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## JUNE 28-30 2018

# ABSTRACTS

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## Preface

It has been more than half a century since human-environment relations as a debate subject had left behind the habit of conceptualizing by creating dichotomies based on the Enlightenment paradigm, such as the natural environment & the physical environment or the nature & urban. As a style unique to the design disciplines such as urban planning, architecture, landscape architecture, the idea of designing modernized nature as an authentic, passive object that shapes nature in the frame of urbanization phenomenon, shortly claimed to dominate nature, has now come to an end. Industrialization and the consequences of over-urbanization and environmental problems that have emerged as a result are on the agenda of the new century. The worldwide spread of a new discourse centering on environmental awareness and sensitivity, which marks the twenty-first Century, plays a role in the change of definitions of human, nature, environment, society and identity and the wide range of problems and solutions in urbanization and new contexts of the periphery necessitate a multidimensional approach to these relationships.

When we try to understand our age in which environmentally sensitive discourse is dominant or to problematize according to the Michel Foucault's terminology, there are three axis areas that have complex patterns and are not always easy to understand. These axes that establish the order of the era we are in and make the discourse of environmental consciousness possible can be briefly defined as the *field of knowledge*; scientific theories and philosophical questions, *field of power* relations; institutions, laws, regulations and even architectural and urban forms, *field of ethics*; the subjectivity/truth relations towards self-forming subjectivity. In ISUEP2018 International Symposium on Urbanization and Environmental Problems these three have been taken into debate in the following order; transition theme to describe *knowledge* axe, transformation theme to portray *power relations* and authenticity theme to conceptualize the environmental *ethics*. In this abstracts book, concepts such as sustainability, ecology, reuse, the use of renewable resources like wind and sun, urban industrial solid and hazardous waste management, environmental friendly products / technologies and methods / technologies for the purpose of transforming materials produced by recycling; briefly theories and methods that are formed by field of scientific ***knowledge*** specific to environmentally responsive discourse, have been gathered together under the theme of **TRANSITION** to a new age. The urban **TRANSFORMATION** act that has become an inseparable part of urbanization, forms a debating platform that comprises the normative field which consists of laws and regulations of the ***power*** relations. The theme **AUTHENTICITY** has been used to analyze the identity of post-modern society and the value judgment, the ethical field of the age of environmental awareness where environmentally sensitive designing, producing, managing, consuming, converting etc. attitudes and behaviors are accepted and approved correctly.

Increasing emphasis on the authenticity of the natural and physical environment in the issues related to urbanization, are indicative of the fact that, in the system, authenticity has become the determinant or even the ontological condition of the ethical field. The symposium ISUEP2018 International Symposium on Urbanization and Environmental Problems: Transition / Transformation / Authenticity" held in Anadolu University, Eskişehir between 28-30 June organized to analyze environment-sensitive urbanization in terms of design disciplines within the scope of change / transformation / originality themes, hopes to be the first step of a long-term journey. 268 oral presentations, 62 poster presentations with a total of 330 abstracts, along with the exhibitions, the studio workshops and the studios have made it necessary to organize parallel events. When the applications were assessed in terms of quantity and quality, the symposium's interest is truly gratifying in terms of its comprehensive awareness and accountability in the academic field. With this symposium, we wish to share and proliferate alternative solutions to problems of vital importance such as urbanization and environmental relations, and to establish a comprehensive groundwork for future work. And finally we would like to thank those who put forward the idea of this symposium, give support, contribute and participate to the symposium.

Prof. Dr. Berrin AKGÜN YÜKSEKLİ

# KEYNOTE SPEAKERS 1

# The Role of Law and Ethics in the Protection of Urban and Environmental Values

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## ABSTRACT

It is a well-known fact that we are the inhabitants of a highly lucky country because of its unique geographical characteristics. Not only because of the traces of great number of civilizations that exist in our country, but also because of the natural and cultural values she possesses, Turkey can be regarded as a rich country. We have not inherited all of these urban and environmental assets from the past generations; they are as a kind of "public trust" in our hands to be handed over to future generations. Therefore, all of these values have to be used in accordance with the principle of "intergenerational equity". Both legal rules and ethical principles force us to use them with great care and in compliance with the concept of sustainability.

Legal rules and regulations concerning the protection of urban and environmental assets can be found not only in the Constitution and the laws, but also in the respective international conventions. Among them appears to be the conventions prepared and put into effect by such specialized agencies of the UN as UNESCO, UN HABITAT and UNEP, as well as the directives and treaties prepared by the European Union and the Council of Europe. The European Cultural Convention of 1954, the World Heritage Convention of 1972, to which Turkey has become a party in 1982, and the European Landscape Convention of 2000, which has been ratified by Turkey in 2003 by the Law No: 4881.

As in all other matters, proper implementation of laws is highly important for the protection of urban and environmental values. By not only neglecting the implementation of the laws properly, disregarding their legally binding character, even sometimes by implementing them, under such titles as urban development or transformation plans, in the form of regulatory administrative action that contradicts the goal of the protection of urban and environmental values. Even though such practices can be considered as formally in compliance with the legal rules, it is not possible to regard them as legitimate. In order to call such actions legitimate, they should not create disturbances in the public consciousness. There is no doubt that the substantial rationality" of the public actions, as defined by Max Weber, must be preceded their "procedural rationality" .

Therefore, the legal rules in the service of the protection of urban and environmental values must be strengthened by ethical principles. It is important to benefit from the principles of Environmental Ethics in this respect. Instead of preserving urban and environmental values as untouched, an approach based on the balance between the use and the protection (sustainability) may be preferable. Purely utilitarian approaches may be highly detrimental for the protection of such values.

As a result, an ethical approach, in addition to the present users, respecting the rights of others and future generations over urban and environmental assets, as suggested by the deontological approach is more meaningful. Such an approach is in line with the Kantian deontological principle of "categorical imperative" which prevents us from doing anything to others which we do not want to be done to us. Complementarity between the rights and responsibilities requires that the rights concerning all urban and environmental values such as air, water, land and the like be utilized with great care.

The basic guarantee for reaching such level of civic culture and consciousness is certainly an educational system formed by the light of scientific thinking.

**Keywords:** Historicisim, conservation, authenticity, modernism

# Thinking Architecture in the Age of Pseudo-Optimism and Hedonism

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## ABSTRACT

Since the late 15th century, majority of the texts of architectural thought intends to eliminate two possibilities: arbitrariness and indeterminacy. However, this attitude aiming to construe a paradigmatic and normative architectural episteme is gradually destroyed in the last few decades by legitimizing both arbitrariness and indeterminacy. What Zygmunt Bauman implied when talking about the recent shift, or revision, of the routes of thinking from "legislation" towards "interpretation", is that transformation. He means that a new type of intellectual appeared who can define new ways of communication between different areas of knowledge and demonstrate new possibilities of understanding, instead of the norm-defining one who can invent/explore the paths of righteousness. Alas, in such an environment where interpretation became the primary role the intellectuals are playing, appears another transformation that Bauman did not take into consideration: while "legislation" creates an illusion of objectivity, "interpretation", on the contrary, provides limitless possibilities for the freedom of personal choice. This, however, results on the one hand with an affirmative that all the individual aesthetic and intellectual attitudes are reasonable, which is basically and solely "politically correct" an argument, and on the other hand this new freedom of choice paves the way leading to hedonism, instead of producing new democratic means that can liberate individuality. The ground where the recent political populism rises above is, at least partially, that dilemma. The same dilemma provides architects an axe of Janus, the front edge of which constructs a new regime of pseudo-optimism, but the reverse mainly destroys the means of producing thoughts of social responsibility.

# Observations on Restorations and Preservation of Cultural Heritage in Turkey

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## ABSTRACT

In Turkey, the history of conservation law and conservation agencies date of a rather long time. However, although mostly Istanbul and almost all the cities in Anatolia enjoy a high historical and cultural value and were taken under legal protection, they were not successful in protecting the urban fabric and the architectural heritage that constituted them.

In the developing process, new highly poor architectural environments arose in urban conservation areas, buildings of cultural heritage were abandoned to their own devices and came to the point of falling in ruins. In Turkey today, an important number of buildings of cultural heritage have long exceeded the limit of being restored.

Today, Turkey needs to determine the principals that can be applied to such areas and buildings. However, such an endeavor contains complex issues. Just as in law, forming an opinion based on mathematical formulas is not possible in the context of protection theories. Numerous technical, legal, social, administrative etc. factors come into effect during opinion and the decision making process.

When analyzing the conservation/restoration application both in our country and in the world, we find that there is no consensus on this issue and come across both examples of those that change the original spatial order of the cultural heritage building or examples that preserve it. In the same manner, it is evident that there is not a total agreement in the technics and methods to be used in the restoration of cultural heritage buildings. The generally accepted approach in this context is that each individual building has its own individual conditions and must be evaluated in its own specific conditions.

Following determination of the existing condition, the method to be used in the treatment process should be appraised. It is observed that since the onset, preservation planning is evaluated independent of the city in general. Both the preservation of the single building and that of the urban fabric have been excluded from urban planning and later on left adrift. While development plans were prepared for other parts of the city, the new city was generally not considered, equipment that would revive the traditional urban texture and their usage models were generally neglected. The necessity to plan urban planning together with urban conservation planning was not considered.

The fact that historical urban conservation is part of contemporary urban planning has not been adopted in our country. In the same manner, the fact that conservation planning can only be carried out under the supervision of urban conservation experts has not been understood either. Most often, urban planners have been assigned as the sole responsibles of the work regarding urban plan preparations and at best, preservation experts have been kept in the background as

poor figures in the work done. However, this is an area where interdisciplinary work has to be carried out and having experts who have a good grasp of the traditional fabric and products of residential architecture is essential. It is not possible to expect sound decisions regarding conservation in a planning in which the characteristics and the way the traditional environment from the residence unit to the street and from the street to the fabric was constituted is unknown. On the other hand, it is also evident that the approach of placing a “designer architect” at the focus of the conservation plan is equally wrong and will end unsuccessfully.

# Teaching Young People And Children Our Cultural Heritage

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## ABSTRACT

Turkey, in the past, created by living cultures, very rich cultural heritage that is transmitted to the present, is one of the few countries. Eyewitness to history, the only surviving tangible products of the era of this unique heritage, the respect he deserves and can see the value and tomorrow is a very important topic to be transferred to. Ash can be transferred to future generations of natural heritage, the human element of the level of awareness and sensitivity about a very important. Also nowadays considered to be the common property of all mankind cultural heritage elements, determining, documenting, promoting, protecting and transferring an original way to future generations has a historical responsibility.

In this context, located across the world cultural heritage protection by identifying the elements of the field through Unesco countries information about each other's cultural heritage ones. In 1985 for the first time in our country ' İstanbul ', ' Divriği Ulu mosque and its hospital ' and ' Goreme National Park and Cappadocia ' Unesco World Heritage list is entered into by the year 2018 our presence in this list, a total of 17 pieces. . Also in 1994 for the first time passed the UNESCO World Heritage Centre is updated in the year 2017 Temporary List this list 2 mixed (cultural and natural), 2 natural and 67 for a total of 71 pieces of cultural assets.

The fact that the common heritage of mankind "cultures" consent; every nation even with every civilization language, culture and history heritage will take your place in the world. Individuals will take place within this heritage rooted in and socialization. Witnesses of the past and cultural heritage of these aspects are the factors in shaping the future. Especially in our country that should be the responsibility of each individual to learn those entities. In this context, the first known of these entities were introduced to the world in the wake of our cultural heritage that we have to learn from our past and our future direction on behalf of the connection is extremely important. In this context, cultural heritage the most economical and effective way of creating awareness, children who represent the future of the country, from an early age trained to pass of this topic. In this context, is the most effective method of teaching through the game passes through.

Teaching through play; in the learning process of the students actively take part in the cooperation, socialize or helping, which allows you to live and actively learn by doing-learn to recognize the opportunity directly, copy a large number of giving way to the use of the organ, the realization of permanent qualified learning influences that is an important teaching and practice area. Fun with learning to recognize the opportunity to learn, can offer a flexible learning environment, students have the opportunity to control their own process, a sense of curiosity and discovery research, for reasons such as feed, play-based teaching, especially at an early age Group a highly effective results in the research findings.

All these are located in the UNESCO World Heritage List taking into consideration Turkey be taught of doing in the scope of our work aimed at the preschool and elementary schools as a first step in that the "Memory of our kids Inheritance, with heritage in memory, Turkey "Little Learning It UNESCO World Heritage List with 162 participants activity. As the second step of this activity is the same as for 169 middle school and high school students with Young Fingers Learning Through Heritage Games in Memory UNESCO World Heritage List Turkey "activity.

Our children and our young people within the scope of proactive activities survey and with the information available in "introduced to the world of Unesco draws the artifacts in our country?" her answer to the question of misconduct. Then history in the process, we created "Memories Heritage, Memory card game Turkey promotional video was watched during the event was twisted and crafted by compiling the Unesco world. Activity as a result of information learned in the survey again and "introduced to the world of Unesco draws the artifacts in our country?" question again portraying her of misconduct. Works produced an exhibition was opened. In the process, with the visitors to the exhibition game was played, large scale larger audiences.
Activities within the scope of the work in accordance with the cultural heritage and children, cultural heritage, play and children evaluation of activities and academic environment through studies aimed to create a discussion.

**Keywords:** Cultural Heritage, Unesco, World Heritage List, Learning With Game, Memory

# URBAN TRANSFORMATION

# The Future of Residential Areas: Expectations and Responsibilities

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**ABSTRACT**

Housing is a building type which is generally insufficient in quantity and quality and which is difficult to obtain for low-income groups. Although the ruling groups were not really concerned with this problem at the beginning, they had to search for solutions when the situation threatened the whole population. There were basically two approaches in answering these problems. One was the utopian approach, which was based on the development of new environments from scratch. There were also reformers who sought for piecemeal changes as a means of correcting the problems of existing environments.

The general tendency in providing housing for low-income groups has been to construct mass housing areas in many countries all around the world for almost a century. However, research carried out in these areas shows that most of the users have preferred these housing units only because of economic reasons, and that the level of satisfaction is not high in general. There are many examples of mass housing areas, which have ended up in abandonment or demolition because of growing dissatisfaction, resulting in devastated, desolate urban areas which people are hesitant to visit.

Research related with these problems reveal that it is not sufficient to construct a house in whatever way possible; instead what is important is to create a home where people are happy to live in. In this context, approaches where social and cultural values are taken into consideration in addition to meeting the fundamental needs of the users are preferred in architectural design. The improvement of the physical qualities of the environment means the production of safe, useful, and healthy interior and exterior spaces in terms of light, ventilation, heat and noise. However, in order for societies to continue their existence and to be reproduced, it is not enough to improve the physical comfort in the environment. In addition, the environment has to bear meanings which reflect the values and needs of the users, and it has to have a dynamic structure suitable for social changes. The establishment of a balance between the perception of change and the comprehension of the past is an important challenge for architects.

In other words, user satisfaction should not be limited to the desire to own a house; instead, quality should also be valued in addition to quantity. In this context, different means of increasing the involvement of the users in the development process of housing areas should be re-evaluated. It has been generally accepted that housing is a basic human right. Therefore, everyone has the right to live in a satisfactory house where all needs are met. A satisfactory house also has to be accessible

for all and payable. In fact, housing and environmental conditions are among the most important indicators for establishing quality of life. In this context, post-occupancy evaluation can be used as a method to determine problems, and the results of such research can lead to alternative approaches in design.

The basic question to be answered in architecture, as the Chilean architect Alejandro Aravena has indicated during the Venice Architecture Biennale in 2016, can be summarized as the following: "How can the advancement of architecture, given physical needs and local contexts, actually improve the quality of people's lives?"

# Planning Healthy Neighbourhoods / Cities

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## ABSTRACT

Urbanisation is one of the most important global processes of the 21st century, with cities, as key players. It is widely accepted that cities, as the engines for business and innovation, can and should provide education, jobs, health, security and growth for the urban community. In this context, in 2016, 'the city we need' was introduced by the UN, as a new paradigm for building sustainable and well-managed cities for tomorrow. This urban paradigm evolved into a manifesto, presenting a 'common vision' driven by principles and drivers of change - the New Urban Agenda.

Currently, the global urban community, in aggregate, has the most comfortable living conditions on earth. But the wellbeing of the world community is not yet achieved. Complex and chronic health conditions, particularly, rising mental health conditions, have a significant negative impact. There is still significant progress to be made towards a more unified understanding of health / wellbeing of human beings, which could positively influence the trajectory of urban planning and development. There is an evolving range of urban health protection initiatives, aiming to address this issue, with hopeful outcomes in more developed parts of the world. For example, since 2012 the TCPA has been supporting and facilitating the creation of healthier places in the UK. However, there are also some urban-village initiatives, as yet on the margins of the global discourse, which address the issue from a more holistic perspective in the eastern hemisphere. For example, since 1968 Auroville, India has been supporting and facilitating the creation of an international community with higher consciousness, as the next stage of well-being.

From this perspective our research aims to contribute to the development of a rigorous model for sustainable urban development and inclusive governance, with particular reference to sustainable healthy neighbourhoods / villages. Therefore, the paper first reviews 'the city we need' initiative, as an overall analytical framework. In this context, the emerging concept of 'sustainable healthy neighbourhoods' is introduced to provide a more specific framework for a detailed analysis at a local level. The paper then presents some of the initial findings of exploratory case study research undertaken by the authors in Auroville in 2017.

The paper concludes with a preliminary assessment of the potential of an innovative holistic approach to sustainable healthy neighbourhoods, which embraces a broader definition of health/well-being than that which is embedded in contemporary neighbourhood / village development.

**Keywords**: health, well being, holistic approach, planning, design, sustainable healthy neighbourhoods, Auroville

# Participatory Planning for Sustainable Neighbourhood Development - Innovations In English Practice

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## ABSTRACT

The Localism Act 2011 gave local communities the right to prepare a statutory Neighbourhood Development Plan (NDP) to enable residents to influence the implementation of the strategic Local Plan for their area. Over 3000 communities have started the process of preparing an NP and over 500 have been completed and officially adopted, each after a referendum in which all the people who live and/or work in the designated Neighbourhood Area are entitled to vote. This paper reviews progress to date and prospects of this major innovation in English planning.

This paper first examines the origins and purpose of NDPs in the context of the neo-liberal drivers of planning reform which dominated the 2010 Conservative-led coalition government. It then critically analyses the scope and limitations of the powers available to Neighbourhood Forums, as constituted under the new legislation. Key themes include: the emphasis on stimulating housing development to alleviate the worsening housing crisis shaped by Nimbyism at the local level and austerity and privatization at the national level; the limits of subsidiarity - the shift from 'top-down 'to 'bottom-up' planning, the legally defined neighbourhood planning process and the resources available to local communities – finance and professional support - to meet its requirements. The application of this model of neighbourhood planning is illustrated by contrasting case studies of a rural village settlement and an urban regeneration area.

In conclusion key outcomes of the new practice include; NDPs are here to stay; a quantum leap in the numbers of people directly participating in the planning of their neighbourhood, especially in rural areas but less successful in urban areas; Forums have access to 25% of developer contributions (Community Infrastructure Levy) to meet local priorities such as public realm improvements. Further development of the model will need to consider the allocation of more resources in urban areas, more consistent local council support and changes in national planning policy to increase the provision of affordable social housing.

# Change Through Time: The City as a Self-regulating System – It Never Has Been Just the Buildings

Jeff Austin

## ABSTRACT

Many technical and professional skills are deployed in the management of the continuous flux that is the city adapting to environmental concerns, political requirements, economic resources availability and a changing social context. As an Academician of the Academy of Urbanism I have looked back on time spent as a transport planner, chief planner, a deviser of regeneration policies for Margaret Thatcher, a housing economics adviser to Tony Blairs government, served as part of the Urban Renaissance initiative and planning control in Dubai.
Master plans are very important to us city managers. Very few get fully implemented. Successful cities tend to have a portfolio of open projects spread over time, within which defined projects with clear goals, budgets and deadlines can be identified. Managing the process of change effectively has become one of the key skills needed for the incremental restructuring of the city. I will share some colleagues learning from Utrecht, Hamburg, Tampere, Malmo, Bordeaux, Cardiff and in the URBED Economic Prize winning model of city development.

1) Delivering Connection: The central purpose of the city is to **enable social and economic transactions of ideas and goods between people**. Successful places require the appropriate balance of **interconnectedness, movement, awareness, encounter and exchange** at every scale to provide environments in which different kinds of human activity can unfold and thrive.

2) Changing: You cannot "build a city" but you can shape a place The organic city, which has taken generations to mature, is as an 'Open system': **never complete, always adapting and self-organising** over time. Planning and urban design in the modern era has focused on completeness and control within a 'Closed system' in harmonious equilibrium. Successful places are less concerned with establishing a blueprint conceived and delivered as a single project, but **the management and moderation of a process of continuous change.** HafenCity has created a framework for "actor-centred, induced development" focused on integrating old and new, changing perceptions not with a fixed masterplan but by **establishing processes to support collaboration and coproduction within a guiding framework.**

3) Collaborating: We live in a world of paradox, ambiguity and seeming chaos Great urban places reflect an **edginess** of uncertainty and the **freedom to continuously adapt**. The paradox of collaboration is that cities succeed from a **combination of collaboration and conflict**.
Modern city planning has become centralized in decision-making and adversarial in its relationships.

4)Communicating: Identifying and shaping change across generations and cultures Communication can raise **awareness** and change **perceptions** to support cultural, behavioural and physical change. Effective communication is based on a broadly based **open and continuous dialogue** resulting in lasting **relationships and trust**. Effective communication provides the **basis of consensual decision-making**. Success relies on effective networks, not just virtually, but based on human relationships.

5) Controlling: a balance between firstly creating the vision and mission and then managing the process of change the **voice of communities embraced**, whilst ensuring each citizen's livelihood through regulatory democracy and the equable distribution of resources
Working **partnerships between key stakeholders with agreed goals**. Strong leadership – Project champion who has the ability to **keep the different parties aligned and engaged**. Orchestrating a process of change and sustaining other champions who are committed and **keep the project alive**. Staying pragmatic and **flexible**.

# ENVIRONMENTAL CHANGES

# Urban and Environmental Change as a Cultural Challenge

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**ABSTRACT**

Urban and Environmental Change are two defining features of our global times. If the last fifty years have created a wide understanding of their relevance, their origins have long been traced to the Industrial Revolution. As the combined introduction of machinery, steam power, growth of factories, and mass production spread from England to Europe and the United States, fundamental economic, social, and environmental changes have affected the traditional balance within society, and between society, its territory, and nature at large.

Notoriously, the Industrial Revolution attracted large numbers of people from the countryside triggering an exponential urbanization. Between 1800 and 1880, London's population exploded from 1 to 4.5 million, and the harsh conditions of urban life have famously been depicted by Dickens. But not only cities and urban life were affected: wherever natural resources were extracted for the industry, new problems emerged.

An early understanding that human action caused environmental problems irreversibly affecting the natural balance can be traced back to George Perkins Marsh (1801-1882). His Mediterranean experience as US ambassador to Turkey and Italy helped him understand how, historically, deforestation could lead to desertification, and in "*Man and Nature: Or, Physical Geography as Modified by Human Action"* (1864), this pioneer ecologist argued for the necessity to manage natural resources for the welfare of future generations.

About a century later, Jean Gottmann (1915-1994) studied the multiple challenges posed by rapid urbanization. In *Megalopolis* (1961), he identified an urban region at an unprecedented scale along the northeastern Atlantic seaboard between Boston and Washington, characterized by a new rural-urban balance, a large concentration of the nation's economic activities, a population of +25 million, and a poly-nuclear 'nebular' structure, acting as a 'hinge' between regional, national and international scales. It was a change of paradigm in human settlements, and soon other megalopolis were recognized in America, Europe, Japan, China, India, and the Mediterranean (Gottmann 1975).

To the French geographer, what made *Megalopolis* special was its 'promethean' character, a cultural character visible in the attitude toward change exhibited by its inhabitants. In his earlier study on Virginia (1955), Gottmann compared the traditional culture of Virginia to the progressive culture of Megalopolis. The two attitudes are seen in the respective approaches toward urbanization, and the natural environment: Virginians are more conservative, and resent too much change, favouring preservation of the established order, while Megalopolitans are actually among the main drivers of change, in politics, economics, etc. Thus, he explained the very different

character of the two regions, as well as the historical North/South divide in the US, as the specific consequence of their different cultural attitudes toward change.
Earlier, Gottmann (1952) had made clear that to explain the organization of territory, it's necessary to consider not just the material factors, the networks and nodes, but the psychological attitude of a community toward change: whenever external change becomes overwhelming, affecting the very identity of a community, it will trigger self-defence reactions. The community will become less tolerant of cultural differences and more conservative. Today, paradoxically, economic fundamentalism can be thought as a self-defence reaction, in view of the overwhelming changes of the last fifty years and the related increase in complexity.

Gottmann's lesson is thus that to manage urban and environmental problems, we have first to consider also the cultural and psychological aspect behind them. Thus the awareness of the urgent need to redress the urban, social and environmental balance has to be injected in the economic and political systems, in order to make it more aware of the many related risks, and costs.

In this perspective, design and technology could play a major role by offering practical solutions to urban and environmental problems, if inspired by an understanding that change and the ability to adapt to it are central. The main challenge is thus cultural and psychological. It depends on our very ability to understand, adapt, and ultimately steer change toward a greater respect for the natural, cultural and psychological variety of humankind, and of the Earth. And this challenge has to be met especially at the urban scale.

# Environmental Cha(lle)nges in the 21st century: authenticity in transition

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## ABSTRACT

Since the 1960's, **principles** of architectural conservation have been established in doctrinal documents issued by UNESCO, ICOMOS and the Council of Europe. The main focus of this action on architectural heritage relies on the aim of safeguarding the **authentic** material evidence of historic environments. This objective is considered to be achievable when the conservation of the cultural good, i.e., when the **transitional** stage from past to present, is established in guiding drawings and texts that reduce change to a minimum.

Architectural conservation **practice** aims to **transform** old and sometimes obsolete spaces into contemporary used places, within the above-mentioned framework of **change**, establishing exciting challenges regarding authenticity and limits of change to architects professional ethics.

Considering that architectural conservation inevitably requires that changes to the built environment take place, authenticity concept is perceived to be at a transitional status in the 21st century. Therefore, this presentation will approach the methodology applied in the rehabilitation of historic buildings in Lisbon - Portugal by the speaker's office vmsa architects, focusing on the specific challenges faced in two recently awarded interventions.

**Keywords:** architectural conservation, principles, practice, Portugal

# The Future of Urban And Environmental Issues Are Based on the Authentic Transformation of Our Schools of Architecture: To Accelerate The Transition of The Students Into Active Participants of Cultural Experiences.

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## ABSTRACT

Many changes have been in the architecture profession since **Journey to the East** was written: A diary of Le Corbusier's trip in 1911. This book is a collection of visual notations, or impressions perceived by Le Corbusier as a visitor to a number of cities in Southeast Europe. Later, the acquired disciplinary knowledge acted as an inspiration for his architecture. Nowadays we live in a moment of history when no one can predict even our most immediate future. This statement invites us to revise the relationship between architecture and its past; questioning what to distract, when and how to understand the information so it can be used in a creative process. The pedagogy of architecture at Alicante University is based on the need to prepare our students and faculty members to be **ready for the fast transformations** we are experiencing: **economical, social, technological and environmental changes.**

The pedagogy of architecture at Alicante University is based on the need to prepare our students and faculty members to be **ready for these fast changes** we are experiencing. Although our society seems to live in a continuous state of crisis, we always bear in mind the original value of the word "crisis": Its Greek origin means change, evolution and, therefore, we can read it as **opportunities**.

During the last years, our teaching has been based on a journey to the unknown. It is a series of courses that include travelling to distant places away from our reality. These trips have awakened in each of us a need for learning from the local, its technology, culture and society; consolidating links of specialisation. This is also an experience to empathize Architecture as a Comparative Study: Reykjavik, Istanbul, Naples, Athens and Marseille have been destinies to relate architecture to Landscape, Gender, Time, Democracy and Integration respectively.
The approach to each reality follows several stages:
First is the construction of the **expectation**. The preparation for the trip takes more than a month, taking part in specific workshops and exercises to prepare the student to formulate questions on site. The preparation for the trip is followed by the impact of the **emotional experience**. That is, the trip itself. The aim is to encourage the student participate in the life of the city. Through various actions, we trespass the limits of being mere visitors and turn into users of the city and its buildings as a way of appropriating a multidisciplinary knowledge.

Finally, back to Alicante, this cycle of creativity through the impetus of our **emotional memory** accelerates. The studio class becomes a laboratory for social innovation with a clear sensitivity towards sustainability. It aims to generate new concepts in terms of social and environmental consumption. It is thus on the return journey to Alicante when the students reinvent a new social structure defined by its uses and materials. Throughout this process of preparation / testing and

seeking opportunities for projects / reflection, the student finds the need to seek an outside expert in order to achieve a certain degree of specialization. Additionally, the projects become more solid by the effort of our students to work in multidisciplinary groups. This is a pedagogy that accelerates the transition of the students into active participants of cultural experiences, a political transformation of our schools of architecture to speculate on future urban and environmental issues.

**Keywords:** Journey, unknown, action, experts, creative

# KEYNOTE SPEAKERS 2

# Within the Scope of İzmir Model, Environmental Protection and Waste Management

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## ABSTRACT

The environmental issue has taken in the first place of the global agenda for the last 50 years due to increased global environmental such as habitat loss, climate change and depletion of the ozone layer. In Turkey's Environmental Law No. 2872, it is mentioned that "biological, physical, social, economic and cultural environment in which the living beings interact and interact throughout their lives". The basis of environmental problems that we face today are the increase of the human population and the changes taking place in the consumption habits. The environmental impact in the simplest form is the number of people, the amount of consumption per capita and the amount of resources used for this consumption.

As a result of trying to meet people's infinite needs with limited resources in the relationship between human and nature, the balance gradually has begun to deteriorate and nature's ability to renew itself has diminished. A group of scientists, including Paul Crutzen, a chemist who shared the Nobel Prize, have pointed out that we have caused the world to go through millions of years of change and fort his reason a new geological era called the Anthropocene has begun. In other words, naturally identifiable areas on the earth's surface cover less than 20% of the earth's surface. The Global Footprint Network's studies show that since the 1970s, the annual demand of human beings for resources has been more than the speed of self-renewal every year in the world. Namely, since 1970, more than a world is needed for human activities. A book called "Quiet Spring" by Rachel Carson in 1962 and a report by the Roman Club in 1972 entitled "Limits of Growth" emphasize the impossibility of unlimited growth with limited resources.

The World Commission on Environment and Development established by the United Nations in 1983, presented "Our Common Future" with the other name Brundtland Report sustainability is defined as "meeting today's needs without compromising future generations' ability to meet their own needs" in 1987 to the United Nations General Assembly. Additionally, in the report, "a world where poverty and inequality exist will always be prone to ecological and other crises" statement took place.

Cities are living organisms and have a dynamic structure. Each is shaped under different natural, cultural, social and economic conditions. For this reason, each city has its own characteristics. In this context, it is not possible to mention only one truth in environmental protection. For this reason, each city has to balance the environmental, social and economic structure and to follow unique way for the above-mentioned goals. For example, in Singapore, which is shown as one of the best examples, a framework based on Integrated Master Planning and Dynamic Urban Governance has been developed and named as the Livability Framework. Riffat et al. in the study they published in 2016, stated that people prefer to live in cities in order to reach the social and economic welfare, they prefer to live in cities and they gave examples of environmental problems that could arise if these requirements could not be met. In this context, they propose a 5-

dimensional wheel that can lead to future urban constructions and the effective use of resources and opportunities. This wheel, which includes environmental sustainability, productivity, infrastructure, quality of life, equality and social acceptance components, includes the following elements;

- To support economic development, and to provide income and job opportunities that can provide appropriate living standards for the entire urban population with effective production, especially assessing local resources,
- Provision of infrastructure facilities (adequate water, sanitation, energy supply, transportation network, communication technology, etc.) necessary for the sustainability of population and economy,
- To improve the standards of living, to raise personal potentials and to provide social services such as education, health, recreation, security, etc. necessary for lead fulfilling lives,
- To minimize of the population units that are experiencing poverty, inequality and extreme poverty and deprivation,
- To protect the environment for sustainable urbanization.

The theme for 2014 was set as "Ecological Based Adaptation" on "World Day to Combat Desertification and Drought", June 17, 2014. Slogan was determined as "Soil is our future, make it suitable for the climate". The important issue is that 1.2 billion people in 110 countries and over 4 billion hectares of land are under the threat of desertification. The studies show that 12 million hectares of arable land deserted each year. Another basic measure of conservation measures is GREEN. The more green, the more decarbonization will be. In addition, green has now taken its place as an adjective for the sustainable environment (Green Building, Green University, Green Certificate etc). This will result in a more environmentally friendly environment. Green is also very important for breathing creatures; in addition to their biological, ecological, physical, recreational and economic functions; family, neighborhood, region, private and legal institutions are erosion prevention, oxygen reservoir and each is a separate dam with roots. If a whole can be formed within the city from the parts mentioned above, a very important task is fulfilled for the Urban Ecological Balance. As it is known, Urban Cleaning is directly related to WASTE. How much the Solid, Liquid and Gas Wastes can be disposed of, that much "Clean City" can be mentioned. But also as a matter of fact, the relationship of the WASTE and CONSUMPTION is not to be forgotten. Because, within the scope of the transition from increasingly wild consumption to sustainable consumption, the role of CITIZEN CONSCIOUSNESS is very important and the development of this consciousness in the desired direction is among the most important tasks of the local administrations.

According to the US Environmental Protection Agency, garbage produced in the world constitutes for 40% of the Carbon Emission. That is why the world in which the majority of young people are formed today has emerged as a new trend, "ZERO WASTE". With this movement named "Going Zero Waste", it is tried to be revealed the ways of not creating garbage especially by redesigning the lifestyles. All of this is because we have exhausted the world's ability to renew itself in a year. People related to Global Footprint also have named this "Earth Overshoot Day".

Considering all these, Izmir has been in an ecological structure, foremost in energy, and continues this ecological attitude in Environmental Protection and Waste Management.

**Key Words:** Environment, İzmir, urbanization, waste

# Europen Comission REMOURBAN (Regeneration Model for Accelerating the Smart Urban Transformation) Project

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## ABSTRACT

H2020-SCC1-646511-REMOURBAN project involves 22 partners, committed during 60 months to REMOURBAN tasks for total eligible costs of 23.8 Million € and a requested European Commission contribution of 21.5 Million €. The total investment of the REMOURBAN actions for Tepebaşı demo-site is 5 Million €. REMOURBAN consortium is composed by 5 cities, 3 research institutions, 5 large industries and 9 SMEs, include a powerful strategy for citizen engagement, a work package focused on replicability.

REMOURBAN aims at the development and validation in 3 lighthouse cities (Valladolid-Spain, Nottingham-UK and Tepebaşı/Eskişehir-Turkey) of a sustainable urban regeneration model that leverages the convergence area of the energy, mobility and ICT sectors.

Tepebaşı demonstration aims at the reduction of 85% in the energy consumption per capita, and a 63% of the $CO_2$ emissions. 57 dwellings retrofitted in order to achieve a reduction in the building consumption higher than 53%. A district heating/cooling facility based on biomass and air sourced heat pump installed for the targeted district, together with solar thermal facilities for DHW, with a reduction of $CO_2$ emissions of 63%. A PV facility of 100 kWe deployed on the roof of the central social building as BIPV and also a 50 kWe carport canopy installation. 4 e-buses and 22 hybrid cars utilized in the project in addition to a 30 ebike rental system. An additional 6.8 km expansion of the cycling lanes established during the project.

City on Cloud ICT city management platform developed that will put together all energy and mobility data, and more than 3.000 variables gathered and stored. Through the implementation of all the strategies aforementioned a 53% of reduction in building energy consumption is expected, reducing the emissions by 63%. In transport, it is expected a reduction of 70% in energy consumption and 70% in emissions.

# Nearly Zero-Energy Settlements

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## ABSTRACT

Designing criteria, materials used and operation of the buildings are important parameters in the context of energy efficiency. In order to provide comfort conditions in living spaces, the amount of energy consumed has a share of about 35% -40% in total. Preventing waste and increasing productivity in energy consumption is a topic that is on the agenda of all world countries. Apart from increasing environmental problems due to global warming, the constant increase in energy demand and the limited availability of fossil resources make energy efficient building design a necessity. According to current consumption figures, it is estimated that in 2020 primary energy needs will increase by 4% of the world increase with an increase of 160%. Reducing energy intensity in terms of our country is also one of the important targets. From the perspective of the building life cycle, it is seen that about 80% of the total energy is consumed in the use of the building. Therefore the implementation of low-energy, zero-energy buildings in the European Union countries is on the agenda and is becoming increasingly widespread. The European Union requires passive buildings in the construction of all residential buildings since 2019 and then commercial. Energy consumption in our country is parallel to the EU countries and the work on energy efficiency continues rapidly.

Passive building, energy saving building, low energy building etc. refers to the building with a better energy performance compared to the building built according to the regulations specified in the national standards. High energy efficient buildings are expressed in different European countries using different terms such as "Low energy house", "Passive house" and "Energy saving house", but recently the term "nearly zero energy building" (NZEB) has become increasingly widespread in recent years.

The basic characteristics of the low-energy building standard expressed by the Passive House concept developed by Dr. Wolfgang Feist in Germany in the 1990s are given below.

- Passive house uses internal heat and solar energy gains; thus requiring 90% less heating energy than traditional buildings; saving about 75% compared to new buildings;
- The heating energy requirement is 1.5 litres / m2 of the year fuel (petroleum) and ¼ of the low-energy buildings.
- Building shell (wall, floor, window) has high insulation value and airtightness;
- The high wall / floor surface temperatures provide thermal comfort,
- Waste heat recovery saves energy

In this context, the passive house of Kranichstein-Darmstadt, which leads especially to passive building practice in the cold climate region, is considered. The Kronsberg and zero-e park; which is referred to as zero-emission settlements in Hannover and Riesenfeld-Freiburg plus energy buildings settlements are examined in terms of building shell and integration of renewable energy sources into architecture.

**Keywords:** Energy efficiency, Passive House, Nearly Zero Energy Building

# When City and Country Change in Post-Natural Age: Local Asset-based Development and Nature-based Solutions in Izmir

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## ABSTRACT

Urbanization today rising so fast that it has become a global phenomenon and gained importance at the planetary level. Seventy percent of earth surface will be shaped by human influence by the year 2050. In so-called Age of Anthropocene or Post-Natural Age nature-culture dichotomy has been altered by human culture that means urban nature has been emerged. Coupled with climate change effects and uneven urbanization practices cities and city-regions in the world should find new ways of relationships with the nature.

In this presentation, results of recent development strategies, urban projects and implementations of Izmir Province will be discussed. With this regard, changing relationships between culture and nature will be exemplified within the basic parameters of local development perspective.

In the first part of the study, changing human culture and nature relationship will be examined within the frame of industrial revolution and early responses by the 19$^{th}$ and 20$^{th}$ century urban planning movements. Here, the role of automobile will be highlighted as destructive innovation in the enormous transformation of the modern city today. Therefore, urban-nature relationships will be illustrated by using urban growth management practices of different world cities.

Second part focuses on sustainable local development strategies conducted by the demand of İzmir Metropolitan Municipality between the years 2013 and 2016. Throughout the process those strategies have integrated into multi-level and multi-scale basin-based studies. Local asset-based development is at the heart of these studies aiming to protect natural and cultural assets without harming natural carrying capacity and ecological boundaries via creating intersubjective collaboration and idea development process among locals. Recent implementation projects therefore will be scrutinized in the peninsula region of Izmir.

In the third and the concluding part of the study strategies, plans and projects trying to provide urban-nature continuum will be examined against the sprawling urban development process of cities like İzmir. With this regard, İzmir's recently EU-funded Horizon2020 project entitled "Urban GreenUp: Renaturing urban plans" will be highlighted. As a frontrunner city İzmir takes the lead by involving as an integrated part of nature-based solutions via demo-sites distributed among character zones from dense urban areas to rural ones. These demo-sites will be upscaled within the frame of Izmir's local "green infrastructure strategy" completed in March 2018. Derive from the given cases the presentation will be ended by making claims about how nature-based solutions involve in current urban planning and design processes.

# ECOCITIES - a proposal for comparative analysis

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**ABSTRACT**

By 2050, more than 10 billion people will live in the world; In terms of resources, it is known that the world population will exceed 10 billion in 2100 and our grandsons will have to settle for only 10% of the raw material resources we are using today. The buildings are using two of our travel resources and are responsible for 50% of the atmospheric CO2 emissions. To stop the CO2 increase, we need to reduce emissions from buildings by 60% by 2050
It is the responsibility of the architect planners and managers on behalf of our people to reduce waste by 80-90% over the next 30 years, to make more efficient use of resources and to establish a more harmonious balance with our earth. Architects, planners, managers have to reorganize in this direction, which has been the primary problematic target and dominant discourse and action show.
• Water, healthy food resources and energy inadequacy; holds the frontline in the global issues that need to be addressed.
• For the continuation of the earth and its species, it is necessary to answer this question and the questions.
• Healthy, producers are the basic requirement of living assets that do not consume resources.

The size of the people who seeks to live in eco settlements will increase by 4 billion over the next 30 years; Energies will be compulsory to separate and compartmentalize for independent communities, renewable energy, water management, and recycling to the sources of waste, which are composed of sufficient nutrients for their own water and those living in the environment. We call eco settlement for natural and healthy settlements self sufficient in
• Energy,
• Water and
• Nutritional Needs in vicinities.

The eco group brought together for the originality purpose of change, transformation; a settlement model that combines human behaviour with nature, supports healthy individual development, and provides a self-sufficient life plan on a human scale. Design, technology and management should be organized as holistic system.
Eco building can be planned and constructed as;
- Single structure,
- Neighbourhood unit, district
- Village,
- City
- Part, city,
- Metropolis,
- Megapol or

- World.

For this reason, Ekosettlemets can be classified under 3 headlines;

• Ekoköy in the nature; Findhorn, Cristal Waters, Ithaca, Sieben Linden, Aurowille, Güneşkoy, Silivri, Büyükada, Tesla of eco-villages, Paris Smart City,

• Eco buildings within the city; eko house model, walnut squares district centers, municipality service eco building, business center, mixed buildings,

• Ecosystem in or near built environment; Batıkent, Arkosanti, Mikkali, Solar City- Linz, Masdar, Dongtan and their derivatives. It is at the forefront of environmentalism with its sustainability policy that deeply affects mankind and has the mission of keeping alive the longing for traditional life that people support each other.

They are designed to show that it is possible to live in the 21st century without harming the earth by creating various models to create a natural lifestyle. (Dawson, 2006) echo repertoires are and will be and will bring a systematic response in the answer of the question; solving the types of organizations is the first step in the solution; Eco settlements on;

- Local governments,
- State
- Citizens initiatives are; 'people'
- Foundations
- Cooperative
- The union is organized by trade organizations and alternatives.
- Private initiatives

These organisations organize are not just places; the processes of production, the human life, the economics of energy.

A search that exceeds half a century can be collected in three environments;

• Research, course, articles and books,

• Implementation initiatives, projects, ecotopias

•Constructions.

**Key Words:** Eko structured building-village-city; comparative eko analysis of built systems; Eco sytems under construction

# Urbanization and Changing Climates

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## ABSTRACT

The climate, which can be defined as all as the meteorological parameters that characterize the average state of the atmosphere at any point in the world, manages the activities of the human on a direct or indirect basis as a great authority. Climate conditions affect the distribution of living beings on the earth, physiological developments, settlement characteristics, housing type and materials used, economic activities, food and clothing, industrial distributions, transportations, tourism and agricultural activities, biological diversity, soil formation and productivity, river flows and regimes. The climate due to unstable has changed over many billions of years in the earth's natural history at different timescales. The most important reasons for the recent climate change is human activities such as the rapid increase in the use of fossil fuels and deforestation since the industrial revolution. Changes in the general characteristics of climate have begun to be observed in the world climate, when the carbon dioxide, methane, nitrogen oxides, ozone and water vapour are known as 'greenhouse gases' increase inside the atmosphere. Related to these effects, the temperature of the world has increased about 1$^{o}$C in the past century, and the end of the this century will be increase of between 2.5-5$^{o}$C and sea level will rise between 15-95 cm. Depending on these, increase of the number and intensity of disasters such as storm, hurricane, flood, decrease of biodiversity, loss of productivity in agriculture, changes in crop patterns, increase of intensity and frequency of extreme warm waves, change of water cycle, melting of continental and sea ice, change of rainfall patterns, are expected to have significant changes that directly affect the ecological systems, human life and the economy.

The first human activities which cause the global warming is urbanization. Fuel, energy and water consumption and wastes generated increase greenhouse gas emissions in rapidly growing cities. The cities are responsible for 40% of carbon dioxide emissions, 12% water use, 65% of waste, 71% of electricity consumption and 80% of total greenhouse gas emissions. Depending on these developments, an increase in the global warming with the development of the cities, and the city atmosphere becomes warmer than the rural areas around it, that it called 'urban heat island'. The main causes of the urban heat island are; decreasing green areas and heat-retaining materials used in buildings, heat trapped between buildings and roads, and the spread of this heat at night, the heat evolved from the use of changing soil structure and energy consumption. The temperature difference in between urban areas and outdoor areas can be up to 5$^{o}$C. For example, due to intense urbanization, the average annual temperature has increased 1.8$^{o}$C in Frankfurt city.

Minimization of climate changes and negative effects on these changes on natural ecosystems, socioeconomic sectors, and the human health; human generated greenhouse gas emission should be reduced and carbon sinks should be replicated, environmentally friendly technologies should be used, energy efficiency should be increased, sustainability should be in agriculture, effective waste management should be created, population growth must be balanced and should be prepared for

disasters. In order to realize the most to these measures; create ecological solutions for the conservation of natural resources, to take the base of clean energy, well-designed transport system, to realize good waste management, to create the environmentally friendly buildings with less carbon production and more green areas, in the cities that created the majority of problems. Those are necessary and important steps for reducing of climate change.

# Overview of Cities and Energy Efficiency

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## ABSTRACT

Increased needs of individuals, improvement of living conditions, and growth of comfort expectations cause the increase of the energy used. The increase in energy consumption with the population increase is becoming more important. However being able to meet this with limited fossil resources is difficult and brings different problems. Increased energy consumption and at the same time production causes problems such as global warming, climate change, nature damage.

A significant number of individuals live in urban areas. Cities are growing, especially due to population growth and migrations, and greenhouse gas emissions are increasing due to increased energy consumption. In the revision of the Urbanization of the United Nations Department of the Population Division of the United Nations, in 2014, 54 per cent of the world's population lives in urban areas and this ratio is expected to rise to 66 per cent by 2050. In 1990 59 percent of Turkey's population, in 2000 64,9 percent of Turkey's population, in 2008 75 percent of Turkey's population began to live in the cities. According to the latest estimates of the International Energy Agency, 60-80 percent of the world's energy consumption occurs in cities.

The increase in urban population means that the area of construction will increase further. Construction of a building will significantly increase energy requirements and new infrastructure costs. In addition, according to the United Nations Environment Program, although urban areas cover only 3 per cent of the Earth's surface, urban areas account for 50 percent of all waste, generate 60-80 percent of all greenhouse gas emissions and consume 75 percent of natural resources. For this reason, especially big cities are among the settlements that will be the first to be affected from the negativities that may occur. According to Arcadia Power, a clean energy provider, cities in the United States that are most affected by global warming are estimated to be cities that consume the most energy and contribute to global warming. Miami city in The Florida state was negatively affected by the Irma hurricane on September 11, 2017. Monthly energy consumption in this city is 25 per cent more than consumption in the whole country. It is estimated that the most important reason for this is the use of air conditioners. The use of fossil fuels in energy production is among the triggers of unusual weather events such as climate change and hurricane. Other cities that are adversely affected by extreme weather events are Atlanta and Phoenix. The energy consumption of these two cities is above the United States average.

According to the United Nations Environment Program, cities can achieve 30 percent water savings and up to 50 percent energy savings with limited investment and encouraging behavioral changes. Efficient cities can provide growth, create jobs, reduce greenhouse gas emissions, and increase the health and overall quality of life of the world's population. This study presents a conceptual framework related to energy consumption, its reasons and results and energy efficiency in cities and makes a general assessment under the framework. In this way, it is aimed to create consciousness for more livable green cities

**Key words:** Urbanization, energy efficiency, climate change, buildings

# CITY – NATURE - AUTHENTICITY

# Parkway Concept as a New Vision On Tourism and Recreation Planning: Natchez Trace Parkway Case

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## ABSTRACT

In the XIX. Century, Olmsted proposed a linear parking facility in conjunction with Prospect Park in Brooklyn (New York); parkways that were planned and designed in conjunction with urban parks have become an integral part of American urban planning activities. The aim of parkways, which are increasingly planned as integrated with ecological and social planning decisions; is strenghtening the positive feeling of nature by bringing it closer to people, especially on the highways.

After World War I, the absence of regional and national highway systems in the 1930s increased the importance of parkways and the amount of road networks and vehicle ownership multiplied with increasing acceleration. Parking lots which are for tourists traveling by automobiles in the 1930s, still serve tourism and recreation today. Thus areas of relative discretion and limited accessibility and potential for tourism have gain importance. In many European cities, mountain roads, valleys, lakes and seashore routes are planned as parkways, where different versions of the natural environment and nature have become accessible. Parkways have mostly been combined with bike routes. Sometimes parkways can pass directly through parks, as in the case of New York's Henry Hudson Parkway, or they can be as a way of transporting the driver to a park, as in the case of the Bronx River Parkway. According to the New York State Parkways Management Plan; "Landscape corridors with scenic, natural, recreational, cultural, historical and archaeological preservation on the regional scale" are defined as “Scenic Byways”. Unlike major roads and interstate highways which offer direct and effective transport facilities, these roads are the routes which have additional resources and characteristic qualities, improving the travel experience and consistent with the character of the area through which they pass through.

Natchez Trace Park in Mississippi State is a national park that is being managed and protected by the American National Parks. The parkway is a 444-mile long, diagonal state road, known for its dense forests and pristine natural beauty. The Natchez Trace Parkway was used by the Indians thousands of years ago in the state of Mississippi, and was later used as a trade route during the war years. The mounds seen along the parkway show that this corridor was used by people up to 2000 years ago, and this route was most intensively used for commercial purposes between 1785-1825.

Nathchez Trace Park is 39 minutes away from the Vicksburg settlement which is an important castle in the north-south wars. Also this parkway is a route which includes the centuries of walking traces, reflects the history of the country. The route also includes hiking trails, jungle camping and recreational activities such as picnics, fishing, cycling. In addition to the forests, there are ponds, waterfalls, wetlands and floodplain forests as natural landscape features on the

route. There are also mounds, bridges, battlefields and XVIII. historical houses dating back to the 20th century continue to exist as cultural heritage.

The area, which is heavily used for tourism and recreation in terms of the potential natural and cultural landscape potential, includes a number of educational and cultural activities planned for all age groups and projects are being carried out. The purpose of this research is to investigate the planning and design goals and principles of parkways, the services fort he society, operation and management, facilities and financing possibilities of the parks on the selected case area and to investigate the feasibility of this system in our country.

**Keywords:** greenway, prak system, parkway, scenic byway, Natchez Trace Parkway

# Role of Authenticity in Urban Transformation

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## ABSTRACT

Transformation stands on a change of structures, forms and content of natural and man-made features. Urban transformation involves with the form, appearance, nature and the character of urban landscapes. It is a fundamental and creative process that requires sustainable approaches for human habitats. Transformation for sustainable development of urban environments is an emerging issue with ecological, cultural, social and economic dimensions.

Recently there are different lines for urban transformation: transformation for heritage conservation, transformation for urban regeneration, transformation for urban gentrification, transformation for urban re-development. On the other hand to keep on sustainable bases understanding characters that been transformed are the greater issue. Authenticity is defined as originality, genuineness or entity which refers to the quality or condition of being authentic, trustworthy or genuine which help as to identify and understand the value inherited within the urban cultural landscapes. Character of the urban landscape is seen as an embodiment of architecture, qualities of historical and cultural heritage as well as natural.

Discussing authenticity in urban transformation is important which values is to protect, which values is to change, which values is to enhance for the improvement of quality of urban environment and well-being of urban inhabitants. In this study, the role of authenticity in urban transformation will be discussed with regard to form and design, materials and substance, use and function, traditions, techniques and management systems, location and setting of urban environments. We hope that study results would bring different perspective for rapidly growing urban transformations in Turkey.

**Keywords:** Urban transformation, authenticity, sustainable urban environment

# Creating Oppurtunuties for Life-Long Learning, Devoloping Environmental Awareness And Orientıng Move Life via Nature Based Festivals: The Sample of International Eastern Anatolia Youth Festival (Dapgençfest)

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## ABSTRACT

The aim of this study is to make an assessment about the process and results of the implementation of the International East Anatolian Youth Festival Project implemented in Erzurum between 2012 and 2015 and for young people living in the city of Erzurum where nature and youth festivals have not benefited sufficiently from active recreational opportunities due to long winter conditions. life-long traininng programmes, participation in culture-arts activities, development of environmental awareness and participation in active life. DAPGençfest, has been developed for the active participation of young people living in Erzurum in the regional development plans and to support the personal and social development of young people and the establishment of sustainable infrastructures in TRA1 NUTS II Region and Erzurum Gravity Center with the financial support of the Ministry of Youth and Sport in 2012 and 2013, the Erzurum Metropolitan Municipality in 2014, the Çağlayan Science Culture and Art Association and the Eastern Anatolia Nature Sports Specialty Club (DADAK) in 2015.

The purposes of DAPGençfest Project are (1) encourage young people living in Erzurum provincial center and districts to support their formal education in regional, national and international activities to contribute to the personal and social development of their potentials; (2) to promote intercultural and tolerance cultures among young people; , (3) developing opportunities for young people to learn about national and European opportunities, (4) organizing project / activity-based organizations among local, regional and international initiatives and institutions, (5) developing countries' development plans and regional agencies through the motivation of young people (6) the nature-based youth camp and festival activity to be organized locally; inviting volunteers from Europe and raising the mobility capacity of Erzurum.

With participatory methods, DAPGençfest has been considered for public awareness on the importance of volunteering, protection and recognition of the environment, development of nature-based project and entrepreneurial cultures, important landscapes in the Uzundere province where the project is carried out, is also considered as an initiative to initiate project initiatives for physical development in Choruh valley where the western part of the Caucasus Ecoregion by International Conservation Organization. Project implementation covers (1) Identification of volunteer youth and camp site and planning and application of camp site, (2) Realization of activities for nature and adventure sports with international participation, (3) Informing the youth camp participants about the natural and cultural landscapes values in the region through local guides, (4) organizing activities such as traditional Turkish Handicrafts, folk dances, village watching games within the context of culture and arts activities, (5) creating opportunities for a lifelong education

and sustainable approach to natüre and (6) The young people who volunteered for volunteer activities under the Bulgaria and Lithuania mobility programs will be able to participate in various activities such as museums, botanical gardens, conservation areas (PANPark), rural life museums, historical towns, adventure parks, bonsai art, wetlands and birdwatching.
As a result, with 3 years of implementation, more than 3,000 youth people have been actively participated and DAPGençfest has become traditional. Within the scope of nature and adventure sports activities, tours and organizations have been organized in areas such as rafting, rock climbing, stroking with rope, hiking, photo safari, mountain bike, lake canyon and sea bicycle to inform the public about the potentials of this area. In recognition of the project indirectly the Uzundere district, the brand was also contribute to being thrown important steps in the development of rural tourism and rural development projects for tourism helped implemented and included as Uzundere district of Turkey's 11th town on the International cittaslows network in 2016.

**Anahtar Kelimeler:** DAPGençfest, Nature Camping, Recreation, Lifelong Learning, Sport, Culture, Art, Çoruh vadisi, Uzundere

# Landscape Architecture Approaches to Street Improvment in Urban Design

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## ABSTRACT

A city with dynamic and complex features has continuously changing and transforming structure. Urban population and its growth are the important factors affecting urban transformation. Additionally, economic and administrative changes trigger the transformation in the urban structure. However other environmental factors affecting conversion are; the differentiation of the expansion areas of the urban spaces, the increase of their functions, the failure to fulfill their old functions, the pressure on them. Natural disasters faced by cities, fire, earthquake, etc. all of which are factors that affect the city's demand for change and transformation. When we look at the history of the conception of Urban Transformation; It is seen that modernism influences this process in Europe and in many countries. Urban transformation in this period was seen as spatial transformation. This situation has caused the destruction of organic city structures, the loss of identity of cities and destruction of existing cultural heritage. Along with these negativities, it has been understood that urban transformation is a concept that is much more comprehensive and involves many entrances. In this context, Urban Transformation has begun to be evaluated according to its own characteristics of the applied field and many different applications have emerged in urban transformation. These are applications such as re-development, renewal, renovation, relocation, upgrading, rehabilitation. Urban rimprovment works; it can be defined as a planning and projecting process that establishes safe, qualified and urban qualities and attaches importance to historical, cultural and natural values.

Urban improvment should be designed to serve basic purposes.

1. A direct relationship should be established between the physical conditions of the city and social problems. One of the most important reasons for the urban areas becoming a depression area is social collapse or degradation. Urban transformation projects should primarily explore the causes of social degradation and suggest proposals to prevent this degradation.
2. Urban transformation; many of the elements that make up urban fabric must respond to the need for constant physical change. In other words, urban sanitization studies should enable the urban parts to be redeveloped according to the new physical, social, economic, environmental and infrastructure needs emerging in the fast growing, changing and disintegrating environment of the city.
3. The city should establish an economic development approach that enhances the quality of life and welfare.
4. One of the most important reasons for urban areas to become depression zones is the lack of economic vitality of these areas. Urban improvment studies should aim to develop strategies to restore economic viability in urban parts that have become physical and social depressed areas and thus to improve the welfare and quality of life of the city

Today, the increase in the population density of cities, the strong economic network around the world and the business centers that develop in this framework, and the growth of industrial zones have caused many cities, especially urban centers, to be under more pressure. In addition, the urban open green spaces were also laid in the backdrop of this intensity of the city. In this framework, the ecological profile of this transformation, which is gradually understood, has come to the forefront. Parallel to this situation, many countries in the world old factories and railways have been transformed into public spaces, enabling ecological recovery of large areas. In addition, the recent re-integration of ecological processes into urban areas requires that urban transformation be addressed at the ecological level. Urban transformation should be addressed through a comprehensive and integrated approach, along with the transformation of the physical space, as well as social development, economic development, environmental protection and conservation of natural equilibrium. The social, economic and ecological dimensions must be seriously considered and evaluated on the basis of application in order for any change, transformation, renewal work to be carried out on the urban tissue to be in the framework of sustainability and to be accepted with all its parameters. In this context, one of the most important work areas of urban design, street rehabilitation or improvment projects, requires interdisciplinary (landscape architects, city planners and building architects) collaboration. The purpose of the street improvment is to create a living space that is open to the outside and integrated with the landscape. In this study, the examples applied in the world in the frame of the literature search of street sanitation will be examined and the significance in terms of urban design will be explained. Responsibilities within the interdisciplinary works and the general principles of ecological landscape design will be presented and discussed.

**Keywords:** Street improvment, landscape, urban space

# Analysis of Authenticity and Transition in Urban Pattern: The Case of Antioch

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## ABSTRACT

The city is a physical, spatial and social environment that is the result of the accumulation of physical, social, and cultural layers of different periods of history in historical continuity. In this context, urban pattern constitutes the composition that reflects the natural structure and social environment formed by the structures and the space between. Urban pattern describes the technological and morphological characteristics, lifestyle, values and codes of the period it represents, identifies the identity of the settlement and describes the urban form (Ocakçı, 2012).

The most prominent and effective of the various elements that make cities more identifiable and which citizens can identify themselves with the city are the historical environments that give the city the fourth dimension (the dimension of time) and form the traditional urban pattern. Traditional urban patterns are the areas to be protected and assessed because of their physical homogeneity, long history, cultural – social – economic – archeological and aesthetic values (Erdoğan and Atabeyoğlu, 2016).

Most of the research studies that has been done so far has revealed that urban pattern has changed over the time, in terms of quality and quantity. Demand for cities, immigration and population growth, rapid and unbalanced growth tendencies and irregular urbanization through rent surplus have exposed the urban space which is far from being liveable because of its intense construction areas and conflict areas of traditional pattern and new urban space. This emerges as a serious planning problematic in reaching sustainable and livable cities.

As a framework of approaching this problematic, this study specially stands on;

- Establishment of systems that relate traditional urban fabric to newly emerging urban spaces,
- Determining what kind of effects these systems will have on the integrity of the city and its continuity in development, either positively or negatively,
- The continuity and strengthening of the traces existing in the city and outside the urban area as a way of ensuring the integrity of the newly emerging urban pattern with its surroundings and the old urban pattern,
- The creation of livable, environmentally compatible, sustainable, balanced and healthy urban pattern with the guidelines based on the principles of diversity in the public space.

In this framework, it is aimed to examine and compare the characteristics of the traditional urban pattern with those of the new urban pattern in order to create sustainable urban patterns. In this context, Antioch / Hatay urban development area was chosen as the research area.

When we look at today's urban pattern in Antioch, it is observed that both the original characteristics of traditional pattern and the different types of tissue from relatively new urban areas coexist. The traditional urban pattern of Antioch is observed in the area between the Habib-i Neccar Mountain and the Asi River dividing the city in two, and the area contains the urban protected areas (urban sites). The Asi River is not only a landscape element that adds an identity to the traditional urban pattern, but also acts as a border separating the new urban pattern, which is also called "New Antioch", from the traditional pattern. The new urban pattern of Antakya, which is called "New Antioch", is located between the Mount Amanos and the Asi River.

The city of Antioch, with its traditional urban fabric including the urban sites (urban protected areas), is a typical example of Hellenistic cities with its urban planning system applied in its foundation. This plan, called the "Hippodamus Type Plan" and applied in many cities established in the Hellenistic Age, is a "grid plan" consisting of the islands of buildings and streets that are perpendicular and parallel to each other in a certain discipline.

The city of Antioch that developed on both sides of the main axis from southwest to northeast direction, cutting across the city, became an example of the model of some cities founded by Alexander the Great. The fact that, the model applied in Alexandria was an example and influenced the city of Antioch, and in history that model has caused the city to become a two-axis city plan which is perpendicular to each other.

As a methodology, this study consists of three main stages:

- Review of traditional urban pattern and new urban pattern within the scope of residential areas – gardens – streets, private – semi-private – public spaces and urban functions,
- Analysis of this review within the framework of natural and urban systems and
- Developing proposals to contribute to the harmonization of these different (old / new) patterns and to protect the authenticity of the city while creating sustainable and healthy urban habitats.

Findings of the study are also discussed in the framework of the methodoly in three parts:

- Discussion of the pattern types obtained after a comperative pattern examination between the area where the traditionional pattern type is observed and the area where the new field of development is observed, and the reasons for the appearance of these types,
- Discussion of the evaluation of positive and negative aspects of the identified pattern types in the context of natural and urban systems,
- Proposals to sustain the traces existing in the city and outside the urban area to contribute to the aim of removing unfavorable negative aspects, reconfiguring disrupted systems, ensuring integrity and sustainability in pattern and urban development.

When the *traditional urban pattern* of Antioch is examined; its observed that the local data, in terms of location, orientation on the land, alignment with topography, climatic data (eg summer and winter temperatures, dominant wind direction, precipitation amount,... etc.) in particularly, have been evaluated efficiently to provide a settlement in a harmony with sustainability principles and in a way to provide optimum, comprehensive, energy efficient and comfortable living conditions.

The housing pattern in this area consists of narrow streets that are compatible with climate conditions and natural forms. Behind the high walls that limit these streets, the courtyards are both a factor that adds vitality to social life and brings comfort to everyday life to the highest level.

Antioch's *new urban pattern* has not been shaped by a systematic connection with the traditional pattern and by a comprehensive approach. Compliance with sustainability principles also presents an extremely troubled landscape in terms of energy efficient build-up or comfort conditions. The main reasons for the emergence of such a troubled situation include not considering the natural structure components such as terrain form, climatic data and threshold values, the loss of the human scale, and the neglect of the city's natural and cultural characteristics.

"Urban transformation" implementations are being held at various points in the city in order to prevent physical collapse in urban areas and alleviate it to a certain extent. However, as these practices are treated as "demolishing and rebuilding on building scale" as it is in other urban transformation implementations in our country, it has just worked as a continuation of the problematic urban pattern. The contents of the urban transformation projects carried out in the study area include, in part, the restoration of historical buildings and the deconstruction and reconstruction of socalled “risky” buildings.

Some important structures (Hatay Republican Assembly Building, Old Municipal Building, Old Archaeological Museum, etc.) in the part where the city can be described as "transition from old tissue to new tissue" continue to be used as socio-cultural spaces with restoration and function change, is insufficient in terms of integrity and sustainability. Structures re-used with this practice are valuable in terms of reflecting cultural accumulation, preserving and maintaining traditional lifestyles somehow, and being an important mean of transferring socio-cultural traces to future generations even if they can not maintain their original function and make a significant difference to the pattern. These structures in the transition area should be regarded as elements to improve the urban pattern together with the strengthening of the natural and urban traces that are now wiping away.

**Keywords:** Sustainable Urban Pattern, Urban/Natural Traces, Urban/Natural Systems, Public Space, Antioch

# Investigation of Antalya / Kepez Santral U Urban renovation project in Antalya / in the Context of Landscape Planning

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## ABSTRACT

Urban renovation is the renovation of urban areas, that have lost their quality, degraded in terms of environment and lost their function and are facing social and economical exclusion, with certain social and economic programs or transformed into cities. Urban renovation studies can be done with different purposes and methods. In this study, firstly the concepts related to urban renovation and urban renovation are introduced. The historical process, aims, dimensions (social, economic, legal-administrative and design and planning), urban renovation methods (urban renewal - renovation, urban clearance, rehabilitation - upgrading, revival - revitalization and regeneration) are briefly presented. Legal case was investigated and related urban transformation in Turkey. Then, in Antalya/Kepez Central Urban Renovation Project, positive and negative effects of the urban renovation process were examined in the context of landscape planning. Antalya shaped urbanization process in Turkey due to political and spatial decision cannot be taken into account in accordance with the area and found that the city's location features. Considering the natural and cultural landscape values as priority in urban transformation is important for the tourism sector of the city, the outward opening window of our country. Kepez/Santral Urban Renovation Area located within the boundaries of the Antalya Province Kepez District Municipality is located in the old slum areas of Antalya province. It covers an area of 132,7 ha bounded by Antalya-Burdur Highway in the east, Ferrokrom Factory, Prison and Ünsal Quarter in the south, forest area and zoo in the north, forest and Kepez Hydroelectric Power Plant in the west. According to the data of 2010, there are a total of 13 469 people living in the area. The samples of cores taken from 27 different structures in various places of the area were analyzed in the laboratory environment and it was reported that all of the samples taken are at risk. The Kepez/Santral Urban Renovation Area, owned by the Municipality, was published in Official Gazette dated 25.12.2014 and numbered 29216 and declared as "Risky Area" with the decision of the Council of Ministers. Thus, the tasks and responsibilities of all kinds of maps, development plans, development applications, preparation, review and approval of the design projects for this area have been left to the municipality by the General Directorate of Spatial Planning and the planning and projecting studies have been initiated. It is planned to create a multi-storey texture in the urban renovation project in the area where the traditional culture of houses with single or low floors prevails and the neighborhood culture continues. The current environment has been completely cleaned and the structural and vegetal elements have been removed. Although it is stated that the trees in the field are protected under another area, the transportation of all the trees is not possible from the technical and economical

point of view. When the land applications are examined, it is also noteworthy that they are not worked sensitively. The socio-economic characteristics of the Antalya / Kepez Central Urban Renovation Project area were searched for natural and cultural landscapes values and the socio-economic characteristics before the renovation and the plans, programs, reports etc. prepared by various institutions and organizations for the project were examined. The results obtained are analyzed under the headings of renovation in short, medium and long term. For example, the transition from apartment-house and site cultures to street-based living culture, which is a reflection of the garden house and the Mediterranean climate, and the cut-off of the rural family to the soil will be effective in the short run. Due to the position of Antalya, domestic and foreign investors are interested in this field and the changes due to the increase in economic income are experienced. It is thought that the emergence of social and cultural conflicts resulting from the settlement of people in different cultures together in these houses will be effective in middle term. The environmental problems that will arise due to the decrease in the per capita area in parallel with the increase in the population density will cause the long life quality of the individuals to be affected. I n terms of landscape planning based on the data obtained as a result of the study, some suggestions have been developed in this context by introducing the points to be considered in urban renovation studies.

**Keywords :** Antalya, urban renovation, landscape planning.

# RFID Based Indoor Personal Tracking Systems

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**ABSTRACT**

Applications related to indoor tracking with wireless systems are becoming widespread. For this reason, Radio Frequency Identification (RFID) technology, which is one of the methods used for indoor tracking, has become an important research topic. Systems using RFID technology are automatic identification and tracking systems that provide data exchange through radio frequencies. Today, RFID technology is found in many sectors such as logistics, construction, product security, access control, agriculture, livestock, health, traffic, defense and urbanization. It is utilized different technologies in indoor areas for the purpose of controlling entrance and exit, tracking products and people and providing access control to restricted areas. These mentioned technologies are; Ultrasound, Wifi, Pseudo-GPS, Bluetooth, Infrared and RFID. RFID technologies stand out for indoor tracking. In this descriptive study, it is aimed to explain the methods used in human tracking in indoor areas by using RFID, the constraints of the methods and the elements affecting the accuracy of the methods, and make some suggestions in theory and practice. In the context of the studies carried out on this subject, it is observed that the RFID is already used in human tracking and there are intensive efforts to use it more effectively in the future. With the analysis of the data obtained from RFID based human tracking systems, it is possible to determine the most visited locations, the most used lines and the most favorite places. Thus it is seen that it is possible to make improvements in design, layout and arrangement in places such as fairgrounds and museums. In this study, with the aim of contributing to the literature, it is intend to present a conceptual examination of the usage of RFID technology which has innovative potentialities in many fields and to reveal a visionary viewpoint for the practitioners and possible fields of study for the academicians.

**Keywords:** Indoor, Personal Tracking, Positioning Systems, Radio-frequency identification, RFID.

# CITY – EXPERIENCE - CHANGE

# The Role of Utopias in the Context of Future Cities

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## ABSTRACT

Utopias, expressing a desire for a better life and society throughout history, have been effective in predicting the future by making a proposal for a social order and environment that does not exist, through criticism of what is present. It is possible to associate the utopias that emerge with the belief that a better world is possible with the place and cultural context where they belong. Today, the worldwide expansion of the impact of industrial production and consumption as the basis of social life, continuous growth of urban areas and the negative effects of lifestyles on the environment have produced life-threatening results in the World. As a result of globalization, natural resources are rapidly consumed and cities continue to grow uncontrollably, while criticisms are made for this situation, and proposals for these solutions are developed. Studies of sustainability and livable environment are continuing rapidly, and responses to the consumption of resources are put forward through various institutions and organizations worldwide. Considering that 70 percent of the world's population will live in the near future in cities thought to be the most important source of ecological problems in the World. It can be seen that it is inevitable that cities and a sustainable model of life must be dealt with together. In recent years, it has been observed that urban strategy proposals for sustainable and livable building environment have proliferated rapidly. For these proposals, the concern of sustainability of the ecological system is emphasized, it can be said that the aim is not only to propose an ideal urban form but also to create an ideal society to solve global environmental and economic problems.

Architecture discipline, which has played an active role in the construction of the physical space of social life throughout history, has become one of the most important instruments of social utopias, an important indicator of civilization as a historical and cultural phenomenon. Utopias have been developed on how the modern world, which was built in place of the destruction of the traditional way of life, should be a physical environment in the 20th century. However, the devastating effects of the two world wars led to the criticism of modernism, so rapid urbanization and destruction of nature have been one of the most important international issues in the last decade. The rapid transformation of the ecological environment has brought new problems, and the sustainability of life has been an important research and discussion topic. The desire for a more livable world leads to the development of recommendations on how the ideal life of the future will be.

It is observed that utopian propositions are put forward in the 21st century in which adaptation to nature is considered. Architecture, which takes its future dreams from the scientific ground, now prioritizes the sustainability of society and life and therefore provides places that can be easily lived

in case of possible disasters. Nature, which has to be protected from the destructive effects of humanity, is no longer a phenomenon that needs to be taken away, but rather a phenomenon that needs to be caught up with harmony in interaction. The sustainable environment for future society is inspired by imagination science and technology. It is possible to say that the utopian proposals that emerged in the 21st century carry a driving force for today's sustainable urban projects. This paper deals with the new utopias emerging from a critical attitude that acknowledges that global conditions create cities that are alike with each other's by problems and facilities and destroy ecosystems. Within the scope of the study, the utopian projects that are not associated to a place, but which consider a general 'city' as a social remediation project, will be examined as a paradigm for the viable 'good' cities of the future. This study, which argues that utopias have potential to lead to the future as projects that criticize the present physical environment and reinforce the belief that a better world can be possible, emphasizes that the definition of living space is no longer limited to urban scale and includes the entire ecosystem.

**Key words:** Globalization, Urban, Utopia, Paradigm, Environment, Ideal

# Transformation of Street as a Public Space: İstanbul-Göktürk Case

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## ABSTRACT

Streets are public spaces including different function, providing rich experiences to people in shift from private space to public space; enable people's interaction with each other. Streets which are encountering points for citizens are important urban elements where human interaction is enabled face to face and is a basic element in society-space interaction. Especially in traditional districts, streets where the social interaction of residents takes place are important cultural values as well as physical. Streets which provide socialization opportunity to individuals through shopping, transporting and walking about express social aspect of the district. In modern era, streets have become places on which vehicle and pedestrian traffic took place apart from being a place to live in. On one hand automobiles become widespread due to mass production and become dominant in urban life and functional planning principle of modernism enhance linearity that accelerates traffic flow of streets, on the other hand increasing vehicle traffic caused pedestrians retreat from urban life. Postmodernism accusing modernism of destroying the street criticize the point that street is only regarded as flow/transition place and accepts that street is the complementary element of urban life and asserts that street should be reconsidered as public spaces. Postmodern urban design approaches suggest hierarchical arrangement of traditional urban land usage such as residence-street-district-city in opposition to functional zoning approach of modernism such as residence-resting-business-transportation.

Public spaces form the visibility of urban processes and transformations in urban spaces. The quality of urban life which has changed rapidly in recent years resulted in radical transformation of street as a public space. On the basis of these thoughts and discussions, it would be sensible to broadly analyse the transformation of street as a city component. The aim of this study is to analyse transformation of streets and to present change of their usage and meaning in time as a public space which is also a communication space. Within the scope of study, first of all the characteristics of streets in urban spaces and their roles as a public space were analysed. Then, in order to put forward transformation of streets, the term of street was studied in traditional, modern and postmodern urban space arrangement concepts. According to the aim of study, study field was chosen to be Istanbul-Göktürk Village in order to analyse how the changes in cities influenced boulevards and streets as public spaces. It is thought that Göktürk which is out of Istanbul urban space has postmodern urban space construction with its gated community surrounded by impermeable lands and blocks that is not formed all by itself but totally designed and created by big capital. Starting point of development of Göktürk as a postmodern urban living space is Kemer

Country Project. Since in the development process of concept Project, New Urbanism Postmodern urban approach theoreticians Andreas Duany and Elizabeth Plater-Zyberk participated in with their Project called TND (Traditional Neighborhood Development), Kemer Country is the original representative of global postmodern urban design approaches in our country. Following Kemer Country, gated communities were built in Göktürk in different density and typology yet which create similar living promises; Göktürk turned into a composition composed of the collage of these sites. In this settlement which is preferred by middle-upper class, gated communities are completely detached from each other with high walls, fences and/or barriers. In the scope of study, spatial quality of boulevards and streets in Göktürk and problems which occurred as a result of changes in urban life were analysed and evaluated. It is observed that public characteristics of streets were minimized for being planned together with residences and other social spaces, privatized with high walls and security measures, defined with the boundaries of gated communities. Boulevards and streets in Göktürk have the function of places enabling exit-entrance to gated communities instead of being spaces of publicity. While socio-spatial transformation which restricts pedestrian access at street deforms its conceptual spirit, removes its multifunctional structure which forms its feature in the sense of utility. This transformation which occurred depending on the change of expectations from space is the result of security concerns and prestige in gated communities in Göktürk. Streets which are the basic elements that structurally connect parcels and form spatial structure and compose morphological language of the city are vanishing day by day in the sense of quality and quantity. This study points out the importance of streets as a public space and aims to analyse the effect of transformation in cities on its morphology and on public space which is the part of urban identity.

**Key words:** street, public space, transformation, İstanbul, Göktürk

# "Nostalgic Future": 'In-between spaces' as a Space-Time Authenticity

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**ABSTRACT**

Compared with the past, the rapid alteration of life style, differentiation of needs or changes in social order today effects the human's perception, feelings and also memory. People have stuck between 'to forget' and 'to remember'; 'to lose' and 'to respect' in the city's today's transition and/or transformation. Amy Mills in her book, *Streets of Memory: Landscape, Tolerance, and National Identity in Istanbul* mentions that one of the most important elements in the process of imagining people sharing an identity is the reproduction of a common memory of the past. In this context, Steven Boym's the notion of "*nostalgia*", which is mentioned in *The Future of Nostalgia,* expresses the yearning to local values that is the sense of losing and replacement, a longing for different times. But, this nostalgia, in contrast to the meaning of the word, is not just retrospective, also includes the future; the expectation behind nostalgia is "*the future that has been transformed to the present*". Nostalgia represents a kind of returning to yourself that is just like the memory which relies on reminding tools. The most striking thing is the difference in the sense of time. Nostalgia which enables to percepts of different times, accompanies to each new phase of modernization by playing with timelines, by embracing different types and forms. But, the matter is not the passing time or the changing human being; the matter is missing or transforming '*thing'*. In this sense, Jean Laplanche and Jean-Bentrad Pontalis mention the distinction of two opposite way of recalling past to present in their book "*The Language of Psychoanalysis"* that is *revival* and *reminiscence*. In todays' urban scale, a reminiscence of 'local' versus 'universal' has been created. As Michael Certeau expresses in "*The Practice of Everyday Life",* the spaces in the city are not just architectural metaphors, but also, they are screen memories, the projections of controversial reminiscences for the inhabitants of the city. However, the fact that a civilization has a common history does not mean that people would feel the same thing to every moment or every experience. So that, due to different memories, different expectations, mental and emotional disconnected relationships between generations, there might be conflicts between what is in the memory and what is experienced today. At this point, it is important to the person as a member of the community, what and how the individual recall and how long it has been kept. Heidegger states in *Being and Time* that people are self-interpretative and these interpretations emerge in contexts surrounded by daily experiences. According to him, interpretation is based on one's past experiences and historicity. In this sense, one of the most important factors of social memory which transferred the cultural accumulation, brought from the past, to present day is spaces as a remembrance figure. The familiarity of a space to the individual makes it possible to unwittingly experience that space; those emotions revitalize in the presence of reminders; memories are recalled. For this reason, one way to reduce the feeling of alienation, to develop the sense of trust

is probably in connection with history, culture and common perceptions. As a matter of fact, Serpil Özaloğlu mentions that we can not protect the past; we rebuild it according to present time, in her collected works, *Once Upon A Time - Researches On Social Memory, Place and Identity.*

In today's cities, people might stuck in vertical concrete jungle might yearn to the old. In Adem Yıldırım's *Temporal Experience and Historical Illuminations of Everyday Life in Walter Benjamin article,* Benjamin's temporal experience is closely linked to the experiences of the person who is lonely in life(s) and dragged by the flow of crowd. These occur in passages, streets and wide boulevards that embrace the daily life. Benjamin relates the past and the present with passages (in-between spaces). As a matter of fact, Steven Boym emphasizes that nostalgia as a replacement disease, relates with passages, transits and communication tools and expresses the possibility of explaining the place of experience of the past by today. In the tour of nostalgia in today's 'modern' urban scale, the study, departs from the question of how the *'in-between'* spaces which are preserved in the continuity of local cultures and transferred until today, maintain tendency to be today's popular spaces; concentrates on what is the thing that is yearned, replaced or transformed and/or finally the thing that needs to be protected in urban transformation. As Michael Hebbert mentions in *The Street as Locus of Collective Memory,* the city's memory, which presents content ranging from the spatial development of the city to the events, memories and traditions of the city, ensures the continuity with transition and alteration in the city over time. This phenomenon, which is conceptualized by French philosopher Pierre Nora as *"The Places of Memory",* in his words, is a kind of *"fermented place"* of memory.

Within the scope of this work; a study was carried out in popular in-between spaces and interviews were conducted with the people grown up in a traditional environment, by asking the details of what they want or do not want to see, what they miss, the details they want to see or not to see and they wish to preserve or maintain in the city were all questioned. In search of nostalgia, besides the passage, inn and street experience of the users, the preferred "*in-between spaces*" which they found warm, sincere and preferred with confidence were questioned. From the study findings; it was understood that in contrast to fast, crowded and consumed spaces in the city, people prefer to be together with people in their immediate surroundings. Besides, they were reluctant to use indoor spaces like shopping mall style unless they had to. So, it was understood that, the sense of nostalgia in passages and inns was more attractive to people and the in between spaces were more important in terms of perception. In this context, on the question of *"Can the protecting or recalling of the street aura expresses the desirable nostalgia?";* it has been emphasized how the nostalgia, as a different form of forgetting, has shifted with the urban transformation; in the triple of nostalgia, memory and experience, the predicted keyword would be the transformation.

**Key words:** Nostalgia, Places of Memory, Experience, In-Between Spaces, Transformation.

# The Quest for Neighborhood and Social Sustainability in Terms of Semi-Public Spaces: Ankara Emek Israel Houses, Ataköy 7-8, Neighborhood Design Competitions

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## ABSTRACT

In *The Image of the City*, Kevin Lynch stated that the 'physical environment', 'action', and 'meaning' are interrelated concepts, and that this has been a topic of a debate for a long time. Regions that have transformed in today's cities are faced with the risk of losing their social sustainability qualities in addition to the physical changes. Emotional ties between the users and the place are getting difficult to create in areas that are trying to establish place attachment via economic values or gated communities, and as a result, masses fail to transform into societies. According to Edward Relph, *'to be inside a place is to belong to it and to be defined with it* '. When the built environment and the sense of belonging contained by the inhabitants come together, an original organisation, a community comes into existence and thus creates an identity. In this case, the process of establishing belonging defines the question.

The neighborhood, which is a means of representation and a founding agent of the place and place attachment, is the constituent of street architecture and urban image. The neighborhoods in Turkey acquired their actual structure in the 16th Century and as indicated in the urban development chart of the Habitat 2 National Report of 1996, they preserved this structure until the 1980s. After 1980, the globalizing world and weakening nation-state associations have created socio-spatial polarizations in the urban space. In the process, changes occured in the structural-spatial definition of the neighborhood. These changes have brought the definition of public and semi-public spaces to another point, leaving the relationship between people and place in a shadow. In *Place and Placelessness*, Edward Relph associates this situation with acceptance and adoption of mass production, mass communication and mass culture depth and providing possibilities only for commonplace and mediocre experiences". Trying to discover why and how the places have meanings for humans, Relph claimed that places are closely tied to the meanings or memories of people associated with them. In the works of Irwin Altman and Setham Low, Place Attachment, the process of establishing belonging and ensuring its continuity is examined in four sections: biological, environmental, psychological and sociocultural. In this multi-factorial, multi-component platform,

the main topic of discussion of this study is the investigation of a subject's attachment to a place and the reasons behind it, in terms of semi-public areas in neighborhoods.

The aim of the study is to question the the changes in the level of attachment depending on the formal design of semi-public spaces. In this direction, this work adresses the desire for the "neighborhood" life and hence for the neighborhood relations and belonging that is lost in the contemporary cities as a result of badly designed semi-public spaces, and the efforts to regain it. In order to see how these spatial and socio-cultural values that are lost in a cycle based on unearned wealth under the name of urban change / transformation can be treated, the examples of Israel Houses in Ankara of 1950s and the Ataköy 7-8 in Istanbul of 1980s are included in the study and the concept of place attachment has been approached with the experiences of those who lived in these areas. The neighborhood design contests, which have become quite popular recently, constitute the other leg of this work. With these competitions; it is striking to see the pursuit of diminishing alienation in the city, designing a neighborhood integrated with the existing tissue, and therefore bringing back the neighborhood relations. The data obtained at the end of the work reveal that Israel Houses in Emek and Ataköy 7-8 have gained their unique identity by forming their own context with the public and semi-public space descriptions that enable the community formation; in the process of providing social sustainability, established a directly proportional relationship between the place attachment and the quantity and quality of the semi-public steps between private and public places. It has been noticed that similar approaches are seen in some projects that have won prizes in contemporary neighborhood competitions, and this has been seen as a promising consciousness. In this context, the neighborhood templates that suggested in competitions promises sustainability in general terms.

**Key words:** Semi-public spaces, place attachment, social sustainability, place, neighborhood design competitions

# Fragmented Urban Experiences

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## ABSTRACT

Eskişehir is a city with various break points in its history when its urban development is taken into consideration. It was a city with a low population in the beginning of the Republican era having its economy based on agriculture. Especially with the influence of the rapid industrialization and the geographical position of the railroad, the results such as urbanization, modernization and population increase have positively affected the growth of Eskişehir. These socio-economic outputs, which develop and interrelate with each other, have shaped urban morphology as well as an urban culture.

Another important breaking point is the introduction of universities. By this development, the population in the city has increased and it played a critical role in the formation of the economic and physical urban fabric that accompanies them. The population increase in the provincial stage have come to the dimensions that establish and define the urban space in the long term.

With the decisions of the local governments, another breakpoint has been experienced. This has given Eskişehir another dimension as a modern city as well as the identity of industrial city and student city. The places that are produced in the city and the designed buildings have made Eskisehir a tourism city. Especially high-speed train makes Eskişehir more accessible, has been effective in presenting and introducing traditional and modern textures of the city. The historic Odunpazari residential area and its rejuvenated architecture and commercial spaces have an important place in this new presentation. In addition, recreational areas, parks, and retail buildings created by the transformation of industrial heritage, which are included in the city, offer rich alternatives for tourism.

This study is carried out to show the urban experience of "post-tourist" coming to Eskişehir as a tourism center. Through this experience, which is supposed to be fragmented, the practice of perceiving the individual and his city is discussed. Especially the day-trips and the route planned for Eskişehir, post-tourist actions and experiences were evaluated in relation to the places. Where to stop, where to eat, what to eat and drink, where to take pictures etc. actions, the stalls on the route, and during the transition from one point to another point, are individually, intermittently, piecemeal and discontinuous experiences. These are discussed from an individual point of view. When the collected data from this experience are brought together, the question of which information we have on the whole of the city is in a critical position in terms of work.

When Eskisehir and its development are considered, the fragments experienced during one day coincide in a certain way with spatial causality originating from memory. However, these intersections are the superficial fragments of a designed route, and they do not touch much of the collective memory spaces that exist beyond the design. For this reason, the specific activities of the planned post-tourist route remain as a fragment of the city, carrying clues about the city's long-haul film, but the city is not similar to perceiving and experiencing the original. Because in order to recognize a city, one must lost himself along its streets. Seeing the chimneys of factories that have given the identity to the city, it can be important to know its reference to the past. The information about the place may not be obtained just from an image. For this reason, brickwork, colors, smells and sounds are also influential in completing the whole. The piercing voices of planes passing through the sky that interfere with all the dialogues, the intense smell coming from the Sugar Factory may become a negativity that misses the enjoyment of the day-to-day experience. The post-tourist expectancy is to benefit from the service introduced to him until the end. The post-tourist reads and experiences city through the imagery. This means that in the direction of post-tourist expectations, the city can reveal very little of the original information.

**Key Words:** Post-tourist, urban identity, memory, Eskişehir

# Redesign of Two Linear Urban Voids in Eskişehir; Comparison of Hamamyolu and Hatboyu

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## ABSTRACT

Eskisehir has undergone major changes in the last 10-15 years. Due to the increasing infrastructure and superstructure needs of nearly 900 thousand people, municipality and central government policies have had a major impact on the change of the physical appearance of the city. The elements that make up the identity of the city are student population in the city, historical texture in the Odunpazarı region, Porsuk River dividing the city into two halves and the industrial heritage. The spatial interventions in the center of the city are realized by the metropolitan municipality and the two county municipalities (Tepebaşı, Odunpazarı) as well as by the governorship which is the representative of the central government. Also, some other institutions are also able to use their will to transform the urban areas they own. While these decision mechanisms have different political and ideological backgrounds; it makes it difficult to be the practices in the city as collective and participatory and to be produced directly in the benefit of the city.

The center of the city today is in a small zone and dense. In a plan drawn on 1986, we see only the settlement around Odunpazarı district and around Köprübaşı, which was the main trade zone. After the foundation of the Republic, new industrial buildings built on the train line has expanded the city, but the city center was just on Porsuk River line. Therefore, today there is a still pedestrian and traffic circulation problem going on. Also lack of green areas is another fact about the city center.

Urban void is related to the concept of urban space. Urban space corresponds to any kind of structured or natural surroundings to which the public can easily reach. However, urban voids are the in-city volumes that urban residents use in a flexible way, without too much defined programs. In the case of Eskişehir, the Porsuk river and its margin can be defined as an urban void. Squares and parks can also be included in this recognition. In this sense, the question arises how urban space should be treated as a design problem. What parameters should be addressed when constructing an urban void and how should its relation to the city be constructed? This study will be carried out in Eskisehir in the last 3 years and will try to make a comparative study of two urban spaces with linear character. One is the Hatboyu project that emerged after Hammyolu, one of the oldest commercial arteries of Eskişehir, and the other, a railway that divides the city from the center.

This study will try to compare two urban void projects with linear character done in last three years in Eskişehir. One is the oldest commercial arteries of Eskişehir, Hamamyolu; and the other is Hatboyu project that emerges when the train road is taken underground. In this study, these two parts of the city, which are of very different quality due to their temporal and physical contexts, will be examined in terms of design approaches and they will be discussed in terms of what they bring to the city by comparing them with certain parameters.

**Key words:** Eskisehir, urban void, urban design, public space, urban context

# "Apart House" Concept and Spatial Evaluation of Apart Houses in Eskişehir

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## ABSTRACT

The housing problem and inadequate housing have been primary concerns of the urban developments in Türkiye due to the anachronistical causes of modernization and industrialization. Eskişehir is one of the most important industrial cities, which has gained a modern character after the introduction of a variety of factories and state sponsored settlements, especially during Republican Era. Consequently, this has ended up with the increase of the population in the city which brought about the new residential patterns in the urban morphology. Regarding this period, when the image of the city is considered, it could be said that Eskişehir was synonymous with its factories, railway and Porsuk River.

This image, however, had transformed into another one related to post-modern urban tendencies generating a more discontinuous, partial, disintegrated and temporary ways of planning and dwelling on one hand. On the other hand, the universities in the city caused a heterogeneous demography with its concomitant circumstances. Besides, not only the number of younger people attending to universities in Eskişehir paramounted, but also the urban, economic and socio-cultural outputs of it had become visible so that the identity of the city has stated to be dominated by an image of the "city of students".

The shift in socio-economic structures resulting in a change from an industrial city through a post-industrial (student) city caused a divergence in the physical structure as well. "Apart Houses" is one of the touchstones of this destructive transformation. The housing shortage to shelter students and the inadequate alternatives such as dormitories to accommodate them leaded a liminal design solution, in order to house maximum number of students on minimum sizes of lands. The problem seems to be solved mathematically and economically, yet it is rather far from spatial, qualitative and social solutions.

Regarding global approaches, 'Apart House' is an invented new term used for small-scale houses which has been prevalent and preferable in USA and Europe since mid-1970s. According to the housing researches the number of nontraditional households (unmarried couples, singles, students, and elder people, and people living alone) are growing rapidly worldwide often because the smaller houses are more affordable (Sell, 2006). Moreover the idea of smaller house supports the trend of sustainability since wise use of spaces is one major topic in the development of sustainable design. Larger houses consume more resources both in construction and in maintenance.

Apart houses in Eskişehir are also small-scale houses designed to accommodate especially university students. Being small in scale does not mean a smaller version of a larger house. On the contrary, to organize spaces in a smaller area needs a more careful design approach in order to create livable and functional houses. A small house can have a smart, flexible floor plan, good

storage opportunities, well-positioned apertures, and clever extensions (balconies, patios, decks, and even rooftop living areas) with a variety of uses.

This paper is an attempt to better understand the spatiality of “apart houses” in Eskişehir, through some examples. In order to do that, firstly, the definition of “Apart House” concept is clarified. Secondly, the spatiality of “apart houses” is questioned according to some design criteria. Those criteria have been discussed in city councils of some developed countries and reported as “good”, “livable”, “sustainable” design principles for house design. Literature review, visual analyses on photographs and analysis on interior plans is set as the methodology of the study. In conclusion, the prevalent construction of “apart houses” is discussed through a designerly perspective in order to contribute for a proliferation of more livable and qualified spaces.

**Key Words:** Apart house, small house, design criteria, Eskişehir

# CITY - REPRESENTATION - AUTHENTICITY

# An Alternative Approach to Architectural and Urban Design Problems: Anti-Architecture

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**ABSTRACT**

General description of architecture; is defined as art of designing space in specific principles, in cooperation with various disciplines and in the direction of aesthetic principles considering the needs of the users. And the architects are the specialists or authorities who make these designs. This current definition has been repeatedly formulated with the addition and removal of various concepts throughout history, it is reproduced by integrating other disciplines and architecture. Significant social, political and economic transformations in the historical process have changed the architect's mission, profession definition, macro and micro-built environment, but with the 20th century, this change has entered an irreversible period. The 19th century industrial revolution, which is at the beginning of important events in terms of world history, caused massive breaks in the field of architecture in the 20th century due to mass production, acceleration of urbanization and population growth.

A new understanding of architecture has emerged, depending on a number of parameters that can be exemplified in the first and second world wars of the 20th century, technological and scientific developments, and the Internet revolution after the 20th century, this understanding has rapidly transformed the built environment into a radical form by gaining momentum at an international level. The new architectural understanding emerged with the contribution of the new building materials which became possible to mass produce is called modern architecture. The movement of modernism in architecture has been a movement that basically took the principle of simplifying the form and abandoning the aesthetic concerns of the known sense of architecture. With this new understanding, architects and urban designers have created a representation language which they call "international style" both on paper and in the field of construction. Architects and urban designers have transformed into actors who have created sterile and functional spaces that are far from the negative effects of unhealthy conditions for urban people who have become new customers and thus set the ideal life. The built environment transformed by the designers who become authors and the experience that has been constructed have begun to shake after a while with the opposite discourses and actions of the users. The movement of modernism, especially with the destructive effect of the Second World War, lost its validity in social, political and economic fields. Designers who have contributed to the built environment have now become creators of the forms and functions that are questioned by rationality.

From the second half of the 20th century, the architectural world entered a multi-tone, multi-colored turn. In this period where voices were heard against contemporary architectural

understanding, attempts were made to demolish traditional assumptions and these studies have enriched the debate on architectural space as never before. This new insight kind of discomposes the understanding of the mainstream space and the acceptance of this understanding can be called as anti-architecture / reverse-architecture. The designs that contributed to the concept of anti-architecture in the history of architecture were often neglected and the potentials of these projects with secondary importance alongside the mainstream productions could not be explored. It is a failure to address the problems detected in the fields of architecture and urban design within the voice of critical approaches and attempt to solve them with a traditional approach without leaving the comfort zone of architecture and urban design disciplines. The aim of the work is to make an alternative reading of the architectural and urban design problems of the recent past and the present, centering on the anti-architectural concept and the production which contributes to the concept. In this way, it is aimed to find out about current problems and to bring solution proposals. For this purpose, two architects, Gordon Matta Clark (1943-1978) and Lebbeus Woods (1940-2012), who have defined the concept of *anarchitecture* and contributed as comprehension and action, will be examined in macro and micro scale. Gordon Matta Clark, who worked at the cross between art and architecture in the 1970s, entered the abandoned building without permission and made a series of cuts, Lebbeus Woods, whose work in the early 1980s and early 1990s will be examined, has come to the forefront with cities that are affected by war and crisis situations, with non-feasible work existing only through means of representation. The common point of production to be addressed is that they provide a concrete contribution to the physical space in a known sense. However, these studies allow us to discover new potentials of architecture by isolating themselves from any constraints that come together to exist in the built environment. It has been envisaged that through the productions which contribute to the concept of anarchitecture, the concept of architecture can be regarded as a subject of change, not only in the physical environment and in architectural applications, but also in change and transformation.

**Key words:** Architecture and urban design, anti-architecture, anarchitecture, architectural representation

# Unconsumed Icons despite the Urban Transition and Transformation: New Hopes for Ankara's Atakule

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## ABSTRACT

Nowadays, cities are plunging into a search of disclosing the potentials of the city with the inevitable influences of globalization while giving a struggle to protect their own identities. It is possible to say that cities are in search of authenticity by using the iconic power of architecture. Iconic structures can exist in architectural platforms as a result of the efforts to gain the identity of today's cities. In the architectural environments where the cities are faced with uniformity by using similar production techniques and materials, symbolic structures, with iconic expressions and powerful images are tools used to differentiate visual identity values. Tolga and Dilek Akbulut mention in their article titled "*Changing the Image of a City"* talk about iconic structures as a singular architectural product that are independent from the whole, do not support the whole, do not receive all the support from the whole, in other words do not get a reference from the local and regional values and cannot relate to its physical environment. In this way, a new image and brand value have been created for cities that are gradually getting similar to each other. The iconic structures, like those mentioned in the Kaika's article "*Architecture and crisis of: re-inventing the icon, re-imag (in) ing London and re-branding the City"*, provide a perspective *"from outside the traditional frame".* For this reason, iconic structures are considered together with the concept of *'new'* which creates contradiction with the old, like the new image of the city, the new identity of the city, the renewal of the city. In this context, a symbolic competition between cities emerges and the images of the city are built on by a singular icon structure of the city, leading to the city being pushed to the background of the authentic identity and urban texture gained. With the concern of transitioning the city image, constructing the concept of *'Bilbao Effect'* in the literature, these buildings tend to respond to a search in the context of attracting cities and urban projects, promoting cities and contributing to urban tourism. It can also be said that these structures are the results of economic success, they symbolize the power of technology or be an indicator of innovative urban transitions. For this reason, the globalization and liberalization seen in the world since 1970s, has created a ground for the spread of iconic structures. These urban transitions can be considered as triggers of branding actions along with globalization.

The emergence of symbolic structures should be examined with the question of whether cities need a symbol. The symbolic value of Atakule in the city, included in the written and oral sources as a city icon of Ankara, is discussed within the scope of the initial question "Did Ankara need a symbol?". From 1989, the year of the opening, Atakule visuals are commonly seen in Ankara

postcards, the institutional and organizational logos that can be associated with Ankara, in local events and advertisements. Atakule's dominant iconic value for Ankara is the focus of this study. Discovering Atakule's place in the city and discussing its symbolic value will be possible with examining its contexts such as its place in urban identity and urban memory, its contribution to the image and branding of the city, its role as a landmark and its iconic expression, its architectural and structural achievements. This discussion is also aimed to illuminate the duality of Atakule's symbolic and imaginary values in the frame of social memory and urban experience. In the study, Atakule, which was generated as the product of search for an iconic structure in Ankara, is questioned as the symbolic situation in the frame of urban transition and transformation, and the persistence as an image by continuing to cling to the city. Atakule was designed with a shopping center, but only the tower got the title of being the city icon. Atakule Shopping Center was wanted to be strengthened due to the continuously increasing competitors and by 2014, the shopping mall section was completely demolished. Today, it is aimed to integrate the new shopping center, which is still undergoing transformation process, with Atakule. The independent design treatment of the tower from shopping center also raises contradictions related to belonging. Preserving the symbolic value of the tower on the transformation project of shopping center also expresses the hopes for the tower in a sense. The statement on the billboards covering the demolition, *"The Tower Is Under Your Assurance, Signature: Shopping Center"*; also strengthens the relationship established between its symbolic value for Ankara and collective memory. Within the scope of the study, regarding the transformation project, new experiences waiting for Atakule and the effect of these possible experiences on its symbolic value are discussed. As a method of working, the written and oral documents revealing the symbolic value of Atakule have been the subject of the article in conjunction with the theoretical readings on the symbolic structures of today's cities. Atakule's image in the memory is revealed through oral sources and visuals used in various media and communication tools. Findings of the work show that Atakule which is a tower that can belong to every single place, can still maintain its authenticity in the memories as an image without being influenced by the processes of urban transition and transformation through integrating with the city in an imaginary context. However, it is thought that how Atakule can exist in such a way and how it can keep up the hopes for Atakule can be enlightened by new experiences of the transformation project.

**Key words:** Iconic structure, city icon, city image, Atakule, collective memory.

# Cinema Buildings of the Republican Period in the Process of Urban Change and Transformation

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**ABSTRACT**

In 1895, after the first public film presentation performed by the Lumiere Brothers in Paris cinema all over the world and in Turkey has begun to spread rapidly. First presentations in Turkey are done in Beyoğlu district of Istanbul and opened the first cinema places here. Modern cities in CIAM (International Congress of Modern Architecture) congress held in 1932; four main tasks are divided into the headings of accommodation, rest, work and transportation. As part of one of the main themes of the rest, the film industry has become a popular activity over time, interacting with sociological and cultural situations of societies through new technologies. According to Özön'e (2008), cinemas have the audiences that range from towns to towns and villages, and the theater in ancient Greece has the place and the importance in the daily life of the people. According to Öztürk (2014), humanity has reached a new lifestyle with the city, and the birth of the modern city or of the urbanization has been almost synchronous with the cinema. It provides to the crowded masses interact with each other in the city life bringing together the individuals. As a result, cinema places that have become popular with the cinema have started to take place as social-recreational facilities in the modernizing cities of the world. For Turkey during the Republican Period modernization cinemas with operations spread across Anatolia and places where people spend time in the city has come to the fore. Within this study, twenty cinema buildings are selected which are in the foreground with the formal and spatial features of the Republican Period in the cities of Istanbul and Anatolia. Some of these buildings include; Süreya, Emek and Atlas Cinema in İstanbul, Atatürk Forest Farm in Ankara, Etimesgut Sugar Factory Alakart and Büyük Cinema, Tayyare Cinema in Bursa (Tayyare Culture Center), Gündüz Cinema in Hatay (Meclis Cultural Center), Karabük Yenişehir Cinema, Dilan Cinema in Diyarbakır, Kılıçoğlu Cinema in Eskişehir, Kılıç Cinema in Zonguldak, Eski Cinema in Yalova and Halk Cinema in Çankırı. It is aimed to draw attention to the importance of preserving these buildings both in their present architectural condition and as a modern architectural cultural heritage. Analyzes of selected cinema buildings' location typology, periods, current conditions and usage conditions appropriate to their original function are done. As a result of these analyzes, it has been seen that the cinema buildings that have been examined lose importance in recent years due to

decreasing interest, changing social trends, urban changes and transformations. It has been learned that most of the cinemas have become obscure without being used, changed their functions, closed and destroyed. The reasons why the examined cinemas came to this situation and the changing social orientations are questioned.

It has been observed that cinema halls in malls, which are becoming increasingly popular nowadays, are becoming increasingly popular and have many opportunities for users (entertainment, recreation, parking, shopping, restaurants, etc.). The spatial and physical characteristics of these halls have been researched for reasons of preference. In this context, displays of different and various images such as five-dimensional and seven-dimensional displays, moving and technological seats, advanced acoustical systems, high quality film formations, display and sound systems take over.

In addition to all these technological developments, the future of cinema buildings which maintain their existence in the state of idle or change function within the urban texture but can not fulfill their main function is discussed. In other words, these buildings, which are a part of urban memory that can be transferred to future generations, have been tried to present their suggestions for continuing their essential functions or transforming them into similar functions in order to provide spatial and social-social sustainability.

**Key words**: Cinema building, modernism, urban change, transformation, sustainabiliy

# Social Reflections of Spatial Transformation in Turkish Cinema from 70's to Today

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## ABSTRACT

Cities and societies are such dynamic structures within a continuous interaction, and a spatial transformation effects the societal life directly. It is clear that in the globalized world, environment and human are in a continuous transition and transformation process by means of sociocultural and psychological scales. These observations would pass to future generations by movies, which could reflect the elements of their times as a concrete data. Cinema movies could be also historical evidences recording their times' relationships between human and human and human and environment.

Yesilcam films, have an important place In Turkish Cinema history, scrutinize the time's issues in the rural and urban areas and mirror social and economic scenes especially after the 60's with the time's new constitution. In the 70's several Yesilcam films examines migration from rural to city. Anatolian people's struggle in adaptation process to the city after migrating to Istanbul with the hope of finding a job and increasing the comfort level of their life, the survival war of rural culture in the complexity of urban space are expressed in these movies. In the epoch cinema films, the process of the transformation of Turkish cities could be observed with the issues based upon societal relationships. The problems such as unemployment arise from drought and famine, survival migrations to city from rural due to the steamrollers of feudalism, the process of adaptation to the city life, migratings' slums in the city as a failure of urbanisation, the relationships between the societal classes, transformation of urbanites alongside of rural migrants have been treated as such subjects in the Turkish Cinema from 70's to today.

The aim of this research is to analyze the transition of urban space from 1970's to today on the basis of societal reflections from the frame of Turkish Films which testifies human and environmental transformation and the process of transition in the historical phases. The movies analyzed in this research have been chosen as 'samples' considering of their reflectivity from sociocultural and environmental perspectives in their periods. From 1970, each consecutive decade

is represented by one sample. Through the analyses of the sample movies listed below in this study, the transformation of space in cinema, and urban - human relationships will be interpreted within the context of urban sociology and societal psychology: 1974 production film 'Aclik' is scripted and directed by Bilge Olgac; 1985 production film 'Zugurt Aga' is scripted by Yavuz Turgul and directed by Nesli Colgecen; 1993 production film 'C Blok' is scripted and directed by Zeki Demirkubuz; 2008 Turkish - American production film 'Melegin Sirlari / Broken Angel' is scripted by Leslie Bates and Tulay Pirlant and directed by Aclan Buyukturkoglu; and 2017 production film 'Kaygi' is scripted and directed by Ceylan Ozgun Celik. The movie 'Aclik' (1974) reflects the difficulties brought by drought and a woman's fight and struggle with it. It is one of the movies reveals not only the time's rural and the feudal structure but also treats the issues at an extreme level caused by environmental disasters, social and economic collapse. In the movie, the city is reflected as a hope for unemployed individuals at rural. There is also a strong emphasis on the possible effects of environmental disasters on societal relationships.

'Zugurt Aga' (1985) is one of the well-respected productions which conveys successfully the transition process from feudality to capitalism on the silver screen. A landlord, who flees from Eastern Turkey's feudal system after losing his landlordship, and his survival effort on the base of capitalist social relationships in the urban context is narrated in the movie. In the movie 'C Blok' the urban life of the 1990's, city silhouette 'invaded by the giant monstrous blocks', and the psychological effects of urban space on people from different societal classes who get stuck in the moody and tainted structuring of the city could be observed. The scenes showing where the city image, depicted by high-rise apartment blocks, meets with the sea take place repeatedly in the movie. Emphasizing the thickened line in between nature and the city by these scenes, the director also addresses urban space and its failed adjoint slum lives in the subtext of psychological effects of spatial transformation against nature.

2008 Turkish - American co-production 'Melegin Sirlari / Broken Angel' moves a step forward to the globalized world in the city of angels and reflects the reality of today. In this sample, the reality of American Dream and the dark side of it experienced by a Turkish girl is mirrored to the silver screen in a continental perspective. In the movie, which is adapted from Tulay Pirlant's novel 'Ruzgarli Sehir / Windy City' written based on a real story, the adaptation and transition process of human-being to a space, loss of culture, and loss of self-authenticity, the effect of this transition process on people is reflected. Social and psychologic collapse as a result of sociological deformities and distortion of globalized crowded cities could also be viewed in scenes takes place in the Los Angeles' dark streets. 2017 production film 'Kaygi' is chosen as sample movie from the last decade for this study due to its success of reflecting the capitalist meaning of urban transformation. In the movie, urban transformation's negative effects on urban memory and identity are reflected in a critical perspective by means of the confusion of an individual, who is in quest of memory and self-identity. The loss of historic, cultural and social values, that the cities are losing today, is also emphasized in the movie.

As a result, it is clearly seen in this study that, social effects of spatial transformations in cities could be seen as a literal translation in the cinema within a historical order. Analyzing these transformative processes that people undergo depending on the transition of spaces by means of the chosen sample films, suggestions are proposed towards a positive interaction between space and society in transformation.

**Key words:** Transition and transformation in urban, cinema, society

# The Effects of Cultural Imagery and Human - Nature Relationship on the Space Setup in Miyazaki Cinema

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## ABSTRACT

Architectural spaces have social values, cultures and associations within ordinary but meaningful relationships of everyday life and enable them to be transmitted to future generations. For this reason, it is possible to find the formation logic of space in social life, cultural values and geography. Because architecture is influenced by changing cultural and social processes over time, it constantly changes the language of communication. It transmits not only the period and the story of place that it belongs to but also the history and the value of that society and culture. So, space is not only an area that defines a void in space borne, but a place that can be explained by social interaction and action, and its content can be conceptualized, which is the cultural and physical dimension. In this case, architectural space is a tool for social and cultural change, transformation and originality. The concept of space, which is shown as the most original and distinctive feature of architecture, is multidimensional for this reason. This carries it to a ground of interdisciplinary. In this work, this power of architecture will be handled with in relation to a different discipline. Today we live in an urban environment shaped by productions that treat the authenticity of space, its historical / cultural value and its meaning as a consumption object, often without questioning it. The space which is cut off from its context and lose your originality can not host continuities of the culture and tradition. In this case, the created ordinary architectural environments have a strong relationship with technology but, cultural ties and social values are ignored. Yet culture is an instrument for the individual to establish communication with the environment and nature. This instrument is losing its influence day by day due to the pollution of the nature and the environment that become the object of consumption today. Cengiz Bektaş summarizes our situation with these sentences: "Once the culture is polluted, everything is following each other. To say directly, as culture is polluted, the water gets dirty, the air gets dirty. Soil is polluted...Can we regard the cultures of armed countries as immaculate? Even if their water, air, soil are clean..." (citated by Keleş from Bektaş, 2005, p.1). Napier (2008: 21) indicated that animation setting with the rapid change in narration and the continuous transforming of imagery has effects not only on Japan society but also on industrialized countries. It has a superior advantage about reflecting of change atmosphere. In connection with this, it is resulted that the animations can be instrumentalized in order to analyze the changing society, culture and architecture. In addition, architecture as an interdisciplinary area ensures this research. The aim of this study is to show how the cultural and social experiences of the space are handled and represented in other disciplines such as the anime. In this work, Animations of Miyazaki which deal with problematic issues such as cultural

degeneration, identity loss, human-nature relation and breakdown of this relation, deterioration of ecological balance, technological based nature destruction will be examined. Additionally, the contents associated with the subjects that he worked in his animations, Miyazaki reflects directly or indirectly the culture-based imagery to the settings that he created. In short, Miyazaki has developed a unique cinematic narrative form by analyzing the cultural and social structure that determines the visual and auditory codes. Although this form can be seen as local due to the fact that it is fed from Japanese culture, it is universal with the narrative serviced and the message given. In this work, conceptually discussed values are examined according to animator Miyazaki's works rather than works seen concrete in the field of architecture.

The aim of this work with the examined films is to analyze the representations of Miyazaki's culture in the tidal way he created between his imaginative world and reality, and how these reflects the theme and the spatial situation in the space. Scope of the study includes movies of *Nausicaa of the Valley of the Wind* (1984), *Castle in the Sky* (1986), *My Neighbor Totoro* (1988), *Princess Mononoke* (1997), and *Spirited Away* (2001). These movies are chosen as the sample films since they have a unique narrative language and the most critical perspective seen on the environmental problems. The method that is followed in the formation of the text is the determination of the subject, the source and literature review, examination of image-architecture-culture relation through Hayao Miyazaki films, analyzing the theoretical structure of the subject through films and discussion of the result.

The study consists of two parts that are theoretical patterns and evaluation of these theoretical patterns with examples. In the theoretical section, concepts of culture, image and space are examined, while in the second section these concepts are analyzed through Miyazaki films. Findings related to the space comes to the mental dimension visually with animations will be tried to understand by means of the images. Critical interpretation that is missing today is thought to be found through animations due to the animations are the interpretation of the architecture by the spatial representations. In addition, the animations are not just representational objects; but also they transform spatial fiction both a mental fact with the interplay of real and the fictional space. As a result, animations use architectural elements such as chateaus, castles, temples, baths, urban squares, as an instrument to create the narrative, and bring these spatial elements to the mental dimension by means of images. The misleading architectural environment that is forced to perceive everything through the visuals that are brought closer to the reality affects one’s perception of the space negatively. This study shows that spatial perception can be understood by means of different tools. It is thought that the animations that reach the mental dimension of the space through the visuals through the visuals can be proposed as one of these tools. It is also thought that animations will help change the point of view thanks to the created consciousness with their messages by showing what they might be, even if they do not provide solutions to the problems in the environment of architecture that is meaningless, transfigured and disconnected. As a result, in this work we can question in the absence of the environment what Miyazaki tried to convey through his films, "what has been lost and what might have been in the past" in architecture.

**Key words:** Miyazaki cinema, representation, image, culture, architectural space

# Old & New Contradiction in a Transitioning and Transforming City. "Where is Authenticity?": Ankara Central Train Station and Ankara High-Speed Train Terminal

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## ABSTRACT

The built environment composing a city, not only represents the urban and architectural values and terminology of a particular period, but also carries the identities, life styles, cultures and ideologies of that belonged society. The city, which is in constant change, documents its own past. In "Realms of Memory", Pierre Nora states that the identity of a city could only exist with the preservation of elements constituting the identity of a society, and any experience of urban living of the present is actually a continuity constructed on the knowledge of the past, while any contribution to a future experience about city could only be possible by marking the past as a souvenir of memory. However, a priori continuity in urban identity has been interrupted by varying ideological entities appeared as a side effect of modernity. Throughout the modernization process, as a result of changing definitions of architecture as a constituent form of communication between society and ruling power, agents of centralized power appropriated a convenient architectural style to be established in public sphere, thus, this consolidated the role of architecture to construct public identity. The new role of architecture is attained to be the representative of societal values and an agent of change constantly reconstructing everyday life of a society. Throughout the history, all regimes -from the most totalitarian to the most democratic- have been effective agents in constructing, transforming or development of the built environment. Tekeli states that the effect of political power on building scale has mostly been ideological in a sense that a building could communicate and transfer information to public on who to be, or how to live.

If we look at the situation in Turkey, for example, Early Republican period is a significant time in the history of Republic of Turkey since the ideology and worldview of the young republic was constructed during this period. The ideology of Republican Period, although is a continuation in terms of societal practices initiated by the westernization of practices during the ruling of Mahmut II, has also involved a process of disintegration from the imperial ideology and a whole re-constitution of nation-state practices. As a continuation of this process, Ankara, after the approval of Republic's First Constitution in 1921, was declared as capital on October 13, 1923. The new urban model to be established by the young Turkish Government, in this sense, had to be significant symbolizing the power of the Republic by encouraging the modernization in every field. The search for a new national identity in architecture initiated by the ruling power in this period through First and Second Waves of National Architectural Movement, only briefly resurrected as the Third National Architecture Movement after 1980, however, could not go beyond a mere replication of

images of the First and Second Waves. The search for identity using the power of architecture can take place in different spatial platforms. In this study railway structures will be presented as an example of this search. Foucault, while claiming the railway composes a new dimension in the relationship of political power and architectural space, states that "*space is the construct where the discourses on power and knowledge transform into actual power relations*". According to him, the railway composes a new network of communication that would not necessarily reciprocate with traditional transportation systems. He also points out the characteristics and history of a particular society that had to be considered while bridging with a new method of transportation network. Moreover, he points out the existence of all social phenomena caused by railways, whether this may be a transformation of population or changes in social behaviors of individuals.

While the Western world was introduced to railway networks in early 1800s, this process could only be initiated at the end of 1800s in Anatolia. Transitions and transformations of cities started with the formation of public plans together with the new technical developments of the railways. Haussman, in his urban studies of Paris, reorganized the historical quarters with new large and axial roads in the form of transformation networks linking certain centers of the city to railway system. With this reformation, new boulevards were designed to encapsulate the historical texture of Paris. These urban applications set examples of reference of urban transformations firstly for other cities of Europe, than for Ankara. After the Republican government was formed in Turkey, the initial objective for restructuring of the country was to integrate every settlement through an enormous network of transportation. In this process, production of any means encouraging the modern living in cities was thought as necessity. Railway network and its architectural agents contributed to the development of urban centers while symbolizing the unity of country in this period. At the focal point of this unity, Ankara Central Train Station which is one of the most significant public buildings symbolizing the Republic's history, is located on the cultural axes named as Terminal Boulevard. The Ankara Central Train Station building stands as a symbol not only of modernization, but also of the ruling power as a modifier of the intended transformations in public norms of life. In 2016, to meet the rising demand of transportation, Ankara High-Speed Train Terminal (Ankara HSTT) was constructed with its back to Ankara Central Train Station at the same time to the collective memory of the society.

The search for the answers of arising questions such as: in contemporary discourse, how can the new train station buildings be characterized within a transitioning and transforming urban context? and what does the facade characteristic, scale and material of newly-built train stations represents in the framework of power-ideology-identity triangle? necessitates and inquiry on social and ideological symbolism of Ankara Central Train Station, and also a comparison to newly-designed Ankara HSTT regarding the social structure and public norms of life in contemporary Turkey. This study aims to analyze the symbolic and formal meanings of Ankara Central Train Station and Ankara HSTT buildings in relation to re-changing definitions and relations of architecture and political power. Base on literature reviews, the method of the study is to scrutinize the transformation and transition of the image of public buildings in collective memory over past-present-future triangular basis on two case buildings comparatively these are: "Ankara Central Train Station and Ankara HSTT". The outcomes of the study supports the initial hypothesis that under the so-called definition of urban transformation, the ascending tension between architecture, political power, ruling ideology and technology acted as a determinant on the characterization and formal composition of Ankara HSTT building.

**Key words:** Foucault, social memory, ruling ideology, train station, urban identity

# Architectural Hybridity in the Transformation Process: Contextual Representations for the Spiritual Sustainability of the Space

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**ABSTRACT**

Hybridization can be described briefly as the encounter of two different situations, the positioning together rather than destroying each other. Many situations can be defined as "hybrid": a structure that is newly constructed or transformed and reused can be defined as a hybrid if it can relate to its surroundings or previous periods in a cultural or physical sense. The hybridity studied in this paper constitutes the hybrid of evaluating the local and the new with all their dynamics, the processes of confronting each other, the spatial reflections of the resulting hybrids and the environment in which they are constructed. The "local" symbolizes belonging to the place, as well as the essence, the self and the accustomed situations, on the contrary, "new" is defined as the "other" of the local. The historic and contemporary togetherness is always a comprehensive contentious area in architectural and urban designing. Especially in the historical settlements, there are many questions to be answered by the designer. The study aims to explain that using the hybrid systems while transforming is an important method to sustain the essence of place. Within the scope of the study, a methodological discussion with the questions on hybridity in design has been developed on examples selected as "*contextual representations*". Along with this theoretical framework, the different hybrid approaches considered as the main theme of the study are: mixed/merged construction of different centuries (antique vernacular architecture of Çavdarhisar), front-back construction of different centuries (Zvi Hecker, Palmach Museum of History, Tel-Aviv, Israel, Amateur Architecture Studio, Ningbo Historic Museum, Ningbo) and lower-upper construction of different centuries (Peter Zumthor, Art Kolumba Museum, Cologne). * Çavdarhisar is a town and district of Kütahya Province in the Aegean region of Turkey. Settled over the Aizanoi, ancient city of Phrygia, Çavdarhisar uses the ruins of that period as a genuine part of their newly built structures. The cities can be read from the ruins as well as the dreams in people's mind. * In Zvi Hecker's words, the Palmach Museum of History, is a landscape demonstrating the Israel dream into reality. Designing mostly in bare modernist style, Hecker's selection of materials is trying to symbolize the soul of Israel within a traditional approach. Not only the conceptual has he also added a poetic approach to the circulation risen from the Jewish history. The hybridity can also be realized within the conceptual ideas of the designs. Sometimes chasing the memories could be a start line for sustaining or recreating the city's character. * Ningbo Historic Museum in China has brought Amateur Architecture Studio the Pritzker Prize with the ideas of conveying the traditional arts hundreds of bricks from the demolished traditional buildings all over the city. To keep the spiritual images of the China, Amateur Architecture Studio sticks to craftsmanship and the resources they've found in the history and the rural area. * Respecting the site's history and

preserving its essence Zumthor omitted his autograph to become a part of the historical timeline using a delicate brick cover in Art Kolumba Museum. The Museum sat atop the ruins of Kolumba church which was destroyed in World War II and a mid-20th-century chapel (Madonna in the Ruins) designed by Gottfried Böhm. As explained Zumthor at the museum's opening "*this project emerged from the inside out, and from the place*". Taking part of his own the Museum becomes a new part and also an actor of the historical line. All these examples in the transformation process have shown that the common goal of hybrid systems of using local examples blended with different centuries (either mixed/merged, front-back or lower-upper) was to reach the "spiritual sustainability" or a "sustainable essence".

**Key words:** Architectural hybridity, transformation, sustainable essence, spiritual sustainability, contextual representations.

# CITY - CULTURE - ART - CONSUMPTION

# Consumption of Space and Transformation of Space into Consumerist Space

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**ABSTRACT**

The consumption activity that is claimed to be freed from (non-deformed) needs transforms the space into a market. What is to be called teleological consumption, in that sense, appears as a social signifier or a symbol and paves the way for the needs of the market to manipulate the pure needs and organize the social life. This process coincides with the historical period that created the "consumerist society". The transformation of consumption conception has both changed the structure of consumption spaces and launched the process of repression over public spaces by consumerist spaces. As a result, *consumerist spaces are viewed as public spaces* and under such circumstances this assumption always recreates itself. Working on the transformation of public spaces into consumerist spaces necessitates rehandling the ontology of space in relation to consumption concept and substituting the actor with accumulation processes. The capital's (re)discovering the space and finding the remedy for the stagnation in especially the activities organized over urban space so as to recreate itself enabled the capital a sort of sustainability.

In principle, both city and urban utilizations create the environment for consumption ideology to realize itself. Contrary to the misleading perception that space is losing its importance, indeed space is turning into a more effective agent. In such a way, there emerge hyperreal montage/collage spaces in cities. Urban residents/consumers are provided with a ravishing, fascinating environment where scenes from marine resorts, theme parks, malls, recreations sites, museums, galleries and the like are all brought together. Entertainment and resting are merging with shopping, so that the agent of the consumerist society finds him/herself doing something else while intending something different. There is no place for randomness and spontaneity, and "instance" is substituted with "activity" and "exhibition". As for the public spaces, they are taken as potential consumption places for numerous reasons. The emergence of public spaces as the basic implementation areas for consumerist ideology can mainly related to their accommodating the masses in movement and to their symbolic importance. What is meant by the masses in movement is not just a simple reference to quantity but the qualitative cultural transformation of the consumption society, and by symbolic importance social and spatial visibility of the space are intended. The cultural transformation in question is not following a random course but is following a carefully considered path of institutionalization process closely related to infra/superstructure dialectics.

Taking all these into consideration, the major purpose of the paper is to depict how the consumption has turned into a productive tool with reference to its changing habitus and the potential public space has for such kind of a re/production. Since public spaces are viewed as eligible productive means for demonstrating socio-spatial effects of consumption oriented social transformation the paper basically focuses on public spaces rather than the space itself.

Throughout the paper, a qualitative-hermeneutic approach comprising of secondary sources, various charts and images has been adopted. Within such a method, the transformation of consumption understanding, the constructing conditions of consumerist society together with its inherent components and special expressions of today's consumption understanding have been pondered on.

Though not being public spaces, consumerist spaces which are bound to consumption and capital accumulation processes realize themselves deforming the functions of public spaces. In that sense, space is not a self-evident concrete/physical plane, it is a product of planning and designing processes and, eventually, is a social product. Finally, it has been concluded that the production of space and the capital's self-reproduction come together and threaten the existence of public space, and, though not being one of the key determinants, consumption ideology is an important part of these processes.

**Key words:** Consumption, consumerist society, space, consumerist spaces, public spaces.

# Architectural Traces of the Transition from Arenace to Shopping Center: Las Arenas Example in Barcelona

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## ABSTRACT

There are important thematic subcomponents and traces that should be emphasized on the form and function of the architecture. The best experiences of the time, socio-cultural approaches, technical solutions, technological inputs are understood by the architecture. Dialogue with the past makes it easier to convey the intellectual drift that needs to be addressed in the subspaces, spaces, buildings and scales of the city and moved to the future. By means of functional transformations, it is aimed to increase the usage characteristic of the building and to realize the city integration by making additions/subtractions to the indoor and outdoor spaces of the buildings. Increasing demandability is made possible by meeting design requirements and requirements. The preservation of historical buildings with social, cultural and architectural merits and their transfer to future generations is seen as an important issue in terms of preserving the past of societies. Re-functioning is seen as an important opportunity in terms of preserving historic structures if they contain the right decisions. Structures that are structurally but not functionally in use should be re-functionalized in order to sustain use value. Unavailable structures are beginning to decay and disappear over time. If these structures are not renewed in time, the change is doomed to ruin. The socio-cultural changes that take place in time, which carry historical values and contain cultural riches of that period, must change in order to catch up. This change is possible only in the process of rehabilitating and restoring the existing values of the structure. Most of the historical buildings disappear from day to day, they can not be utilized sufficiently and lose their identities. Every day-to-day historical work is a bridging bridge to the past. The structural functions needed over time may change but the structures remain. When existing structures do not respond to changing needs, they have to be loaded with new functions in order to maintain usage value. In this way, constructions can be renewed and they can survive. Shopping centers that are frequently seen to change in certain time series are the ones that urban people have found to respond to their socio-cultural needs, especially shopping activity. Thanks to the microclimatic environment presented, it is away from negative outdoor conditions. The construction of different alternative spaces under a single cover causes the usage intensity to increase. Shopping centers are defined as new faces of urban public spaces. Designed with architectural thematic understanding, these constructions are city icons, publicity faces and new meeting places. It is in the form of a new small city model where the places scattered in different points of the city can be found together. Design alternatives that positively or negatively affect urban identity with alternate locations presented are constantly questioning the continuity and integration of urban touch with architectural refusals. The Las Arenas shopping center in Barcelona has a historic, cultural prescription and a structural link between the past and the future. An arena in which bullfighting takes place, experiencing functional change and passing on to the identity of the shopping center, conflicts with the rejection of spatial change/transformation. Purpose of the study; functional and spatial exploration of the reuse of the value of usage in order to preserve historical structures without losing its functional and usability.

In the first part of the work, physical-architectural space analysis is carried out, taking into consideration the spatial quality offered by Las Arenas and the degree of public space. In the last part, urban integration is evaluated through human-space interaction within social space. This work; It contains arenas that are important works of cultural heritage but have lost their function in meeting the requirements of the times and now have the chance to live again thanks to their new use. Las Arenas in Barcelona within the scope of restructuring; position, preservation status, structural and architectural characteristics of the building; cultural, commercial and other uses. Las Arenas selected for the sampling area has been examined in detail within the spatial requirements of the structural and new function. In the course of this study, literature reviews of Las Arenas in the historical process in Barcelona were made, and in addition to information on arenas investigated in the context of re-operation, on-site observations and researches were sought. The arenas classified according to the types of functions in terms of their current use are examined and the information obtained is analyzed by detail analysis. The preservation of a historic building is possible with the continuity of use. Structures that can not be used functionally but structurally in the foot may need to be re-activated in order to maintain their value in use. Thus, the structures are protected both by using them and transferred to future generations with the values they possess. There are a number of important points to note when reworking. As well as saving a historical building from extinction, it is also very important to preserve its original values. For this reason, when the structure is re-functioning, the characteristic features of the structure must be selected in the light to select a new function suitable for the space frame. The ideal approach for a new function to be given to a historical structure is a choice of new functions close to the original function of the structure. In this respect, the most important international rule of re-use, taking into account the principle of retrofit, will be the most minimized intervention to the spatial organization.

**Key words:** Architectural function, historical constructions, urban public space, Las Arenas Shopping Center

# An Essay to Bring a New Conceptual Approach to Aesthetics of Urban Space: The Reflection of Aesthetic Culture Built By Cultural Memory on Urban Space

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**ABSTRACT**

This study is an essay the aim of which is to bring a new conceptual approach concerning urban aesthetics by underlining the inportance of the effects of aesthetic culture built by cultural memory on aesthetics of urban space. The method used in this study comprises of creating a literature research based on the concepts of culture, memory, cultural memory, aesthetics, art as the expression of aesthetics, and aesthetic culture and building a series of conceptual frameworks of aesthetics of urban space as a result of this reading / examining process.

The approach that makes of the basic assent of this study is that “the examination of the physical structure that generates the general appearance of a city is insufficient to define urban aesthetics”. The actual element that defines the urban aesthetics is the aesthetic culture that is creaed by the cultural memory in which it belongs to. From the 18$^{th}$ century, culture that is used as the meaning of the product of intellectual and artistic activity; is everything that individuals, communities and societies produce historically and the social structuring that come consequently. While the process and outcomes of the elements directing our culture such as “social justice, quality of life, ghettoization” are the most prominent problems to be solved, we should prefer ‘innovative’ attitudes, behaviors, methods and means rather than ‘new’ ones for creations. Memory provides cultural transfer in every matter for it covers systematic knowledge about nature and information of skills and habits together with reminiscence. Cultural memory nourishes from customs and communication but is not identified by them. While human, capital and culture mobilization are gaining impetus with globalization, cultural memory elements have become a consumption material and forgetting has risen. When we consider the relations between modernity and memory, we observe a constant progress and memorylessness. When the existence of aesthetics is considered, “criticism must be a vision of the world and a philosophical method”. This does not happen at a moment’s notice. It is made possible by experience that belongs to aesthetic culture made by our cultural memory. Otherwise, the scientific research on perception shows that the consciousness is lowered when the external stimuli decrease and if there is no stimulus,

consciousness doesn't exist. Aesthetic perception is a kind of perception that discovers the infinite secret force that belongs to the object. We flourish as we perceive the richness of our surrounding. Besides, the most ethical judgment is aesthetic judgment. This is the sign that shows how important the concept of aesthetics is in our lives. Mankind hasn't considered only the functional values when building his environment throughout history. It can be observed that even the most primitive plannings are conditioned by psychological, physical and geographical factors. The harmony of man and nature will rise and their bond will strengthen thanks to these aesthetically significant forces.

Within this scope, the aesthetically assessed is the reflections of the humane ideal in a structural integrity, the cosmos ideal of systematic capability that ends chaos, the ideal that both deals with and is far from entropy that the man senses in himself. Spatial creations with applied arts reveals not only the technical improvement of a society but also the lifestyle, way of thinking, vision, understanding, the ideals and psyche of different social layers. Consequently, art has always been an essential element as a means of expression of the reflection of aesthetic culture on urban space aesthetics.

The swiftly rising human population, the interaction among different cultures as a result of international mobility caused by globalization, tourism or business are changing today's human being fast and this change is reflected on the physical environment and also *alters* the concepts effectual in this physical environment. Aesthetic culture created by cultural memory is our way of life, reflected on spatial urban space, that has been passed to us from our ancestors, is revealing our attitude and behaviors towards our surrounding naturally and unconsciously by the summation of social experience and is produced socially by our mental structure. Globalization threatens our cultural memory and culture industry jeopardizes our aesthetic culture. That's why urban aesthetics is under threat.

In this sense, consequently, reaching the ideal for aesthetics of urban spaces based on today's quality of life; the "unique" creativity in the reality of time with fictions made with the help of art, embracing the self without denying universality, far from individual profit, in accordance with social decisions must be inevitable. The planners, designers, educators that build cities and urban dwellers that live in these cities can only reach nature friendly goals without harming the nature under these circumstances.

**Key words:** Cultural memory, aesthetics, art, aesthetic culture, aesthetical urban space

# Painting Art in Urban Life, the Historical Setting of Creative Destruction from Modernism to the Present

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**ABSTRACT**

Industrial Revolution, which took place at the end of the 18th century, can be considered as the beginning of modernism, which made the city the center of social life. The modern art movement, which flourished in an environment of sociological, political and economic crises accompanying industrialization and mechanization, is seen as an urban phenomenon.The first person to use the word modernity was Beaudelaire, who used this word to describe ephemerality, appearance and disappearance of spaces, a condition which is bound to innovation and can be confusing, individual and unique. However, after the word "modernity" was used by Beaudelaire, it became a word used to refer to a period covering all these features, and the artist of this period represented a new artist identity with a dominant intellectual aspect, aiming to seize the "moment" in the rapidly changing urban life, go after what is new and to be unique and only. Parallel to Kant's thoughts; the painter who wanted to paint the invisible began to search for a new form far from the naturalistic approach. Cubism, which emerged in this context, overthrew the tradition of representation, which had been the primary aim of painting since the Renaissance, and adapted the combination of time and space, the basic elements of urbanization, to a plastic language of form and opened a new era in art. Cubism's tendency to solve nature using cognition and a mathematical approach, and its stance against naturalism, was reflected by Expressionists in a language of impulsive and sensual form. However, the relationship between the artist, who converted urban memory to perception, perception to form, and the city has never been one-sided. For example, the De Stijl Group, an avant-garde art/design movement between 1917 and 1931, which also included Mondrian, and the Bauhaus School established in 1919 were influential in the appearance of modern cities with their efforts aimed at developing a universal aesthetics reflecting the age of machines, defined by industrial production, and give a material, intellectual and spiritual integrity to art, architecture and design. It is known that the balance of horizontals and verticals in Mondrian's paintings influenced architects and city planners of the time. Thus, for the first time, painting achieved a point where it guided architecture, transcending its role to be just an element compatible with architecture. Futurism, Daddaism and Surrealism, which developed in an environment of socio-economic and psychological destruction after World War II, were avant-garde movements that questioned people, cities and life phenomena by different approaches. In particular, Marcel Duchamp's urinal, which he signed with the name 'Richart Mutt', melted the boundary between art and life, transforming art from a formal problem to a functional problem. The USA, which had a giant industry after World War II, played a decisive role in art, and the worldwide center of art shifted from Paris to New York. The influence of this city of American imperialism emerged as Abstract-Expressionism and Pop Art. Urbanization, which gained momentum with the capitalist economy and the globalizing world order after 1960s, gave birth to Post-modernism in art. The concept of urbanization uttered together with the notions of equality, progress and freedom in modernism led to movement of masses from the country to big cities with the hope of freedom, but the rapid

increase in working class population, faced with poverty, exploitation and heavy working conditions, made the cities in time no longer places that could satisfy the hopes of freedom. While crowding, which physically brings people closer, spiritually distanced people from each other, cities turned into living spaces in which materialistic and superficial relationships are established, and urbanization brutally destroyed the habitats of other living things in nature. The aim of this study is to reveal to what extent painters are affected by this living place in the world and in Turkey and investigate the basic question of whether cities are creative or destructive. The point to reach was well summarized by social theorist David Harvey. "The city is the historical site of creative destruction."

**Key words:** Urban, art, painting art, urbanization, transformation

# Architectural Development Process Evaluation of Konya City Center through İş Bank Building

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**ABSTRACT**

Anatolia is a place that reflects the architectural values of our country in a best and clear way. There is a rich architectural context that illustrates the historical flow of the past. Different civilizations, different cultures and architecture with different experiences gives light on today. The existing architectural structures carry traces of different periods and always determine social, cultural, economic and artistic values. Architectural texture is a major factor for the value of the region or city. So visitors and tourists use very often this places. The user density of the field is more by strong past, strong culture and space relationship. Thus, the value and quality of the city-region is increasing. In this way, all the architectural values of the city are presented as a gain for the city.

Konya has hosted different civilizations throughout history. For a long time Seljuk State used as a capital city. This city has an important history that dating back to the Neolithic period. The establishment of the historical Konya city center started around the mound, which is known as Alaeddin Hill. This area has been used as a center for many years by different civilizations and lived its most magnificent time during the Seljuk period. The development of the historical city center was realized between Alaeddin hill and Mevlana tomb. The rich architectural content of different civilizations is clearly seen on this powerful axle. Our cultural heritage of different periods is a combination in this axle and serves the city as a whole. This axle contains many different works of Seljuk, Ottoman and Republican period. By this research, it is aimed to reveal the historical background and transformation of the rich architectural content in Konya city center that the oldest settlement in the world. The exhibition of different periods architectural works of Konya and integrated perception of the city are the main objectives of the study. In this way, it is aimed to investigate the architectural richness of the city center and determine its relationship with each other. All of these goals and targets will be discussed through Isbank building.

Aladdin – Mevlana axle (Mevlana Street) contributes to the architectural content of Konya city from different periods, still maintains its intensive user profile. This study examined the contribution of the historical city center to today. Alaeddin Tepe - Mevlana Museum axle, which contains many high-quality structures has been accepted as a field work. The rich content of the area is evaluated through Is bank building and today's situation is analyzed.

In this study, the building of Isbank, which is located in Konya city center was determined as field work. The architectural changing process of the area (city center) has been discussed over the determined building (Isbank). The changing of the buildings in the area during different periods and the architectural transformation of the area have been evaluated with a sample building. Although

it is not possible to evaluate all buildings in the area, spatial transformation of the area has been demonstrated in the context of the selected sample building.

The architectural transformation and transformation of the city center was discussed at Is bank building and it has been determined how the city entered into a process of changing during different periods. The historical, urban, structural and spatial values of the area were analyzed in the sample building.

In the light of the researches and evaluations, the impact of architectural values on the city and cultural heritage has been revealed. The contribution of the sample building to the field has been determined in the historical process and the interaction of the area with the building has been analyzed. In this context, the existing architectural works of the area and its richness have been revealed. The values of the buildings belonging to different periods ensure that the field has rich content. The coexistence of different cultures in the field ensures the architectural quality. Therefore, user and visitor density increases in this area as a normal result.

As a result of all the researches, evaluations and analyses, the buildings in the city center (by the Isbank building) have been identified to the city center. It has been determined that the architectural values of the city have turned into qualified spaces and have active use. In this way, the living and user texture of the city center is clearly read. The interaction of the architect with the buildings, the functions with the buildings and the functions with the user requirements is clearly seen. Architectural buildings contribute positively or negatively to the areas where they are located. In time, it is transformed and keeps pace with the changes of the city. Buildings that have no place in this change are disappeared. The city is shaped like a living organism.

**Key words:** Konya, City Center, Architectural Space, Architectural Change, Iş Bank Building.

# Reinterpretation of Traditional Building: The Case of HG House

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## ABSTRACT

Eastern Black Sea Region is a featured life environment with its nature, culture and architecture. The vernacular architectural heritage belongs this featured geography, has been losing quickly due to lack of conservation studies, not consisting of conservation awareness and changing life conditions. The new structure that establish a link with the past, they dealt away in a design concept from the sense of belonging, the transformation of the existing architectural riches is forgotten. Characteristic features of the district are the used/unused houses that still carry on their lives. The construction techniques and architectural features of these houses provide a base for new designs. HG House, which is trying to be solved with the problem of "housing design" problem in Trabzon Akçaabat Yeni Mahalle, reinterprets the newness, change and transformation in one time, has thought-provoking ideas. The details of the traditional housing typology that responds to the user's needs are passed through the design process by establishing a form-function dialogue with a different thematic understanding. The process of architectural design is a complex journey that turns into abstract design, a product of concrete design. Architecture is a discipline in which art, science, and technology trilogy coexist. When designing in the design process, you can refer to various design tools that help the architecture and contribute to the transfer of thought from one mental state to another. These design tools, which exhibit physical and mental characteristics, together with intuition and the knowledge of design that science is teaching, are leading in the architectural design process. The experiences of designers, observations, perceptions and personal characteristics of a landscape shape the design product by influencing the design process. The inability of the design product to think independently of its design is an indication of its design's worthiness. On the other hand, the scientific information that is introduced in the design process guides the designer by guiding the designer's intuition. This study focuses on the potential use of space as a tool in the design process as one of the methods aimed at directing environmental knowledge to the design process and directing it intuitively with science. HG House's reinterpretation of the traditional dwelling aims to decipher the space and the life that takes place in the space, focusing on the relational, configurational features of the space. It is tried to examine the potential use of the space layout in the design process. The question of usability as a scientific design tool that fosters the design process and helps the designer test the design proposal is questioned. The architectural and architectural design process in the conceptual framework of the study is considered together with the inputs of the design process, and the way of using the space layout in the HG House is examined. The designed built environment does not just become a background in human life. The designed spatial fiction has an influence that shapes the movements of the people living at the same time, guiding their perceptions, feelings and emotions. The

architect has gone through a complicated process that he takes into account when designing. It includes design knowledge to access the design proposal and its product. In doing so, he also benefits from a world of design tools, in which physical and mental tools are involved, which is mediated by him. The purpose of this study is to investigate the applicability of the space layout as a design tool by including it in the design process. Some of the spatial alignment techniques have been dealt with in the spatial analysis carried out by including a specified design problem in the solution process; the designed HG House and the data obtained by the analyzes carried out were interpreted and discussed. In the study, firstly design action and design process were discussed, components of design knowledge accompanying this process, design tools were tried to be examined. Then, the subject of this course is investigated in terms of the space, the main discourse, the concepts and the measurements, which show the potential to be included in these tools by demonstrating an evidence-based design approach aimed at bringing scientific knowledge into the design process.

**Key words:** Eastern Black Sea Region, traditional house, design process, originality, HG House

# Spatial Change in the 20th Century in Kayseri City and the Impact of Green Areas on the Change

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**ABSTRACT**

In the urban areas of Western countries, there were no parks or gardens where people are free to use until the industrial revolution. In England, for example, there were about 4000 private gardens dedicated to the use of the rich in 1783 (Jones & Wills, 2005). These private gardens were forbidden to enter by ordinary people as long as they were not invited. Regent's Park, which was commissioned in 1811 by Prince Regent and completed in 1826, was also closed to public use. It was a project to provide rent from the upper class residences created around this park. The success of this initiative has led to the creation of large city parks (Prince's Park, Birkenhead Park, Central Park) on a rent basis in many cities. Moreover, in the case of Birkenhead Park, which was opened in 1847, the public sector was starting to build parks on rent basis. Birkenhead Park was the first city park organization open to the public for the free use of all members of the public. On the other hand, the rapidly increasing population pressure in London was the end result, since the 1820s, ordinary people were allowed to enter a portion of London parks (Olmsted & Kimball, 1970).

It is argued that the regulations of the parks and gardens for the public, which spread to the whole world, especially in the USA since the mid-19th century, served four social ideals. These ideals are democratic equality, social cohesion, public health and economic value (Young, 2004).
In the middle of the same century, modern urban planning and applications, which were seen as the most basic means of solving the problems created by industrialists in cities, were not able to integrate with park and garden arrangements at the beginning. This integration problem was clearly evident in the city plans of Barcelona, Madrid and Berlin. While these early modern plans determine the future shape of the expanding cities, road network and residential areas, only the existing green areas were shown on the plan, but the proposed green areas are not included. The idea of considering green spaces as a system just like residential areas and presented in plans in accordance with certain standards could only be discussed in the early 20th century.

In Ottoman cities, which are shaped on the basis of the Islamic urbanism tradition, there were not any parks and public gardens until 1869. Instead, there were waterfront recreational area that are visited by families for months when the weather is warm.

Houses in Ottoman cities were usually large family houses. Traditional houses were surrounded by walls and with interior garden and courtyard. Therefore, it can be said that the Ottoman society has an understanding of a place that brings nature into the city and offers green space at the garden of the house.

Abdulaziz's European travel, who was the sultans of the Tanzimat Period, was effective in designed the first public gardens to Istanbul. Therefore, Taksim Garden in 1869, Kısıklı Sarıkaya Garden in 1870, Sultanahmet Garden in 1871 and Tepebaşı Garden in 1877 were added to the Istanbul city landscape. In the first quarter of the 20th century, western-style city parks were designed first in Istanbul (Gülhane, Üsküdar Doğancılar, Fatih districts).

In Kayseri, the study area, the first public gardens were built many years ago, during the Ottoman period, before the urban development plan was made. After Mehmet Ali Efendi, who had worked in the Ottoman bureaucracy in Istanbul, was appointed by the Sultan as the mayor to his hometown of Kayseri, he was involved in the reconstruction of Kayseri by the influence of Istanbul. He wanted to built the main square of Kayseri by taking the example of Sultanahmet Square and designed the first public active green area in the city in 1888 in the name of "Millet Bahçesi" by destroyed the historical buildings in the north of the square. It can be said that these active green spaces served as tea gardens that decorate the slowly emerging center of management. Moreover, the use of these parks and gardens was also out of the question by women in those years.

In general, it can be said that the parks and gardens are inadequate and the area is insufficient until the republic period in Kayseri, which is shaped within the framework of the Turkish and Islamic city model. The construction of the modern city plans together with the Republic started with Ankara, and Kayseri's first city plan was made in 1933 (Çabuk, 2012). Thus, the formation of green spaces should be done by plans, laws and regulations in Kayseri, which has a traditional texture.

In this report, the location of the green areas and the reconstruction of the structural space based on the change of the structural environment which is described as traditional texture in Kayseri from the Ottoman period to the Republican period has been discussed. Descriptive research management was applied on the basis of historical process in study. As basic data, maps of the Ottoman period and five city plans that were put into practice between the years 1933-2018 (85 years) were utilized.

**Key Words:** Park, Garden, Urban Planning, Ottoman City, Change.

# Evaluation through Material of Building Facade Transformation from Past to Present

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**ABSTRACT**

Throughout history in architecture, one of the biggest discussions is the factors that are effective in the emergence of the form. In determining the form, even if the architect's identity is in the foreground factors; other notions such as function, expectation, culture are determining factors in this regard. In the perception of the building form, the facade is considered as an important design element and the importance of the facades in reading of the building is great. It is possible that determine the building form as a result product, organized the facades and designed properly. The occupancy-space ratios and transparency-opacity balance on the facades are the main factors that are effective in reading of the building and shaping of the form. Components and design inputs that take part in the emergence of the facade are important parameters. Within the scope of this study, the importance of the facade in shaping the building form has been emphasized in the process from past to present. The transformation of the facade material elements in this process has been discussed and the evaluation shaping of the facade has been made throuh the material. As the smallest part of the building, the material investigated and the effect of the material on shaping of the facades has been examined. It is stated that the evaluation of the materials to be used on the facades is not only in the search for form but also in many performance criteria. Performance criteria have been evaluated in the provision of physical environmental conditions and in the creation of optimum comfort conditions. Considering today's users; heat, sound, light comfort is effective, such as fire safety, humidity protection, security factors are effective in the transformation of facade materials. In historical process, it is aimed to examine the use of facade material and determine its place in the next generation of architecture. The effect of the notions of speed and time on the facade materials in architecture has been examined. It is aimed to reveal the transformation of Stonehenge constructions in the history of architecture and towards light and transparent materials used today and how we are faced with a material transformation in the future. In this study, the effects of facade materials on the design and construction process from past to present has been investigated by conducting a literature research within the scope of the subject. In this context, building reviews has made and discussions has made through the facade material analysis. The contribution of selected materials for design process has been demonstrated. With the explanation of the facade material specifiers, it has been examined to determine the qualities of the materials to be used in the future. In the results of the study, the importance of materials for the emergence of the form has been emphasized in the design process and the use of materials in the construction of the architectural project has been emphasized in the evaluation of the architectural project. The texture, color, combination and smell of the material should be evaluated as a design element. The necessity of using materials within the ethical boundaries has been revealed. It is an indisputable fact that the necessity of material knowledge and material selection criteria are explained and the architect has an effective identity in this role. Examination of the quality of the materials used on the facades and use of the materials are indicated properly.

Evaluation Through Material of Building Facade Transformation from Past to Present Without changing the identity of the material, it is made to be put into the design and explain the transformation of the materials in process. The design problems and performance problems that arising in the use of facade materials have been explained and the quality of facade materials has been revealed from past to present. Within the scope of the study, the material selection of architect has been evaluated and important tricks on the quality of the material selection have been pointed out.

**Key words:** Facade materials, material and identity, transformation of material, architecture and material

# CITY - USER - TRANSFORMATION

# "Mega" Problems of the "Mega" Project: An Evaluation of Kanal İstanbul in the Context of Urban Policies, Governance and Planning

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**ABSTRACT**

The artificial strait project that is planned as an alternative for the passage in Istanbul Bosphorus, Kanal Istanbul, also known as the "Crazy Project", has become one of the primary discussions of academic literature, since the day it started to be mentioned. With its route that consists of Arnavutkoy, Avcilar, Basaksehir and Kucukcekmece line in Istanbul, the largeness of Kanal Istanbul's impact area will certainly have results that would cross the borders of these districts, and even the borders of the city.

Instead of a sole influence on the city and its rural periphery, a chain of impacts that cover the entire geography that the project is located, should be expected. With Kanal Istanbul Project, the direction of urban growth would turn to North; and many neighborhoods and forest villages in the region would encounter the risk of getting damaged and destroyed. Kanal Istanbul project would also cause the loss of water resources of the region in a recent future, since the primary water resources of Istanbul are present in that region. Moreover, the ecological corridor in the North of the city, rural agricultural character, wildlife activity, and urban air circulation functions would go under threat. Furthermore, carrying such a major investment into the region would give birth to new construction projects, and augment urban density. Emlak Konut – which is the subsidiary of housing development administration, has announced that there are currently 33 settlement projects in the region, and that new projects will be conducted, by its press bulletin in 26 February 2018.

In this context, parallel to the probable impacts of Kanal Istanbul project, the evaluations must be made in terms of ecology, urban governance, planning principles, policies and law. This study mainly aims to evaluate and criticize urban-administrative decision process that carries the direction of urban growth to North with a project with such large-scaled impacts, in regards to public welfare, main planning principles and participation.

In the study, the effects of Kanal Istanbul will be elaborated at two stages. These stages can be classified as primary and secondary effects. The primary effects are the legal and administrative processes that affect such a major initiative in Istanbul metropolitan area, urban planning principles and legal status. These are extremely critical issues for evaluating the urban governance decisions that came out at the preparation stage of the project. Here, the purpose is to evaluate the process before putting the project in action, and to put forward the status at the current point. While doing these evaluations, it is required to elaborate all of the subsidiary investments (airport-settlement-

road), new authorizations in the context of legal adaptation, Cabinet decrees and regulations that were proceeded the first time with the project; and to analyse their compatibility to main governance – planning principles. In this context, Kanal Istanbul project – which is completely against the planning principles of 1/100.000 upper scale Istanbul Environmental Plan of the city, seems to be connected to the initiative of central decision bodies that eliminate local planning practices.

The evaluation of the secondary impacts will be conducted on highlighting the probable urban issues that will occur once the project is accomplished. As mentioned at the beginning, Kanal Istanbul suggests an alternative to the passage in Bosphorus. In this regard, it claims to provide a safer passage way and eventually increase recreational usage on this region by decreasing the density in the Bosphorus. However, is must also be noted that Kanal Istanbul would augment the construction pressure on the project route, and load urban functions to agricultural fields – which would result in a change in the urban growth style of Istanbul metropolitan area. The study, in this chapter, aims to project the transformation in urban and rural structure of the region if the project is completed, and to make warnings about possible risks.

Kanal Istanbul project requires a detailed evaluation in terms of the magnitude of its effects. The target of this study is to make an evaluation of this project – which seems to be creating inevitable changes in the region in many terms, with regards to political and legal qualities of the city and the planning principles and practices, but also to put forward the point where we currently are at, as well as evaluating its end results.

**Key words:** Kanal Istanbul, Mega Projects, Urban Planning, Urban Governance.

# Kanal İstanbul Project in the Context of The Change in Urban Life Threshold, the Transformation of Environmental Management and the Demolished Ecological Freedom in Istanbul

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**ABSTRACT**

Istanbul, the most crowded city in Turkey, is going under a fast process of change and urban growth. Since the beginning of 2000's, the city started to become the subject of policies, plans and projects that would transform the city into an attraction center in terms of economy, technology and culture. With the migration triggered by the appeal of urban life and the amount of employment opportunities, the population and construction in Istanbul have augmented – which led Istanbul to grow into a major and crowded metropolis. Today, the large-scale field usage projects that are conducted in the periphery of the metropolis, and the new living spaces that these projects point out, are the pieces of the jig-saw puzzle that would turn Istanbul into a megapolis. One of the projects that possess a significant role in the transition process of Istanbul from metropolis to megapolis, without a doubt, is Kanal Istanbul Project, whose route has become certain in the recent days. The project – which was announced to the public by using the term "crazy" in April, 2011, is decided as a connection between Marmara and Black Sea, by passing through the East of Küçükçekmece – Sazlıdere – Durusu – Terkos Lakes. However, the choice of this route amongst the alternative routes cannot be perceived separately from 3. Bridge and 3. Airport projects. Besides the legitimacy statements that are developed over the risks of the vessel traffic in Bosphorus, the expert opinions and Environmental Impact Assessment Report suggest that this crazy water corridor would create important ecological results in Istanbul.

Küçükçekmece, Sazlıdere, Terkos water basins that play an important role in providing the drinking and tap water need of Istanbul, and that are on the project route, are foreseen to be irreversibly affected in short-term and long-term. This would propose a risk of shortage in the megapolis, by causing a decrease of 1/4 in water ratio of Istanbul. Furthermore, since 78% of the impact area of the project covers agricultural fields with different features, it would also destroy a fair amount of fertile soils – which provide food for Istanbul. Another ecosystem that would be affected bu the canal is the forests. Since approximately 20 km of the route passes through Çatalca Forest Management borders, the sole physical existence of the canal would destroy hundreds of hectares of forest areas. By this way, the policy of systematically deforesting Istanbul would gain another dimension with the Canal. The damage that would be given to natural living spaces that possess a rich variety of flora and fauna, would irreversibly reduce the biological diversity of which certain parts consist of endemic plants. Moreover, not only the subjects of natural life are overlooked in the process, but also the archaeological areas, such as Yarımburgaz Cave, that are important in terms of cultural heritage are sacrificed. This water canal that aim to unite two different marine

ecosystems is not only foreseen to trigger ecological problems in the mainland, but also in the Marmara Sea – which has its own unique water and stream features. Also, during the progress of carrying the excavation caused by the drilling processes, and by the processes of transforming the surroundings of waterway into urban life spaces, the greenhouse gas emission would increase and cause the air of Istanbul get even worse, which would have a bad influence on human health. Finally, when the demolition that crazy projects cause is evaluated in an integrated approach, the climate change in the city in middle to long-term is probable.

The environmental results that the Canal, which is given an estimated economical lifetime of 1 century "if the necessary care is done", and the urban growth it would trigger, would cause, are underestimated, just like in any other projects in the transformation process of Istanbul into a megapolis. Instead, the economical benefits are highlighted. This crazy project that is a product of an anti-democratic understanding of governance that could trigger ecological disasters for rendering the city uninhabitable, and that is conducted over disaster capitalism, does have alternatives. In this context, instead of opening a "water corridor", thinking about an "ecological corridor" that would sustain the natural virtues of Istanbul with primary importance and unique qualities on the project route, would serve more for the development of Istanbul, which hosted many civilizations, and trigger a transformation in the dominant development paradigms in Turkey.

**Keywords:** Kanal İstanbul Project, urban ecology, ecological corridor, healty and livable urban, urban environmental management

# Discussing Tourism Oriented Interventions from the Perspective of Local Enterprises; Case of Bosporus Site

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**ABSTRACT**

Historic city segments began to experience substantial interventions when city governments adopted entrepreneurial policies so as to attract ever increasing liquid capital and wealthy tourists, with the aim of compensating employment losses induced by de-industrialization in a globalizing world, and of revitalizing city economies. A common policy followed to promote tourism in a region or a district is to achieve a dynamic night economy. Local governments, thus, resort to several interventions in an effort to multiply entertainment places which boost night life (Bolzoni, 2013; Grodach, and Loukaitou-Sideris, 2007; Judd, 1999). With the development of night economy, however, there are two kinds of entrepreneurs at stake. One is the local enterprises, which are a part of neighborhood's social and cultural advancement and have a sense of belonging to the place; and the second is national and international entrepreneurs who are looking for the opportunities of investment, and are specialized in entertainment economy (Bolzoni, 2013). City interventions of the latter generate places like café, restaurant and clubs suitable for consumption habits of well-to-do city dwellers and visitors, and so, gradually drive away from or force to pull out of the market less competitive and small-scaled local tourism enterprises. With such destructive influences of change, above mentioned new uses start to replace local values and habits. While some benefit, others are excluded from the eventual city transformation, and those excluded parties are often neighborhood inhabitants and local enterprises (Bolzoni, 2013; Huning ve Novy, 2006; Peck 2005; Grodach, and Loukaitou-Sideris,2007; Wilson and Keil, 2008; Huning and Novy, 2006). As a result, several local qualities turn into commodities in this process. That, in turn, causes to tensions and conflicts between the parties. In order to avoid such negative consequences, and to enable local communities to benefit tourism, tourism related knowledge and skills of local communities and of small-scaled local enterprises should be identified, and reasons for their negative perceptions and attitudes towards tourism, if any, should be found out and their opinion must be consulted first before making any tourism oriented interventions.

This study, therefore, aims at revealing reactions and attitudes towards tourism, of local enterprises, which are excluded from the decision making process to the extent that they can get no benefits in a tourism oriented development scenario. To that end, a questionnaire conducted on local food-beverage and accommodation enterprises at Bosporus Site, which is a significant cultural asset of Istanbul. Population of the research consist enterprises at 26 neighborhoods, which stand out with their cultural and natural heritage. 2014 data of food-beverage and accommodation

enterprises was obtained from Licensee and Inspection Directorates of municipalities that govern neighborhoods in questions; and questionnaires made with totally 235 food-beverage enterprise and 36 accommodation facilities as respondents, with consideration of mistake rate 5%. In assessment of questionnaire data, the formula developed by Raphael et. al. (1998: 5) to measure life quality was used with the intention of showing in scores the reactions of local enterprises to tourism oriented interventions, as a manner different from other literature on tourism. In order to measure reactions and attitudes of enterprises to tourism interventions, obtained data was analyzed through "Principal Components Analysis (PCA),""The Weighted Linear Combination Method (WCL)," and "One-Way Anova" technique.

Eight factors as determinants of local enterprises' reactions and attitudes towards tourism were concluded from the analysis. Those factors were respectively named "tourism- oriented interventions," "positive influences of tourism," "economic environment perception" "socio-cultural environment perception," and "attachment for the place", "tourism infrastructure," "qualitative characteristics of tourism enterprises" and "negative influences of tourism." It was found that "political environment perception"is the factor most determining local enterprises' reactions and attitudes towards tourism.

Investigation shows that perceptions of local enterprises at Bosporus about tourism interventions are not homogenous. It was found that majority of enterprises supporting tourism-driven development are located in the central district, Besiktas. Local enterprises situated in districts Beykoz, Sarıyer and Üsküdar, on the other hand, negatively approached the issue. Neighborhoods, housing food and beverage enterprises which approach the most negatively to tourism development are usually the slums inhabited by low income groups. Enterprises in these regions are, thus, the ones which are less competitive, and small-scaled. In this point, it is appropriate to mention two main concerns of local enterprises at the said neighborhoods: The first is the displacement of original inhabitants of the neighborhoods, due to their inability to afford increasing cost of living as a result of the creation of places designed for wealthier people and tourists by entrepreneurs targeting national and foreign tourists with the aim of developing tourism. In such a case, local enterprises are also to lose their original customers. The second is their financial inability to adapt to an atmosphere answering to consumption habits of new potential customers, and their concern of being displaced due to incapacity to bear the rising costs in an environment of fierce competition.
To conclude, it should be remembered that interventions made in order to attract local and foreign entrepreneurs to the city will change the socio-economic and physical texture of the neighborhood, and such a change, in turn will trigger a gentrification process which will also change authenticity of the neighborhood, and will even pave the way for the gradual displacement of both inhabitants and local enterprises. That will bring along many problems regarding the right to the city and local identity. This study shows that public policies safeguarding local people and indigenous values are required for a sustainable and fair city development.

**Keywords:** Tourism oriented interventions, influences of tourism, support for tourism, local enterprises, Bosporus Site.

# The Right Holders' Perception of Loss of Value and the Gradual Loss of Trust During Fikirtepe Urban Regeneration Process

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**ABSTRACT**

This study examines the transition process defined by the uncertainty, distrust, and despair resulting from the chaotic exchange process as well as the gradual loss of trust experienced by the right holders of Fikirtepe during this process in Fikirtepe Urban Regeneration Area, by using the data gathered during the field study conducted for the doctorate thesis aiming to develop a model that questions the occurrence of urban space rant and the distribution process taking place in Fikirtepe Urban Regeneration Area as well as to increase the public share within the arising rant.

Looking at the questionnaires and the in-depth interviews conducted in the region, the aim of this study is to identify the factors that turn the exchange process into a chaos, to explain the loss of trust experienced by the right holders in Fikirtepe during the transformation process, and to construe the process of losing belief in being valuable in the eyes of the state, the developers, and fellow right holders respectively.

By interpreting the tabulated data gathered as a result of the questionnaires conducted with the proper samples selected from the target population consisting of the land holders and users in Fikirtepe Urban Regeneration Area; the study examines the quality of the exchange process in Fikirtepe, and discusses the Fikirtepe dwellers' trust in the state, the developers, and fellow Fikirtepe dwellers. Regarding the fact that the decrease in the neighbourhood population was due to the destruction and evacuation in the urban regeneration area; the current total population of the neighbourhoods were predicted as 36,924, with an average household size of 3.25, and the target population for the study was determined as 11,362 households. By using the following formula, $n = N\ t2\ p\ q\ /\ d2\ (N-1) + t^2pq$, the proper sample to represent the target population consisting of 11,362 households were determined as 193 people, however the total number of conducted interviews was 206.

Within the scope of the field study, the right holders were asked questions putting forth their belief in the value that the state, the developers, and fellow Fikirtepe dwellers give to them and their opinions. During the in-depth interviews conducted within the scope of the field study, the Fikirtepe dwellers were asked similar questions in order to evaluate their trust in the state, the developer companies, and fellow Fikirtepe dwellers.

The fact that the state isolated itself from the process and left the developers and right holders on their own by not taking an active role during the regeneration process led to social tension and conflict. The social tension, which is a consequence of the attitude assumed by the state, led to a halt in the urban regeneration process, and thus the region was dominated by the chaos and uncertainty.

As a result of the regeneration process which was extended by the legal uncertainties and the lack of solutions, the evacuated houses were used by unidentified people, and the neighbourhood turned into a mere construction site that had nothing but dust and mud. The uncertainty of the process had an impact on the social structure of the regeneration area as well, turning the exchange process, which along with other factors such as unsafe and unhealthy physical conditions represent the process of transformation from the old Fikirtepe to the new Fikirtepe, into a total chaos.

The analyses conducted within the scope of the field study suggest that the transition process defined by the uncertainty, distrust, and despair firstly results in the Fikirtepe dwellers' loss of trust in the developers; secondly, it makes the Fikirtepe dwellers feel valueless in the eyes of the state because of the ongoing distrust and uncertainty; and, finally, because of the social tension arising as a result of the ongoing chaos, it leads the Fikirtepe dwellers to lose trust in one another, and causes them to lose belief in the fact that they are valuable in the eyes of fellow Fikirtepe dwellers.

In conclusion, it would be sensible to infer that, because the state isolated itself from the regeneration process and failed to assume a conciliatory role, the transition process turned into an environment of chaos; and, during this process, Fikirtepe dwellers first lost belief in the value that the developers gave to them and their opinions, and eventually, they ended up losing belief in the fact that fellow Fikirtepe dwellers value them and their opinions. This statement indicates that there is a gradual loss of trust, the impact area of which has been expanding since the beginning of the urban regeneration project.

**Keywords:** Urban regeneration, urban renewal, social conflict

# "Spatial Performances" in Urban Transformation: The Tragedy of Transition from Shanty Houses to High-Rise Buildings as in the Example of Fikirtepe, Istanbul

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**ABSTRACT**

Scheduled and systematic approaches are the examples to the basic factors in creating a city that conforms to the contemporary standards, in the process of urbanization. Also the methods of interventions on the cities throughout the history, which have been employed considering the conditions of the period, have changed and diversified accordingly, as well. Strategic (Spatial) Planning is the top and the highest-priority agenda of urban renewal – transition on site. European Union keeps this on the agenda continually and underlines the need for a Local Strategy and Action Plan approach within a plan, program, and project the systematics, in line with the strategic objectives to be developed within the frame of joint vision. Within the scope of sustainable development strategy, it has become imperative to address the urban transformation in Turkey, through with the urban, corporate and cultural (3K) aspects. The sustainable urban renewal – transition on site approach addressed in this context is a part of the dynamic structure of the city and thus it is required to understand the concepts of recycling and re-interpretation, in order to get a good grasp of this dynamism. Urban space is a place where the permanent and unsecured, precious and expendable assets can coexist and even be interchanged and new narrations are always designed as the previous ones are reconstructed in these dynamisms. This transformation which is experienced formally in the cities also brings the concepts of alienation, deterritorialization by speeding up a socio-psychological and socio-cultural transition. However, the goal of urban sustainability should be a reaction to the indispensability of cultural dynamism and interactions in urban life, a suggestion of urban and human-focused urban solutions.

Nowadays, space search is realized both practically and semantically. Practically, the rapid developments of technology, production models and quick production of new space alternatives have reinforced the transformation of the cities and daily routines. Whereas, "*spatial signification*" is a situation in which individuals and society live together as a part of their everyday life, in "soul unity". The essence of a soul is made up of the unity of earth/green. While a spirit is formed through "spatial performance", the most basic approach should be to minimize the damage to the existence of "existential space" as defined by Norberg Schulz. In other words, the existence of urban patterns (square, streets, parks, structures…) is inevitable where the space is interpreted and it is necessary to protect the soul that has patterns in a spatial act that is treated as "gentrification". In slum areas; in a spatial meaning that takes into account the definitions of public open-semi open space

integrated with soil-green, it is difficult to mention a sustainable design approach in the context of the performance when the scale was taken from the user.

This study will address İstanbul Fikirtepe Region, which has been on the agenda with uncontrolled and unplanned development processes and illegal housing, as the gentrification example of spatial practices. Istanbul Fikirtepe is the first slum settlement area due to the intensive migrations from Istanbul Anatolian side since the late 1950s. As a result of the unplanned urbanization, the suburb has become incapable of meeting its general requirements and eventually physical aging has begun. Various legal arrangements were made within the period; title deeds were delivered to the slum owners and it was ensured that the region got into a process of unplanned and unscheduled urban transformation. The urban transformation process which began in 2005 as it is situated on seismic belt was put into practice in 2014.

In this study; the tragedy of transition from slum houses to apartments and from apartments to skyscrapers, which has developed in an unplanned and unscheduled way since 1950's will be clarified with visuals documents, and the change in the quality and the quantity of semi-public and public open space will be examined. In this transition process, the organizing of semi-public and public open spaces left to the user with annuity priority will be examined through the organizational performances at the site. The findings of the study show that, the spatial performance in Istanbul Fikirtepe Region today reveals that the field cannot protect the quality of the semi-public and public open space that the area had in the past, and that its quality cannot be maintained at all.

**Key words:** Fikirtepe, spatial performance, sustainability, urban transformation, semi-public and public open space.

# Small Scale Urban Interventions and Their Potential to Generate Transformation in the City; The Concept of Urban Acupuncture on the Case of Kadıköy Yeldeğirmeni Neighborhood

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**ABSTRACT**

It can be said that the urbanization process, which marked the 20th century, brought about profound spatial and social transformations for all the countries undergoing, alongside with very different reflections in developed and developing countries. These transformations can be summarized as unplanned urban sprawl in developing countries and upper-scale decision making processes, lack of participation and flexibility in planning process in the developed countries. While the rationalist planning approach of the modernist era has been criticized due to its hierarchical and uniform decision mechanisms where there is lack of identity and participation, the reflections of neo-liberal planning policies of post 1980s mainly focused on the loss of intrinsic value of urban land against its exchange value as well as the structural difficulties around participation and the increasing inequalities in the urban space. In the recent years, the urban transformation projects and large-scale real estate investments have been the in the forefront of the urban policy agenda in confluence with the discussions around sustainable and holistic planning approach and alternative applications. The neo-liberal economic policies of the post-1980s and the (process of) globalization have brought up new approaches to address economic, social, ecological and spatial issues. Although some of these approaches offer only fragmented, single-dimensional and temporary solutions, it is promising that they emphasize a holistic outlook to environmental, social, economic and spatial issues. The concept of 'urban acupuncture' is also one of the developed approaches in this context. Although there are various definitions and implementations of 'Urban Acupuncture', they all agree on its capacity to create transformations on large-scale urban space via/through small-scale interventions. The important aspect of the approach is that it focuses on the potentials/opportunities of the crisis areas; treating the city as an integral, holistic structure, and advocating that the correct interventions on the problematic areas are going to be the forerunners of the overall improvement at larger scale. In this study, Urban Acupuncture implementation as a micro-scale urban intervention model will be discussed against the larger-scale interventions. The case study I will be focusing on, is the spatial and social development in Kadıköy Yeldeğirmeni district/neighbourhood after 2010. This case will be evaluated within the concept of urban acupuncture and compared with other examples across the globe. The purpose of the work is to argue the contributions of the low-budget, micro-scale interventions, which support the needs and encourages the participation of the local people, to the urban transformation. Spatial inequalities do not seem to be resolved without solving the structural problems in urban politics. However it is also important to recognise that Urban Acupuncture approach -and the real-life examples- search for and provide holistic, flexible, feasible, and affordable/economic solutions by improving the quality of urban life, increasing the sense of belonging, dealing with pressing and immediate needs. The emergence of the concept of 'urban acupuncture' can not be considered/understood independently/separately from the changing notion of the 'scale' in

planning and architecture due to the developing technology. İt is also closely linked with the constant global crisis risks; the evolving environmental-ecological point of views; planning decisions and participation in local governance processes.

The study consists of three parts. In the first part, the development of the concept of urban acupuncture will be discussed. In this context, leading developers and practices of the concept will be explained by taking into account the rational planning, sustainability and participation debates. In the main theoretical discussion on the concept of Urban Acupuntur, three names and their practices are important. The first person, who brings the concept to the agenda is Morales, while the second person who is popularizing and spreading the practices is Jaime Lerner, Mayor of Curitiba. Casagrande, the third leading figure in the discussion of urban acupuncture, made it possible to combine urban acupuncture with nature and develop it as an environmentalist theory. In the second part, various applications in the world on the concept of urban acupuncture will be discussed. Various intervention methods will be dealt with, especially from the Brazilian Curitiba city example. In this section, not only spatial interventions but also community-based and social media usage examples will be mentioned. In the third part, micro-scale urban interventions in the Kadıköy Yeldeğirmeni (Rasimpaşa) Quarter and the reflections of community-based initiatives in the spatial and social structure will be evaluated in the context of urban acupuncture. The reason of the choice of Kadıköy Yeldeğirmeni Mahallesi as a case study is, the implications in the quarter are preserve and reproduce the originality and identity of the neighborhood. Also because the transformations can be evaluated socio-econimomically sustainable.

The conceptual part of the work has been completed and field work is continuing. Within the scope of field studies, distribution of micro scale interventions, participant-orienting actors and implementation processes will be included in Kadıköy Yeldeğirmeni Mahallesi and these practices will be compared with world examples. The environmental and social impacts of the practices will be assessed through in-depth interviews with tradesmen, neighborhood residents and outside users of the premises.

Finally, this study investigates the possibilities of discussing and achieving urban change through low budget spatial and social interventions rather than large scale interventions and high cost urban transformation and land / real estate development projects. It constitutes the basic proposal of the fact that besides the spatial dimension of the cities, the urbanism are an integral part of the changing spatial processes and that the transformation of the space and the user as a whole is essential for the change.

**Key words:** Urban acupuncture, urban participation, micro scale spatial interventions, urban transformation.

# Opinions on Urban Transformation: Çiftehavuzlar Sample

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**ABSTRACT**

The process of change and transformation in the dynamic structure of cities is ongoing. Physical, social, environmental, economic and ideological factors are influenced by a large number of forms are experienced. Urban transformation as a whole of strategies to improve the quality of urban life in these domains. Urban transformation is a comprehensive and holistic view of the re-arrangement of living spaces. Urban transformation in Turkey is interpreted under two main groups. First, it is made in large size. The public and private sector is cooperated. A large number of people are affected. The second group is resolved on a building basis. It is based on seismic hazard detection. Applications that make a difference in the lives of a few people. These are the practices made without establishing a balanced relationship between physical conditions and social demands. Expectation is the increase in welfare level and the rant.

Kadıköy Bağdat street and its surroundings have become a district of urban transformation laboratory where individual building renovation is frequently experienced. There are many fragmentations of property in urban areas. Contractor companies are rapidly making projects in order to make profit. The impact of urban texture and the urban culture on the urban population is curious. This study aims to describe the way the urban transformation process experienced in Kadıköy is perceived and influenced by the users. For this reason, a survey was carried out to residents of the district of Kadıköy Çifrehavuzlar Hasan Ali Yücel street. Hasan Ali Yücel Street is one of the most used axles to get to the coastal area. Furthermore, urban transformation is an area where intensive urban transformation takes place on a building basis. There are currently ongoing construction sites. In order to provide a balanced distribution of buildings, a total of 150 participants were surveyed.

The majority of the participants have middle and upper income. Housing ownership rate is high. There is a long-term tendency to sit on the street. Individuals of middle and upper ages are mostly. From the point of view of education, it is understood that the participants who graduated from university and master degree are in a higher proportion. All participants, or close family members, have undergone the urban transformation process. The satisfaction rate of the participants who renew their homes by giving them to the Contractor is 64%. The participants complain about urban transformation practices in Kadıköy in general, even though the construction period has passed in their own buildings. The most troublesome areas are the traffic congestion caused by concrete trucks and construction machines, the shrinking of the flats, the disappearance of Çiftehavuzlar housing type, the decrease in the amount of green space on the street. Other problems are the disappearance of old neighbor relationships, the damage to the sense of security, and the decrease in street animals. During the renewal process of buildings, the number of participants who think that neighbor relations have been damaged during the selection of contractors is very high.

Urban transformation provides users with spatial, social and economic benefits. Çiftehavuzlar Hasan Ali Yücel street residents were economically affected by the urban transformation process. The number of people who think that the appearance and function of the new buildings is better is 59%. Would you renew with urban transformation again if there was an opportunity? The answer to the question has often been “Yes”. Even if the participants are happy to experience renovation on an individual basis, they make negative comments in terms of the urban values of their neighborhoods.

Urban planning policies need to be addressed in a more holistic manner in order to achieve maximum benefit from urban transformation implementations on the basis of structure and urban scale. In addition, imposing certain sanctions on building materials and urban design criteria is beneficial in terms of urban culture and local urban values. Making the building stock in cities suitable for the age may be a positive move. But the social implications of this process must be addressed to interdisciplinary solutions. For this reason, the process of urban transformation should be carried out with committees in the logic of governance. The committees should have local government, special initiatives and city stakeholders. It is the fact that the processes of urban transformation with governance approach can be preferred in terms of user satisfaction.

**Key words:** Urban Planning, Local Government, Urban Transformation, Governance

# Relationships among Ecosystem Services, Humanity and Urban Life

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**ABSTRACT**

Humanity has always depended on the services provided by the biosphere and its ecosystems. Further, the biosphere is itself the product of life on Earth. The composition of the atmosphere and soil, the cycling of elements through air and waterways, and many other ecological assets are all the result of living processes-and all are maintained and replenished by living ecosystems. The human species, while buffered against environmental immediacies by culture and technology, is ultimately fully dependent on the flow of ecosystem services. Ecosystem services include products such as food, fuel, and fiber; regulating services such as climate regulation and disease control; and nonmaterial benefits such as spiritual or aesthetic values. Changes in these services affect human being and urban life in many ways. These impacts have direct and indirect consequences.
Human well-being depends, among other things, on the continued supply of services obtained from ecosystems. Human actions during the last 50 years have altered ecosystems to an extent and degree unprecedented in human history. The consequences for human well-being have been mixed. Health and wealth have, on average, improved, but the benefits are unevenly distributed and further improvement may be limited by an insufficient supply of key ecosystem services.

In most cases, greater biodiversity that is a necessary condition for the delivery of all ecosystem services is associated with a larger or more dependable supply of ecosystem services. Diversity of genes and populations is currently declining in most places in the world, along with the area of near-natural ecosystems. Humanity depends directly on ecosystem services such as food, oxygen and water supplied by both by ‘‘near-natural’’ ecosystems, such as rangelands, oceans, and forests, and by highly managed ecosystems such as cultivated or urban landscapes. The human population in general is becoming better nourished, people live longer, and incomes of the people have been risen through positive relations/interactions among ecosystems each other and living creatures. Political institutions have become more participatory. In part these gains in well-being have been made possible by exploiting certain ecosystem services (the provisioning services, such as timber, grazing, and crop production), sometimes to the detriment of the ecosystem and its underlying capacity to continue to provide these and other services. Some gains have been made possible by the unsustainable use of other resources. For example, the increases in food production have been partly enabled by drawing on the finite supply of fossil fuels, an ecosystem service laid down millions of years ago.

The gains in human well-being are not distributed evenly among individuals or social groups nor among the countries they live in or the ecosystems of the world. The gap between the advantaged and the disadvantaged is increasing. For example, a child born in sub-Saharan Africa or undeveloped countries of Middle-East is 20 times more likely to die before age five than a child born in an industrial country, and this ratio is higher than it was a decade ago. People living in urban areas, near coasts, and in systems with high ecosystem productivity in general have above-average wellbeing. People living in drylands and mountainous areas, both characterized by lower ecosystem productivity, tend to have below-average, and more variable, well-being. Populations are growing faster in ecosystems characterized by low well-being and low ecosystem productivity than in high well-being, high productivity areas. These paradoxes/relations/interactions among ecosystem services, humanity and urban life are approached and studied in the scope of this paper.

**Key words:** Ecosystem, ecosystem services, humanity, urban life, relationships / interactions

# Design of Artificial Wetlands for Waste Water Treatment

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## ABSTRACT

Rapidly growing world populations and livelihoods of living together with evolving technology and brutally increasing production in order to overcome these needs have put an unavoidable pressure on natural resources, putting them ahead of potential renewal and bringing some vital resources to near extinction. Of these sources, undoubtedly the most important and vital is drinkable water. It is once again understood how important water is when it is thought that only 3% of the world's surface water is fresh water, and a small proportion of it is thought to be a fresh water source on a drinkable level. For this reason, it becomes increasingly important to rationally evaluate the water resources that become increasingly restricted and to make them reusable by various treatment methods.

Various technologies are used to recycle and reuse of the wastewater. Chemical, physical and biological treatment systems are examples of these technologies. Apart from these systems, it is a system that essentially mimics natural cycles, low installation cost, zero waste and most importantly no waste of energy. wastewater treatment can be carried out with artificial wetland systems.

Artificial wetlands are the systems based on the phytoremediation cycle in which plants remove various heavy metals and undesired chemical contents from their environment by various organs and tissues. In these systems; it is expected that different plants will consume undesirable substances such as nitrogen, phosphorus in the wastewater they are in, in order to be placed in the wastewaters and maintain their vital activities in artificially constructed ponds and pools. On the other hand, the accumulator capacities and the hyperacumulator plants, which also contain the heavy metals such as cadmium, copper, iron, lead, mercury in the wastewater, it treats the water effortlessly, without using any energy. The most important disadvantage of these systems with zero energy consumption is their sensitivity to various external factors. These systems, which are established with correct design and faultless application, can serve for many years. For this reason, very careful attention should be paid to the structural, plant and cyclic design of artificial wetland systems. Considering all the climatic, topographical and geological features of the place where the artificial wetland will be constructed, all properties, content and content of the water to be treated should be examined, plant selection should be made, structural applications should be realized taking these properties into consideration and regular maintenance programs should be established.

Due to the installation and cost advantages in places with up to 2000 inhabitants today, these systems, which are proposed as alternatives to treatment systems, will gain even more importance in the future due to the lack of energy claims. For this reason, important tasks fall into landscape architects, which are the professional group that is prolonged in plant life and ecosystem cycling as well as structural design knowledge in the design of such systems. It is almost impossible for people

and professions who do not know plant and plant ecology, the main element of the system, and who cannot design ecosystem cycles, to set up these systems correctly. For this reason, rational designs and correct applications are essential to ensure the sustainability of recycled water resources.

# CITY - CLIMATE - TRANSFORMATION 1

# Evaluation of Adaptation Strategies in Developing Resilient Cities Against Climate Change in Turkey

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**ABSTRACT**

Urban areas have become important gravitation areas in the geographies where they have been located particularly by the Industrial Revolution. A lot of dynamics both of which internal and external have been playing roles in urban growth and development. Developing healthy urban areas approach has been appeared in order to find solutions to the different problems growing particularly within the cities by the Eighteenth Century. On the other hand, urban areas which have been growing rapidly and uncontrolled have turned into vulnerable manufactured physical environments in terms of different hazards. In parallel to healthy cities, "disaster resilient cities" understanding has come to the agenda due to the increasing affects of either natural or human induced disasters in urban areas. The World countries most of which experienced the disastrous impacts of World War II. have started important works with the leadership of United Nations to support steps which will reduce the disaster affects by the mid Twentieth Century. In this period, it has been also needed to develop attempts which would help to build policies and strategies on fighting with climate change effects in the international agenda by the increasing adverse impacts of Global Climate Change phenomena. It has been thought by the end of Twentieth Century and just beginning of Twenty-first Century that climate change induced disaster affects on urban areas will have very serious results within the medium and long terms. In this respect, it has been gaining speed and importance of developing policies and strategies for climate change adaptation, and implementing these kind of strategies into practice in terms of building healthy and resilient urban areas. Turkey is a country which has been facing with different hazards and has been a lot of disaster experiences. It is predicted that climate change induced disasters will have impacts on the geography where Turkey has been located as well. In this study, the works revealed within the international area related to understanding of developing disaster resilient urban areas in general, and in particular adaptation of cities to climate change are evaluated through a historical perspective. The transformation of policies and strategies which have been developed for urban areas against climate change effects are discussed within this evaluation. Moreover, the international and national agreements and works in particularly climate change concept all of which have been introduced and/or being a part to by Turkey are evaluated. The study analyzes the policies and strategies which play dominant role for the necessary steps on the development of safe urban areas and realization of the ideal of sustainable urban growth particularly within the institutional structure. The comparison and evaluation of the policies and strategies with the works developed among the international area is done. It is also tried to be analyzed of parallelism

between the international and national scales in terms of major axis of policies and practices developed for the climate change adaptation concept. The steps for the development of policies and strategies which have been targeting to build awareness for disaster risk reduction and climate change adaptation, and community participation for urban area users or urban users are also evaluated within this analyze. It is used different documents for the literature survey to obtain the necessary sources for the comparison and evaluation in general, and in particular the institutional sources are used in terms of evaluation of works and practices related to climate change adaptation. It is also used of documents which have been obtained from the interviews with the practitioners and professionals who work particularly in climate change and disaster risk reduction concepts in Turkey. Both the parallel and opposite views of professionals which have been developed from the interviews designed with open-ended questions are used for the source and base of the evaluation of the study. The results obtained from the literature survey and interviews have been evolved into a discussion of a Model for Climate Change Adaptation of Cities in Turkey which could be developed for the adaptation strategies and practices in terms of building resilient cities to climate change impacts in Turkey. It is tried to be created a base through this argument for a model which is holistic, multi-disciplinary, multi-sectorial, civil society participative and awareness oriented, and practicable for both regional and local scales.

**Key words:** Healthy City, Resilient City, Disaster Risk, Climate Change, Adaptation

# Towards Post Modern Settlements: Creation of Resilient Cities Against Climate Change by GIS Methods

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**ABSTRACT**

Since mankind has existed, it has been trying to meet its basic needs. In these early times, their priorities included protection from wild animals, climate conditions such as rain and wind. The land selection which was made by different priorities before has not changed with the technological development and cultural changes. In the discipline of psychology, the physiological needs first ranked in Maslow's hierarchy and security needs second ranked in Maslow's hierarchy have pushed people to choose places in every age to meet their need for sheltering. Today, more than half of the world's population lives in the cities. Cities with a high population have both residential and working districts. Every development that makes cities even more complicated and it is increasingly difficult to protect them and maintain their sustainability. Chaos Theory, a physics theory, argues that the shape of a cigarette smoke in the air is not the product of purely disordered and independent coincidences but of many parameters that cannot be accounted for the environment. In the same way, even if cities are growing in complexity, their development involves many variables.

Today, urbanization does not only a geographical growth, but also a change in the urban culture, the lifestyles of individuals and the urban-rural relationship. The cities that we know and live in today has started to be formed after the industrial revolution. In the urban areas, economic technological and environmental factors increase the population every day and the cities are growing even more. Cities have begun to build their own climates and to threaten their residential areas and lives by accelerating climate change, a natural process that increases industrial production on a global scale. Cities are affected directly by climate changes and consist of the factors which accelerator the climate change at the same time.

It is clearly very important to understand the development of cities in order to maintain their concept of "Urban Resilience" that emerges at the point of ensuring sustainability of cities can be expressed briefly as follows. The complex systems of cities are resistant to changes, uncertainties, along with their present fragilities, can be restored to this point of equilibrium after preserving or shocking the equilibrium point. Urban resilience against climate change; is considered to be resistant to the brittleness of the climate change in the ecosystem, taking measures to mitigate the climate change and reaching the same balance point or reaching another balance point as a result.

In order to be able to obtain Resilient cities, it is necessary to determine well what the cities are affected and to understand their fragility, ie. the city's variables.

In fact, climate change is a natural process, but human factors such as increased urbanization are accelerating the climate change process. It is necessary to identify the city's variables in order to ensure that cities that are resilience to climate change threaten the sustainability of cities.

Until a few hundred years ago, it was easier to make site selection analyzes by determining the city's variables while the cities had fewer populations. Increasing dynamics in The Cities today, make these analyzes more difficult and increase the risk of error. With the developing technology, Geographic Information Systems provide systematic collection, processing and storage of data. The healthier handling and storage of the data helps us to understand and analyze the dynamics of the cities.

Climate change- Resilient cities are obtained and processed with GIS helping to ensure the sustainability of cities. In this study, the importance of GIS in the transformation of the settlement systems since the existence of mankind and the settlement systems which are separated as urban and rural nowadays are mentioned. From the perspective of climate change, ecological urban practices, eco-villagers, durable cities and other world examples for the sustainability of cities are included in the urban design scale.

**Key words:** Climate Change, Resilient Cities, Eco Communities, Geographic Information Systems

# A Model Project Forming Urban Transformation: IBA Hamburg

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**ABSTRACT**

As a result of popularization of uncontrolled and unplanned structuring, along with the increase in domestic migration to big cities, unqualified and unhealthy urban areas are being created. These areas being created without any aesthetic concerns, without caring about comfort, performance, security and durability and without following any rules have integrated with their surroundings by evolving from being temporary to being permanent in time and have become a major urban problem today. For this problem has spread throughout the whole city and singular solution conditions are insufficient, it should be approached in an urban scale.

In creating new urban areas and transforming and reorganizing current urban areas, the increase in the emphasis on natural and physical environment has proposed the "Urban Transformation" issue that is necessary to be created in areas like management, design and technology for the cities facing the results of global change, and these areas are being created with many years of experience and knowledge.

The primary objective of urban transformation that has been shaped with the purpose of creating a solution for physical, economic and social problems in cities is to create permanent solutions to urban problems and to create sustainable cities that address the needs of users. So after urban transformation, living spaces, and durable, aesthetic and functional structures that have qualified and high standards and can answer the needs of all stakeholders especially users must be provided.

Various works have been done about this issue in the world. In these works, cities are divided into regions and these regions are approached according to changing and reforming urban areas, and the creation of new urban areas is provided. The works usually come to life with the green city theme that is focused on climate change. For example; Freiburg in Germany, Copenhagen in Denmark, Stockholm in Sweden, Vancouver in Canada and one of the most important ones: Hamburg in Germany.

As one of the green city works and the symbolization of urban transformation and reform, IBA (Internationale Bauasstellug / International Building Exhibition) has been continuing to be international building exhibitions in Germany since 1901. More than a building exhibition, IBA is seen as an urban development vision that provides inspiration for innovators and identifies life and future. This approach purposes new solutions to living spaces not only within the climate change and green city theme, but also in the context of globalization, metrozones and cosmopolis.

IBA Hamburg, whose preparations lasted 3 years and was materialized between 2006 and 2013, is focused on three main subjects; "presenting the benefits of globalization", "using information and

culture sources to improve quality" and "creating high quality urban areas". IBA Hamburg Project in Wilhelmsburg region in Hamburg, created within the themes; "Cities and Climate Change", "Metrozones" and "Cosmopolis" respectively, supports the improvement suitable to its original qualities of the natural and physical environment created by these themes.

The purpose of these areas which are the physical equivalent of urban change and transformation is to create spaces suitable to social culture and lifestyle that change with the improving industry and technology and to produce sustainable models for the future city by bringing out border potentials needed to be created With the development of the models being used in the urban, social, environmental and global processes and the sustainability of the feedbacks obtained from the process, IBA, with experience more than 100 years, provides an opportunity for the transformation to progress without being interrupted.

In this study, it is discussed how the applicable and sustainable projects created during the urban change and transformation process of IBA Hamburg which was designed with three different themes can create data for the planning approaches of today's cities. It is speculated that this can support and pioneer works being done about urban transformation.

**Key words:** Urban Transformation, IBA Hamburg, Cities and Climate Change

# Local Solutions for Bioclimatic Urban Design of Settlement

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**ABSTRACT**

As a result of increasing structuring beyond control after the industrial revolution, and of industrialization, the need for energy has increased, and increasing energy demand has increased the consumption of fossil energy resources. The fact that fossil fuels are economically and easily obtainable has caused their damage to the natural environment to be ignored by society, As a result of this, energy systems based on fossil fuels such as coal, oil, natural gas and so on have begun to lead to air pollution, and even climate changes. Today, climate change appears as one of the biggest environmental problems on the global scale. The temporary solutions to the environmental problems that have arisen as a result of the increase of industrialization, of people migrating to cities, and of rapid population growth have led to uncontrolled and unplanned urbanization. In order to meet the need for housing, housing estate have been attempted to be built in a short time, and the same types of projects have been put into practice using same construction technology and same building materials , and with similar projects in different regions, which don't reflect the characteristics of the region and climates. As a result of this situation, houses that are incompatible, unhealthy, totally dependent on fossil energy sources, and pollute the environment by releasing CO2 gas have increased, and also, cities that resemble each other have emerged.

The artificial environment created by the mentioned architecture have an important role in the formation of global problems, of which effects are more felt in recent years, including increase in greenhouse gas emissions, ozone layer depletion, energy crisis, unlimited and unconsciously depletion of natural resources, intensive use of fossil-based energy resources, and decrease in biodiversity. The fact that the resulting local and global environmental problems damage to ecological balance, and reach the level of affecting society, which obliges us to consider next generations. As Brutland emphasized in the definition of the concept of sustainability, "We all have a responsibility to meet today's needs without compromising on future generations' ability to meet their needs". This makes the concept of 'sustainable building' preferential, and accordingly, features energy efficiency in parallel with global concern. Architects should be supported end encouraged on studying on designs towards producing sustainable buildings that will contribute to decrease global warming, and on building houses using sustainable technologies and effective materials, that are climate-compatible, energy and environmentally friendly, with minimal CO2 emissions. It should be aimed at achieving maximum efficiency by reducing waste and resource usage during the building life cycle. Moreover, climate changes and increasing of temperatures from year to year also feature the necessity of buildings and the designs of the buildings to keep up

with changing climatic conditions. In ancient times, location-specific passive design proposals developing houses were designed, which were built using natural energy sources, considering climate, topography, structures in the immediate vicinity, local texture, local materials, and microclimatic conditions of the region. Today, due to rapid population growth, and unplanned urbanization; the current location's climatic conditions haven't been reflected on building designs, and accordingly, housing practices that do not take passive climate techniques into account are increasingly seen. Proper comfort conditions are intended to be provided by using more energy with technological products. The way of building healthy and sustainable houses is making climate-friendly design a part of our lives, and to minimize the adverse effects of the artificial environment on the ecosystem by utilizing from the developing technology.
Since urbanization plays an important role in the emergence of damages arising from the artificial housing, housing estate, and apartment buildings were preferred in the study. In the study, it was aimed to emphasize the necessity of designing distinctive cities instead of one-sample cities, by examining the proposed measures and solution proposals in housing samples that include climate-specific design parameters, and that were selected from different climatic zones. It was aimed to draw attention to the question considering to reach the whole from the piece "Is it possible to create a difference at the urban level with the efficiency to be obtained in the housing designs trough building criteria that are climate compatible, energy efficient?"

**Key words:** Climate change, Climate sensitive structure, Energy effective structure

# The Climate Journey of Turkey from Past to Future

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**ABSTRACT**

Turkey has regularly climate data from 1960 to the present day climate measurements. For the period 1960 to 2017 and for climate indices, data from about 109 meteorological stations can be used. The number of stations used for data to determine the past climate trend is 97. We can count the main climate parameters as temperature, precipitation, evaporation, wind direction and velocity, pressure. The parameters of temperature and precipitation are the most commonly used parameters when showing the climate trend of a region or country. In addition, these parameters are test parameters for the predicting future climatic conditions. For projection studies HadGEM2-ES global circulation model outputs produced with the RCP 4.5 concentration scenario in the IPCC 5 Evaluation Report are used. These outputs have been applied dynamic scale reduction method using RegCM4.3 regional climate model. In addition, with this model, projections of temperature and precipitation were produced for our country and region at 20 km resolution for 2013-2099.

The average temperature in Turkey since 1994 (except 1997) positive temperature anomalies are present. 2017 Year of Turkey has an average temperature of 14.2 ° C. This average was realized at 0.7 ° C above 13.5 ° C according to the average of 1981-2010. From 1961 to the present day, the year 2017 was the hottest ninth year.

When considering the long-Turkey annual rainfall, the arid and humid period is observed that followed one another. The wetest periods have been in 2009 and 1988. 2017, Turkey areal average annual total precipitation was 506.6 mm. this value was 12% below the standard of 1981-2010 (574 mm). According to many years, from 1990 to present, 2017 has been the third of the reductions realized.

According to the results of the new climate index study produced using data from 1960-2010: Summer days, hot days, hot nights and tropical nights are all increasing in our homeland. Decreases were observed in frosty days, cool days and cool nights. These results suggest that Turkey is an obvious sign of warming temperatures. Most of the trends in temperature indices are statistically significant at 95% level. The number of summer days (Tx> 25 ° C) is increasing all over Turkey. The number of tropical nights (Tn> 20) is increasing (except the Fırat Basin). The annual total precipitation trends have been found to increase in the north of the country, and to decrease in Southeast Anatolia, Mediterranean and Aegean regions. The number of heavy rainy days tend to increase in most of the stations except Aegean and South-eastern Anatolia Regions.

According to the temperature and rainfall projections produced using HadGEM2-ES based on RCP 4.5 scenario; For the 2016-2040 period, it is predicted that the heating will generally be limited to

2 ° C. It is expected that this warming will be 2-3°C in the Marmara and Western Black Sea regions in summer. In the rainy season, there is an increase in the coastal Aegean, Eastern Black Sea and Eastern Anatolia in the winter months, it is predicted that rainfall will decrease by 20% in a significant part of the country except for the coastal Aegean and Eastern Anatolia east in spring rains. For the period 2041-2070, warming in the spring and autumn is expected around 2 ° C-3 ° C. It is predicted to increase by 4oC in the summer months. It is expected that in the eastern and southeastern Anatolia and Central and Eastern Mediterranean regions, winter precipitation will decrease by around 20%. For the 2071-2099 periods, it is thought that winter temperatures will increase by 2°C and spring and autumn temperatures by 3°C. In the summer temperatures, it can be mentioned that the temperature increases in the Aegean and South Eastern Anatolia exceed 4°C. The spring rainfall is expected to decrease by 20% in rainy seasons except for the coastal Aegean, Central Black Sea and Northeast Anatolia regions. It is expected that there will be about 10% increase in winter precipitation especially in the coastal area, decrease of 40% in summer precipitation excluding Aegean, Marmara and Black Sea boughs, and decrease in almost all the dormitories in autumn rains.

This study evaluates the historical climate data to understand the course and trend of Turkey's climate, thanks to these analyzes and Turkey through the international climate models to shed light on the future. It is to ensure that these assessments and predictions can lead to possible changes that we willingly and unintentionally live on. How can our sectors, cities and all living things be affected by possible changes in the climate? Which scientific analyzes will be used when adapting to these changes? We will try to make them. This study is also a periodical research study which will reveal the changes in climate assessment and climate prediction studies carried out quantitatively by the General Directorate of Meteorology.

**Key words:** Climate change, climate parameters, climate monitoring, climate projections, climate indices,

# Urban Rural Differences Under the Sea Climate Impacts, Samsun

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**ABSTRACT**

Urban areas in the world and our country are growing day by day. With the growth of the urban areas, the natural environment conditions in urban areas are changing. One of the factors that is affected by this change is climate. Urban areas have begun to have a different climate in their surrounding rural areas. Yılmaz et al. (2007) found a temperature difference of 1.7 ° C between the rural and urban areas in Erzurum. Çiçek (2005) stated that Ankara has an average annual temperature difference of 2.01 ° C between urban and rural areas. The purpose of this study is in the way of examination of the situation in a city with marine effect because researches have been carried out mostly in continental climate areas in Turkey with the purpose of determining the urban climate changes. In the literature, it is emphasized that the main causes of climate change in Turkey is urbanization. The studies related to the determination of the effects of urbanization on climate elements are important. The changes of the climate elements between rural and urban have been mostly determined in central(Ankara, Eskişehir) and eastern (Erzurum) cities of Turkey. The number of such studies in cities with marine effect is little. Climate characteristics of Samsun, a developed and growing city of Black Sea region, have been examined in terms of urban planning.

In this study, data of 17030 meteorological station in Samsun city center and 17031 meteorological station in Çarşamba airport are used. In order to represent the urban, Samsun meteorological station located at the central district of Atakum, where the settlement is intense, is chosen and meteorological station at Çarşamba airport is preferred to represent the rural area. Differences between 2000 and 2017 (18 years) of temperature, humidity, wind and precipitation data obtained from two meteorological stations operating for many years have been determined. The daily data of the two stations are evaluated and the differences during the day are revealed. The data obtained are interpreted with graphics and tables.

As a result of the study, it is determined that the urban area is 1 C hotter in the average annual temperature, the minimum temperature average difference is 2 C and the maximum temperature average difference is 0,5 C. In the daytime temperatures, the temperature in the first hours of day, the urban area is warmer than the rural and the difference reaches up to 2.3 C's. In warmer periods of the day, especially at noon, the rural area is warmer than the urban. In warmer periods of the day, especially during noon, the rural area is warmer than the urban. In relative humidity values it has been found that it is more humid in urban than the rural, the difference reaches up to 10% and the average difference is 3%. During the day, while the rural area is more humid in the early hours

of the day, the urban is more humid in the warmer hours of the day, especially at noon. The wind speed is found to be 2.86 (m / s) in the rural area while it is 1.95 (m / s) in the urban and it is understood that the annual average wind speed difference is 0.91 (m / s). It is seen that the urban is less windless compared to the rural. During the day, important differences between day and night also appeared. It is also determined that the amount of precipitation is higher in city center.

According to the results obtained, it is revealed that the urban is warmer than the rural. The low wind speed in the city center causes the air circulation in the city to be insufficient. This situation lowers the quality of the air in the city center. In urban planning, avenues and streets need to be planned appropriately. The fact that the air circulation is not sufficient in areas where the buildings are concentrated causes the polluted air to remain in the city continuously. Especially in summer, when it is seen to be windless, humid and hot, it has been concluded that this situation could cause negative impact on human life and health by causing urban heat island. It is emphasized that local governments should take measures in this regard.

**Key words:** Samsun, temperature, relative humidity, wind, rain

# Climate Change Perspectives of Regional Development Agencies in Turkey

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**ABSTRACT**

Studies on climate change have begun in the first half of the 1800's, in 1979 with the World Climate Conference was brought on the agenda a global platform. However, in Turkey, It was included in both the Annex-1 (historical responsibility; to limit emissions, to protect greenhouse gas sinks, to report gotten measures and policies) and Annex-2 (material liability; In addition to the obligations they commit in Annex-1, transferring and financing of environmentally compatible technologies to the developing countries) lists in the original text of the United Nations Framework Convention on Climate Change, which was signed in 1992. In 2001, the city held in Marrakech, Morocco, 7th Conference of Parties (COP 7) in Turkey, are removed from Annex II, it has been recognized that it would like to become a party to UNFCCC as an Annex-I country with recognized special conditions, and May 24, 2004 Turkey officially been 189 parties involved in the contract and has been among the stakeholders on a global platform.

Whereas in the early history of the world history natural factors are causing climate change, human activities are the main cause of the climate change that is being observed today. Scientific studies show that climate change in the global, regional and urban areas has negative effects on many indicators such as surface temperature, atmospheric water vapor, violent nature events, glaciers, ocean and land ice, and sea level. These indications are global, on regional and urban areas; the decrease of water resources and the decrease of water supply, the increase of sea level and salinization of soil with rising sea level, floods in coastal settlements,, the extinction of species, the increase of air pollution, the damage due to the increase of extreme weather events, the increase in health problems, the emergence of limitations the drought and agricultural activities and food production , migration, energy demand, deforestation and, in consequence, desertification. These changes affect the distribution of natural resources as a whole, in other words, the distribution of resources and possibilities for life, and also cause changes in environmental and socio-economic structures at global, regional and urban scale. It is considered that urban growth and urban activities are the triggering effects of climate change because of the increase in climate change effect due to human activities in recent years. For this reason, policies to reduce the impact of climate change need to include both mitigation (emissions of greenhouse gases causing climate change, in particular reducing carbon dioxide emission sources and increasing sinks) and adaptation (adapting to adverse effects caused by climate change) policies in regional and urban planning strategies that should be monitored against the climate change problems formulated by the Intergovernmental Panel on Climate Change (IPCC).

Regional plans, which are one of the important tools of regional development and improvement, are important for the effective use of regional resources. The current situation and resources of the

region and how these resources will serve development purposes are decisions taken with regional plans. For this reason, it is seen that sustainable policies and strategies should be developed on regional scale and regional plans in order to reduce the effects of climate change by taking into account the reality of "climate change" to regional plans.

The purpose of this report is; The region plans made by the Development Agencies in Turkey [The Aegean Region TR31 (İzmir Development Agency), The Marmara Region TR10 (İstanbul Development Agency), The Central Anatolia Region TR51 (Ankara Development Agency), The Black Sea Region TR90 (Eastern Black Sea Development Agency) , The Eastern Anatolia Region TRB2 (Eastern Anatolia Development Agency), The Eastern Anatolia Region TRC2 (Karacadağ Development Agency in Southeastern Anatolia Region) and The Mediterranean Region TR61 (Western Mediterranean Development Agency], "climate change" in terms of examining, It is to assess how well the strategies produced take into account policies of adaptation and mitigation in reducing climate change impacts.

The method of work is based on examining the literature on climate change, climate change mitigation and adaptation policies, climate change strategies in regional planning, and examining recent regional plans made in selected areas. Preliminary findings of the study include that the study of the Regional Development Agencies examined has not yet adequately addressed the climate change factor on regional plans and that the evaluation, analysis and measures for implementation have not been developed in regional development strategies. This report will contribute to regional perspectives by drawing attention to the importance of climate change, drawing awareness of the development of adaptation and mitigation strategies at the regional scale, and anticipating what types of strategies might be possible, by evaluating recent regional plans in selected areas.

**Key words:** Global Climate Change, Global and Regional Scale, Regional Planning, Regional Development Agency

# The Importance of Liquefaction in Urban Transformation

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**ABSTRACT**

The concept of urban transformation, as in many countries of the world, has been spreading in Turkey. Urban transformation is expressed as a comprehensive action plan that aims to provide a lasting solution to the economical, physical, social and environmental conditions of a changing region in order to solve the problems in the city. Due to the increase of industrialization and social and economic developments in the world and as well as in our country, immigration to cities has escalated and a rapid population rise has occurred. As a result of this increase, urban problems have intensified and need to be transformed. Urban transformation in Turkey located in an earthquake zone is vital. As stated in the Law on the Conversion of Areas Under Disaster Relief No 6306, "The structure defined as based on scientific and technical evidence that the economic life span is within or outside the risky area, or that it is at risk of collapse or severe damage".

The soil-structural relationship is as important as the structural performance of the structures in the earthquake zones. Under dynamic loads, soil behavior becomes different. The resulting motion of the earthquake motion is propagated throughout the soil occasionally as dampening the motion and sometimes as amplifying it. Sometimes the energy is damped by the soil and this can be explained as the liquefaction mechanism. This type of strength loss results in great damage, no matter how strong the structure is. For this reason, the risk of liquefaction in the earthquake prone regions has great importance in planning. Liquefaction is the loss of the shear strength of the soil that results acting as a viscous liquid. As a result, deformations such as sudden settlement, different settlement, tilting, and rotation come into play and cause great damage to the structure. Therefore, necessary precautions must be taken before the risk of liquefaction determined and built up. For this reason, the General Directorate of Disaster Affairs of the Ministry of Environment and Urbanization describes the areas that are at risk of liquefaction as '' Areas that will not be allowed to be built without measures ''. Models based on SPT and / or index properties are commonly used to assess the risk of liquefaction of soils, but field specific analyzes that reflect the field better evolve day by day. Whether the construction risky or not is done by the "Risky Building Detection Report Review Form" prepared by the Ministry of Environment and Urban Planning. This form has been prepared separately for masonry and reinforced concrete buildings. The risky building identification form is mostly used to evaluate the structural problems and to evaluate only the soil class. Therefore, the fact that a building is structurally sound does not mean that it does not pose a risk in the event of an earthquake. It is of great importance to carry out specific dynamic analyzes of the area belonging to the region where the urban transformation is planned.

In this study, 5 boring logs taken from Akyazı, district of Sakarya province, were examined and different methods were used to determine if there is a risk of liquefaction. Each drilling log was evaluated separately. The reason of choosing this region is that liquefaction happened in this area during Adapazarı Earthquake. First of all, the risk of liquefaction by the method which depends on the conventional and widely used index and SPT method was investigated and then the risk of liquefaction was determined by carrying out site specific analysis with the help of DeepSoil program. Different seismic records were used in the analyzes. In the analysis, the nonlinear method is preferred and the floor is modeled realistically. The data obtained from the two different methods are compared with each other. In urban recreation, soil stratification should be taken into account at the time of earthquake in addition to the soil class. The aim of this study, in the areas which is targeted to urban transformation, is to demonstrate that the soil classification all alone is not enough in the assessment of the risk analysis; question the adequacy of commonly used methods in practice and emphasize the importance of the site-specific analysis in the area.
It is urged on that a liquefying soil should be taken into consideration during the urban transformation process during the earthquake.

**Key words:** Urban transformation, Soil, Liquefaction

# CITY - CLIMATE - TRANSFORMATION 2

# A (Bio)Climate Sensitive Urban Design Example in The City of Eskişehir

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**ABSTRACT**

Cities have negative impacts on climatic elements due to the transformation of natural surfaces, waste heat from industrial and residential areas and low air quality. Degrees of these effects are expected to increase as the urban population increases. Even though the cities are the scenes for social, economic and cultural advancements, harms from such developments velocity of which is at unprecedented pace are so widened and large. Urban areas exhibit very different climatic characteristics than those seen in their surroundings. Results of the studies whose quality and quantity have increased in the last years, show that cities are hotter (torrid), drier (arid) and calmer (sultry) than their surroundings. Therefore, urban spaces are less liveable in especially the developing countries which attempt to perform some activities concerning economic development by omitting urban planning and design principles.

In physically scattering, spilling and spreading cities with their swallowing populations, people are exposed to excessive heating resulting from the overexpansion of paved/impervious surfaces due to the effect of solar radiation, extreme weather events whose violence increases day by bay depending on the heating mechanism mentioned (excessive rainfall, violent winds etc.), floods due to rapid flow of surface runoffs caused by the blockage of rain water infiltration and heat strokes in outdoor spaces in especially summer months. Economic and social impacts of such events whose severity and frequency increase day by day also increase on humankind economically and socially (tolls). It is possible only through the adoption of appropriate urban planning and design principles to prevent such events and reduce the impact of the global climate fluctuations. The aim of this study is to project an example and specially designed area in the city center of Eskişehir by considering a set of urban planning and design principles, which are expected to influence climate elements at the lowest possible level in the urban environment.

Human bioclimatic comfort is the condition where people are not to be disturbed by the ambient air conditons. This disruption of this comfort may result in health problems, excessive energy use and reduced work efficiency. In addition, the direct impacts of changing climate elements are also very costly. In the scope of the study, firstly the data of 4 meteorological stations in Eskişehir city center and its vicinity were used, and the situation of the city in terms of both climatic elements and bioclimatic comfort values was revealed throughout the year. One of the bioclimatic comfort indices, PET (Physiological Equivalent Temperature), was calculated using the RayMan model and the climate data obtained from the stations. Spatial distribution of these values was obtained and torrid and sultry zones were determined together with the distribution maps of mean temperature and wind velocity using geographical information system in the city centre.

Urbanization and climate change it causes are among the most serious problems that humanity has faced so far. Erasing completely this phenomenon or redcution of its effect to the lowest possible levels, which threatens the sustainability of human life and its existence, will prevent the destruction of the general equilibrium of atmospheric circulation and result in the more comfortable and human life out of vital dangers on the subscales. In this context, city planning efforts are needed in Turkey as it is in the World, which wil not disrupt the course of these climatic elements and will provide additional positive contributions to their natural trend. As a result of the present study, an urban design in which climatic elements can be least influenced by the urbanization effect and urbanization originated climate elements have not been changed has been put forward and the projects have been shared with the public.

**Key words:** urban climate, bioclimatic comfort, city planning, urban design

# Determination of the Wind Energy Potential Using GIS: Case Study in Eskişehir-Turkey

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**ABSTRACT**

The rising energy demand in parallel with the rapid population growth that is experienced nowadays with fossil fuels causes environmental pollution and global warming and negative environmental conditions arise. On the other hand, meeting the ever-increasing need for energy with fossil fuels suggests that fossil resources will be inadequate in the future. For this reason, the use of renewable energy sources should be increased by taking into consideration that both the damage to the environment and the fossil fuels will be consumed in the future. The use of renewable energy sources needs to be widespread in order to leave a cleaner and more sustainable environment for future generations in the light of rapid developments in the field of technology. Windenergy, one of the renewable energy sources, is a very efficient and clean energy source used by many countries around the world. The early establishment of windturbinestookplace at thebeginning of the 20th century, although many kind began to take advantage of various forms of wind energy. The energy provided by the wind energy of the developed countries in today's world has reached the dimensions which are not underestimated. Turkey is among the countries in terms of highly efficient wind energy sources. Energy and Natural Resources Ministry wind energy potential in Turkey, according to the study conducted by the Directorate of Renewable Energy 48,000 MW. In Turkey, wind energy investments started in 1998 has not shown a rapid development until 2009. However, in line with the Law on the Use of Renewable Energy Sources for Electricity Generation Production, which entered into force in 2010, the direction of investors to this area has been opened and incentives have been provided for technical studies. Experienced in light of these developments, the value of the total installed capacity of wind power in Turkey has reached 6,106 MW. Turkey's targets for 2023 include wind energy installed power plant has aimed to raise the level of 20,000 MW. For the effective use of wind energy in the direction of the specified target, it is necessary to analyze the current state of the resources, to determine the properties of the installation to be installed and the location selection correctly.

In our country, the Ministry of Energy and Natural Resources, General Directorate of Renewable Energy has maps defining the potential of wind energy, such as the Provincial-based Wind Energy Potential. It is important to note that the wind energy potentialmap that contains information for the wind power plant facility inadvertently defines areas such as residential areas, forests and protected areas in the map for the Eskişehir province but the economical criterias such as proximity

to the highway and various environmental factors are not taken into account is a suitability map. From this point, considering the wind power plant location selection criteria in the literature, environmental and economic criterias in the city of Eskişehir were covered in a much more comprehensive way than Wind Energy Potential map which is done by the Ministry of Energy and Natural Resources, and the appropriate areas for the wind energy plant were mapped. Furthermore, in this study, it is calculated how much electricity can be produced in the case of establishing a residential type wind turbine at a sample location in Eskişehir province.

In the first phase of the work, it was aimed to determine the wind energy potential in Eskişehir province. The wind map and power map were produced by analyzing daily mean wind data information from 2012 to 2017, which is obtained from the General Directorate of Meteorology in the study, in the geographic information systems (GIS) environment. Wind speed and direction information are interpolated by Inverse Distance Weighting (IDW) interpolation method. Grid-based wind speed and direction information were created and wind velocity and wind direction distribution maps of the study area were obtained. In accordance with this information, a wind power map was created. Then, suitable areas for the wind energy plant were determined using spatial analysis methods based on geographical factors. Suitable areas are defined by GBS environment by using 16 environmental and economic criteria such as transportation networks, residential areas, protected areas, protected areas, wetlands, energy transmission lines, distance to transformer centers, distance to fault lines.

In the results of working; the minimum wind speed detected in the study area was 1,8 m / s, the average speed was 2,51 m / s, and the maximum wind speed was 3,1 m / s. A suitable area for the 18 ha wind power plant was identified in the study area. According to REPA, due to the reason that the wind speed is 2,8 m / s and below in the study area, there is not a suitable area for the establishment of economic wind power plant but it is seen that systems with 1,4 Kw power can be installed with the installation of domestic wind turbines in residential areas.In this study, where the wind energy potential is defined for Eskisehir province, suitable areas for the wind power plant are determined and housing type wind turbine usage is exemplified, a part of the energy needed in Eskişehir province can be obtained from wind energy which is a clean energy source. it is possible to produce wind energy from wind energy.

**Key words:** Geographical Information Systems, Renewable Energy, Wind Energy, Wind Power Plant, Site Selection

# Amasya Example in Wind Energy Site Selection

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**ABSTRACT**

Acting on the fact that in the future, even today, renewable energy sources will be consumed, it is inevitable that turning to renewable energy sources will be one of the most important politics of the nations. In many countries, there are successful studies on renewable energy production in Europe. The UK, France, the Netherlands and Denmark have a national renewable energy certificate policy and strategy document (Ercoşkun and Akünal, 2016).

The fact that Turkey is foreign-dependent in terms of energy and that the increase in demand for energy consumption is in the second place in the world after China are signs that there is a need to conduct studies for the use of renewable energy. In electricity generation, it can be said that the use rates of renewable energy sources such as wind and solar power are very low and most of these resources are waiting to be put to good use.

Among the renewable energy sources, the most common and the most technologically advanced is the wind energy. These sources are important in diversifying energy sources and minimizing foreign dependency on resource supply as much as possible. The essentiality here is to primarily use all of the domestic resources and in particular to bring the renewable energy technologies to the national economy. In accordance with this purpose, it is necessary to know the potentials of the wind energy resources and the resource areas where the investments can be made. In terms of wind energy, Turkey is among the countries with the highest potential in Europe. It is seen that there have been breakthroughs in this area lately. In many cities, Wind Power Plant (WPP) investments have been made and still continue to be made. However, it is evident that the selected areas for some WPPs serve the financial interests of entrepreneurs and that site selection factors are not taken into account. On the contrary, considering these criteria, there are successful WPP projects both in terms of location and production. One of these successful projects is in the province of Amasya. Amasya Wind Power Plant built in Amasya in 2015 meets all the electricity needs of an average of 32,955 people with an installed capacity of 42 MWe. The ratio of production to provincial consumption has reached to 11%. It should be ensured that the contribution of the existing WPP gives a positive result shortly and alternative areas should be searched to provide more contribution. In this context, the following information, which is effective in wind energy location selection, has been obtained from the Amasya Special Provincial Administration: maps such as wind speed, altitude, slope, exposure, land use, distance to roads, distance to fault lines, lithology, distance to energy transmission lines. Analyzes and evaluations were created by means of Netcad / ArcGIS / Arcmap programs and it has been tried to determine the areas where WPP can be done for Amasya by using multi-criteria decision-making method. In Multi-Criteria Decision Making Method, each criterion was evaluated according to the scoring scale within itself. For example, in the wind speed evaluation, one of the site selection criteria, the impact class ranges were determined and weighted scores were generated by giving each class effect value. For example,

one of the site selection criteria, wind speed assessment by determining the impact class ranges, weighted scores were generated by giving each class effect value. The same method was used for other site selection criteria. Supported by maps, wind resource information can be queried based on the followings: across Turkey, grid, geographical region and any area or point to be selected. Thus, the areas where the wind power plant can be established are easily determined preliminary feasibility studies can be done and the work done for the purpose of searching for wind farms is removed and the savings are ensured.

In this study, answers to the following research questions have been searched:
-What factors should be considered in the selection of WPP site?
-What are the areas where WPP can be established in Amasya? The answers to these questions were searched through maps.

At the end of the study; the most efficient WPP location for Amasya province have been identified by responding to the question of what the required features in the construction of the WPP should be and what criteria should be taken while selecting the area. In addition, these evaluations will facilitate the investigation on any area in the Amasya province.

**Key words:** Renewable Energy, Wind Energy, Wind Power Plant Site Selection, Amasya

# An Investigation on Digital Wind Tunnel Simulation Study on Urban Scale and Urban Transformation

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**ABSTRACT**

Energy efficient building design has emerged by an active contribution of simulation and analysis tools on design stages. Especially in recent years, the concept of Building Information Modeling (BIM) has introduced a platform that incorporates the entire building lifecycle into the designers during the design phase. The program delivers an opportunity to acquire and manage the building in different design scenarios that have more efficient and more optimized solutions. The heating and cooling costs have a considerable share in calculating annual energy consumption and operating costs. The oil embargo imposed by OPEC countries in the 1970s emphasized the importance of going for energy consumption, and after these dates, the buildings were forced to be more conservative regarding both heating and cooling costs. To reduce energy consumption reduction of cooling and heating needs and to design more efficient HVAC devices has become a priority. The use of passive ventilation systems is also one of the essential inputs to energy expenditure in structure. Occupants can benefit from passive ventilation systems with user intervention or automotive systems. In this respect, the obstruction of air flow is considered a critical factor as much as the design of the structure. The condition of surroundings and relations of prevailing wind in a layout of neighboring buildings are curial factors in passive ventilation design. The aim of the research presented here is that passive ventilation must initiate at the urban scale and then be introduced to building scale. Therefore, to be able to use passive ventilation in a building, it is first necessary to layout a city that respects the prevailing wind directions, and speeds then consider the calculation for a structure that can efficiently utilize the winds as natural ventilation element.

As a case study, two different textured neighborhoods of Antalya that is a hot and humid city is selected for analyses on building height and the solid-void ratio of city context. The methodology of the research is first, created the mass models in the existing buildings and then, digital wind tunnel simulation utilized to study the prevailing wind directions and speed derived from national meteorology database. The result of air circulation simulation maps in two neighborhoods in different urban contexts are evaluated and discussed in the paper. This study indicates natural wind situation is not considered as a design element in urban level. The results from disregarded prevailing wind direction and speed in the design stage and the places where the air is blocked by the result of an urban design decision in the regions were discussed. The study suggests that a passive design which takes advantage of using natural resources, which is one of the ways to move smartly to reduce negative impacts on our budget and inverse effect on nature. However, running any passive design or a green design on only a building scale will underestimate the situation; it needs to be handled on the urban scale. The research aims to contribute to the work that will be

done in this direction. An Investigation on Digital Wind Tunnel Simulation Study on Urban Scale and Urban Transformation

**Key words:** Passive Design, Natural Ventilation, Simulation, Urban Design

# Assessment of the Progress Towards the Establishment of Definitions of Nearly Zero Energy Buildings and Cost Optimum Level in EU

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**ABSTRACT**

Increasing energy demand and decreasing conditions of existing fossil-based resources have made the use of energy efficiently and renewable energy resources inevitable. In Europe, 2002/91 / EC "Energy Performance Directive in Buildings" was published in 2003, covering the issues of heating, cooling, ventilation, lighting systems and heat insulation to reduce the energy consumption of buildings that make up the largest share of carbon dioxide emissions; and in 2010 the directive was revised (2010/31 / EU). The main aim of this directive is to define specific measures to reduce energy consumption in the building sector.

The Directive begins by stating that the conditions set forth are minimum requirements and that the members do not interfere with bringing more strict rules and maintaining these rules. In the 2nd article of the Revised directive, the concept of "nearly zero energy building (NZEB)" is included. According to this article, NZEB is defined as a building with very high energy performance which consumes zero or very low amount of energy and provides a significant part of this energy from renewable energy resources in or near it. The concept of nearly zero energy building is not yet included in the legislation of our country. Since the minimum and maximum harmonized requirements are not specified in the Directive, it is left to member states to define what constitutes very high energy performance, depending on the cost optimum performance level. The cost optimal level is represented as the energy performance resulting in the lowest cost during the estimated economic life cycle of a building. It is evident that the Member States have to determine the NSEB definitions and cost optimum energy performance levels, taking into account local conditions.

Article 9 of the Directive is related to NZEBs. This article is one of the most important articles and sets an important target for the EU member states. Accordingly, as of December 31, 2020, all new buildings in member countries are required to be NZEBs. For public buildings this goal has been further pulled forward and set as December 31, 2018. As of December 31, 2018, NZEB criteria will also apply to buildings that public institutions use or own. In addition, Member States need to increase the number of NZEBs and develop policies and measures to transform the buildings owned or used by the public into new buildings with renewable energy.

This study aims to evaluate the process of making NZEB definitions, to create cost optimum energy performance levels in EU member states, to review the available literature on this subject and to

predict NZEB policies to encourage the development context in Turkey. The progression of cerating NZEB definitions and performance levels has been evaluated according to the detailed analysis of the literature after a summary of the existing NSEB definitions and calculation options and the asserted arguments. In the literature review, international studies of European countries, national studies and countries' specific projects, local action plans and legislative arrangements have been investigated by considering the main principles of the countries according to their climatic conditions, economic and cultural conditions. The examined data are evaluated based on a number of parameters, such as primary energy consumption, renewable energy use rates, certification system, subject awareness, financial support, government policies, trainings on NZEB, and pilot projects for selected criteria in different types of structures determined by the countries. Primer energy consumption is explained by taking into account different data for existing-new, non-residential buildings. Later in the article, legal arrangements in our country and projects related to the subject have been mentioned. The situation of our country compared to other European countries has been put forward. As a result, we believe that our work will contribute to accelerating the development of NZEB consciousness.

**Key words:** Nearly zero energy building, energy efficiency, calculation methods, legal regulations

# New Trend in Our Epoch: Scientific Investigation of the Tendency for the Sustainable Energy Sources

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**ABSTRACT**

Sustainable energy is a form of energy that meet our today's demand of energy without putting them in danger of getting expired or depleted and can be used over and over again. Sustainable energy should be widely encouraged as it do not cause any harm to the environment and is available widely free of cost. All renewable energy sources like solar, wind, geothermal, hydropower and ocean energy are sustainable as they are stable and available in plenty. There are many forms of sustainable energy sources that can be incorporated by countries to stop the use of fossil fuels. Sustainable energy does not include any sources that are derived from fossil fuels or waste products. This energy is replenishable and helps us to reduce greenhouse gas emissions and causes no damage to the environment. If we are going to use fossil fuels at a steady rate, they will expire soon and cause adverse effect to our planet. Fossil fuels are not considered as sustainable energy sources because they are limited, cause immense pollution by releasing harmful gases and are not available everywhere on earth. Fossil fuels normally include coal, oil and natural gas. Growing population in worldwide results in a significant increase in energy consumption. According to the report of the British oil (BP) energy outlook 2017, global energy demand is estimated to increase by an average of 1.3% per annum up to 30% in 2035. This increase in energy consumption results in a significant environmental problems such as global warming, air pollution, water pollution and soil pollution. Energy related carbon emissions are 22.5 million tons and 44% are due to the petroleum, 35% are due to the coal and 21% are due to the natural gas. Global warming, which cause a Greenhouse effect and an increse in the temperature, is emerged because of the increase in carbon emission. Global warming is an important environmental thread, which cause an increase in temperature, cause aridity and desertification and in additon, melting of ice fields cause a thread fort he cites nearer to coast side as well. In order to minimze environmental damages, new and alternatice energy sources are emerged. Alternative, in other words sustainable, energy sources are clean sources which are not harmful for the environment. Sustainable sources can be arranged as, solar energy, wind energy, hydroelectric, geothermal energy and biomass energy. In recent years, scientific investigations and publications are made in the field of sustainable energy. Publications in the Literature related on the sustainable energy between the years of 1988-2016 was rewieved within the scope of this work. Rewieved publications are taken from the Web of Science data base and published in the Science Citation Indexed

journals. In this work papers are evaluated in terms of country of publication, type of publcation, number of publication, feld of investigation etc. As a result, the trend in the sustainable energy from the past to the present, from the present to the future, was analyzed in macro and micro scale and a model proposal is suggested.

**Key words:** Sustainable energy, energy management, renewable energy sources

# Effects of Urban Areas on Human Bioclimatic Comfort Conditions and the Sample of Erzurum City

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## Abstract

Throughout the history, cities have been the sources of socioeconomic developments. When human population was considerably lower than today, damages by cities on their surroundings were also limited. Industrial revolution, changing living philosophy of people and scientific advancements resulted in higher rate of consumption of natural reserves for production purposes, earning more and consuming more and increase in human population due to effective struggle with diseases, respectively. Such consecutive developments caused large masses of human population move to cities and settlements to expand and enlarge physically and in terms of population.

In the enlarging cities, not only the quality of physical environment was lost but also the industrial production, motor-vehicles, domestic uses etc. produced smoke and gases to harm atmospheric environment and thus lowering air quality. In addition to these visible deterioration, bioclimatic comfort of urban atmosphere, invisible aspect of the atmosphere is also impacted negatively by the developments mentioned. Natural areas ventilated efficiently through wind turned into calm and windless areas due to dense structuring and high storey buildings, solar radiation and high temperature (urban heat islands). Due to the triggering effects of such mechanisms, urban areas became considerably disadvantageous areas for the effects of climate on humans.

Human bioclimatic comfort is defined to be the condition of mind where no discomfort is sensible in human brain from ambient air. When such a comfort condition is decreased in cities, people are affected in several socioeconomic ways e.g. the felicity of people decreases, health problems may appear, (feeling exhausted, worsening of some chronic illnesses), increasing energy demand and consumption, decreasing efficiency of workforce. Hence, over the last years, measured record temperatures have brought deaths and their rates are increasing consistently. Nearly all these unfavourable events are seen in urban areas. Bioclimatic comfort as a hotly studied subject has been on the scientific agenda since the beginning of 1900's (Haldane 1905). At the beginning, all the studies were focused on indoor air conditions but at later dates outdoor human thermal comfort conditions tried to be evaluated against heat stress in temperate cities to decrease the energy demand for cooling. Today the number of indices and models used to calculate bioclimatic comfort all over the world exceeded 200 as the number of quality studies increases.

Present study is dealt with the effect of physical urban development on bioclimatic comfort conditions in Turkey, which experiences the same process witnessed in the world in the sample of Erzurum medium sized and unindustrialised city. Aim of the study is to determine the effect of city on human bioclimatic comfort conditions in urban part of Erzurum city. Data obtained from two stations (urban – rural) were used to calculate bioclimatic comfort conditions using PET (Physiological Equivalent Temperature) index and a model (RayMan) over three years. As for the global warming one of the big problems in the world is rapid and unplanned urbanisation having several negative impacts on human life. In both Turkey and the world, urbanisation is among the main responsible factors for excessive warming through several mechanisms in addition to general circulation. This study shows that city centre exhibits unfavourable impacts on human bioclimatic comfort conditions compared to rural area surrounding the city.

**Key words:** Bioclimatic comfort, urban areas, PET, Rayman, Erzurum

# Analysis of Urban Transformation and Development Projects Performed by TOKI in Terms of Climate Responsive Design

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**ABSTRACT**

Urban transformation is a comprehensive activity aimed at ensuring a permanent improvement of the economic, physical, social and environmental conditions of an interchanging region in order to solve urban problems. In addition to making risky structures outside of these areas vulnerable to disaster risk, it is also an opportunity to reduce the amount of energy consumption and damage to the environment by making existing building stock harmonious with the climate. As it is known, the energy, which had a distinctive impact on consumption with the industrial revolution, became a crisis in the 1970s. This has brought about the savings in energy used for heating and cooling in buildings. Considering the amount of energy used in buildings in our country has the greatest share in total energy consumption, the importance of diminishing energy consumption with climate-balanced design is evident in the buildings. In this study, among the projects carried out by TOKI in our country, 'urban transformation and development projects' were dealt with in terms of climate responsive design.

Completed urban transformation and development projects are listed and classified according to the determined climate regions and evaluated with respect to whether they are compatible with climate-balanced design principles by selecting a sample with characteristics in each region. The most important climatic variables affecting energy conservation in climate-balanced design are temperature, humidity, wind and sunshine. Among them, temperature and humidity are more prominent. Our country, which is divided into climatic regions in different ways according to different climate classification, but climate regions determined according to the temperature and humidity conditions in studies on balanced design with climate for easiness. The projects discussed in this study were divided into five different climatic zones: hot humid, humid temperate, arid temperate, hot and arid and cold. The main goal of the climate-balanced design is to determine the heating and cooling periods in the respective zones and increase the heat losses caused by convection, convection, radiation and evaporation accordingly during the cooling period in the design and increase the heat gains realized in the same way during the heating period. Prevention of heat losses and increasing the heat gains from the sun is the main objective in cold climate. In areas exposed to hot arid climate, protection from sun radiation and hot winds in summer, where it is under the influence of hot humid climate, as well as being protected from the sun, the use of wind effect and natural ventilation are gaining importance. In arid temperate climate regions, solar utilization during heating period, sun protection during cooling period becomes important. In humid temperate climate, it is required to ventilate during cooling period, to reduce heat losses during heating period and to benefit from sunlight. In order to realize the stated objectives in the building design, the design principles determined under the titles of location selection, orientation, settlement pattern, interior layout and building envelope properties were examined and evaluated for different climate zones.

As a result of the examination and evaluation, the projects in different climatic regions have many common features, that there is no significant difference in location selection compared to the climate zone, each dwelling unit can have different orientations, multi-storey buildings are arranged in each region and similar plan types are used in each region, it has been found that effective measures against sun protection have not been taken in houses constructed with similar construction techniques and materials in each region. As a result, it can be said that the efforts in terms of being compatible with the climate in the projects considered are inadequate. However, it should not be ignored that the awareness of the subject has started to develop in recent years and the 7 climate and 7 regional competitions opened by TOKI should be regarded as a promising development.

**Key words:** Urban transformation, TOKI, climatic design

# CITY - ECOLOGY - CHANGE 1

# An Outlook from Tradition to Future: Architecture of Gaziantep

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## ABSTRACT

The changes and developments brought by the 20th century are triggering also changes and transformations in the urban landscape. Cities are today losing touch with their old traditional fabric, while their newly developing identity is coming to be reflected on their physical spaces. Nevertheless, every place, city and time period retains its own inherent identity, certain elements of which are carried over into the following period and future. Given this basic assumption, when any area of a city is subjected to a redesign, it becomes necessary to discuss the principles that will be employed in the design, as well as the concepts that will be founded on these principles aimed at expressing the location's architectural identity.

The Turkish word for identity is *kimlik*, which the Turkish Language Association (*Türk Dil Kurumu*) defines as, "The whole of all features that help define an object." In other words, identity/*kimlik* defines the features that make an object unique and that set it apart, qualitatively from other objects.

It is well known that identity is linked inextricably to *place*, while place is a type of reality that reflects the essence of a physical entity, and is formed around a conjunction of the disciplines of geography, planning and architecture. A place becomes a *space* only once it leaves its mark on the human consciousness, and becoming a space also brings with it a sense of belonging, which is the most concrete reflection of this mark on the consciousness.

Many researchers define this concept according to six components: location, ensemble, circulation, localized, change of place and meaning:

**Location:** Location is the most basic indicator that connects a place to a physical region, and that allows it to be associated with other places. Location does not, by itself, define a place; although it is certainly not possible to define a place independently of its location.

**Ensemble:** Every location has an inner order constituted by its own inherent natural and cultural elements, and which together define its characteristic and unique ensemble.

**Circulation:** No location is, in actuality, isolated from any other location. Through the movement of humans and goods, each location is connected, establishing relations, and influencing others as much as it is influenced by them.

**Localized:** Refers to being a local part of a system that is greater than itself.

**Change of place:** A place is affected by historical and cultural changes, gaining new features while losing older ones. Consequently, a place also bears a historical context.

**Meaning:** Meaning is something that is conferred by humans, and from this perspective, it can be seen that the complex combination of nature and culture actually carries greater meaning – going beyond merely answering the question of "what belongs where?" As such, a place is the sum of

"the location, plus everything that gives meaning to the location", which is why understanding a place also requires the six aforementioned components to be addressed together.

The successful *analysis of a place* relies heavily on demonstrating the identity of that place, which is defined as the intrinsic features that allow the place to be perceived as an independent entity. From this standpoint, it can be said that identity is the persisting uniformity and ensemble that distinguishes one place from another. This state of persistence, or continuity, is constituted of three main components, the first of which is the physical setting. Physical elements such as the land, sea, sky and the structured/man-made environment form this setting or scene. The second component is the human behaviors and actions that take place in this setting. The third and final component is the meaning and symbols those individuals and societies create concerning a place. These three components are the interwoven raw materials that make up a place's identity.

That said, these combined concepts fall short of defining fully the identity of a place, as a full understanding of the true identity of a place can only be gained by getting a feel of that place's soul. Each and every place has its own characteristic soul, an atmosphere that makes it distinct. While the three components that define a place – physical setting, actions and meanings – can change over time, and can even partially deteriorate and disappear, this soul cannot be easily lost. It is for this reason that analyses that make use of the formal tools of the disciplines of planning, geography and architecture become inadequate after a certain time, while sensing what the soul of a place requires becomes both essential and inevitable.
Within this context, at the INTERNATIONAL SYMPOSIUM ON URBANISATION AND ENVIRONMENTAL PROBLEMS, we will be presenting an example of a design study that was carried out by taking into account the local dynamics of Gaziantep, as well as the stylistic and emotional elements that bear and conceal the still-surviving meanings, and that also served as the basis of the architectural approach applied within the scope of the "Our City Gaziantep 2023" program (*Gaziantep Bizim Şehir 2023*) project.

# The Transition/Transformation of Architecture from Anthropocentric to Ecocentric and Biomimetic Cities

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## ABSTRACT

Over the centuries, human-nature relations have changed due to technological and scientific developments. In the early ages as result of his existence, man felt that he belongs to nature and attributed sacredness to it, tried to understand nature and integrate with it. Over time, " the perception of nature" has begun to transform by changing factors such as science / technology, philosophy and belief system. The nature, abstracted from belief by the increase of scientific developments, has now become an object of investigation / discovery. This situation necessitated dealing with nature from a more technical point of view and resulted in the establishment of superiority over it. Thus, the perception of the organic world that started with the first-century philosophy (Ancient Greek), together with the scientific / technological developments experienced later, left its place to the perception of the mechanical world. The effort to adapt to nature has left its place to the struggle to resist and dominate nature.

Nature, which became a commodity and consumption object with the mechanical world perception, has started to be destroyed / deteriorated in the direction of human interests. In addition to the mechanical and anthropocentric approach that centered on human beings and opens up the path to consume it with unlimited superiority in the modern era, with the influence of formations like the Bauhaus, ecocentric approaches that see the ecosystem as a whole, take care of the whole, and value every living thing, are beginning to be debated. This approach, called ecocentric, is parallel to the organic worldview expressed in the early ages. In modern times, Wright's understanding of "organic architecture", which conjures up harmony with nature, Candela's creation of the widest-spanning shells with minimal material referenced to nature, Otto's experiments in light of the nature of the light structures to analyze the process and his attempts to find architectural counterparts can also be seen as reflections of the ecocentric worldview.

In recent times, the adverse impacts on the ecosystem such as the endeavor of humans to dominate nature, global warming, climate change and the decline of biological diversity have begun to increase, and the ecological crisis has begun. In other words, "nature is turning against the subject who thinks universal sovereignty over it". The relationship and connection that architecture discipline one of the actors responsible for the process, established/will established with nature consists many questions, lots of criticism and solutions. The concept of "biomimicry", one of these approaches addressed in the 1990s for the solution of environmental problems, has become

widespread, pioneering the creation of ideas to be considered revolutionary in many disciplines. In this approach, nature has been seen as a model / measure / mentor and has taken its place in the literature as "an effort to learn from nature / adaptation / practice" at different levels. Nowadays, with increasing dark scenarios about ecology and environmental problems, it is seen that "taking a reference to nature" and learning from it are discussed at different platforms and accelerated with interdisciplinary studies. Although these researches have come to the fore with singular examples of architecture, they are also leading to the search for building urban spaces and cities that integrate with nature. With the biomimetic approach, designers, architects and/or urban planners think that with the adaptation / application of natural models / processes in designs the ecological damage caused by today's construction technologies can be prevented. In other words, by taking the natural systems as models, it is insufficient to imagine "independent buildings like trees" independent of the surrounding structures and it became imperative to imagine "cities like forests".

In this study, the questions of how data about the sustainable solutions existing in the living nature and in the ecosystem can be transferred to urban scale designs and whether this paradigmatic change / transformation presupposes an authenticity while constituting the cities of the future are tried to be answered. In this context, biomimetic urban designs are addressed and how biomimetic steps (organism / behavior / ecosystem) referenced and applied to the individual structure scale and urban scale are investigated. For this purpose, the urban projects designed by using sustainable technologies and biomimetic approaches, such as Island Master Plan, Coral Reef Project Haiti, Nautilus Eco-Resort, AEQUOREA, Syph Ocean City and Green Float have been examined.

As a result, in the light of the data obtained biomimetic cities that inherit their criteria from the nature have been questioned for their potentials to provide a sustainable future. Instead of urban patterns built with anthropocentric thinking and consuming too much resources / waste, it has been seen that it is possible to build environments that can use natural processes and forces in the air conditioning of the built environment and that are energy saving and cyclical, allow reuse of waste, and produce resources instead of consuming them.

**Key words:** Biomimetics, human-nature relations, biomimetic cities, biocentric transformation.

# Smart and Eco-Tech Cities for Sustainability

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## ABSTRACT

The most prominent feature of the era in which we are is the rapid change of cities. Rapid urbanization in most cities in the world and migration from rural areas to urban areas lead to the negative effects on the natural environment and the depletion of natural resources. Urban areas today are the centers of economic and social development that consume three quarters of the world's resources and more than half of the world's population live, and thus are places where major environmental problems such as pollution, solid waste, noise, high energy consumption and carbon dioxide emissions arise.

The productivity and sustainability problems that arise in the use of resources in cities increase the need for innovative solutions. Strategic measures need to be taken in order to realize the goal of healthy and livable cities in the face of increasing and diversified environmental problems. Different solutions are being produced in different areas in order to solve the environmental problems and to ensure the sustainability of the cities. On the other hand, environmental awareness increases and sustainability becomes the main target. In the context of sustainability, while meeting the requirements of present-day generation, the creation of healthy living environments for future generations is the main principle. Therefore, it is important to identify and adopt strategic objectives, planning and design approaches for sustainability both in newly constructed settlements and in urban areas to be transformed.

The formation of cities that can keep up with the rapid change of the era is directly related to sustainable intelligent and technological solutions. Starting with new urbanism from the 90's, new planning approaches (green city, eco-city, livable city, digital city, smart city initiatives, etc.) have been developed for reducing the negative effects of environmental problems and for healthy and more livable cities. In these approaches, "smart city initiatives" are aimed at reassessing settlements with technological development in the context of ecological sensitivity and aiming to create sustainable resource management, pollution reduction, energy efficiency, increase of urban aesthetics, environmentally friendly, sustainable green buildings and living spaces in this context.

The smart city in the literature is defined as a sustainable, greener, competitive, innovative, advanced technology city that uses information and communication technologies efficiently and effectively. Technology is actively used to solve urban problems. The technological solutions to be developed against urban environmental problems must include environmental technologies, information technologies and communication technologies for rapid progress towards urban sustainability. The urban ecosystem should be monitored by analyzing urban metabolism to ensure

that technological solutions that facilitate people's lives and enhance their quality of life are also in the interest of ecology.

There is a link between urban metabolism and the sustainable development of cities, with the parameters of urban metabolism overlapping with the indicators of sustainability. Non-sustainable metabolic processes cause the depletion of resources and the influence on the environment on local and regional scale. Cities resemble organisms in terms of consuming resources from their environment and throwing out waste. Environmental problems in the urban ecosystem also affect urban metabolism, including energy, water, nutrients, inputs and outputs of waste and materials. Therefore, the increase of urbanization, industrialization and environmental destruction also increases the flow of energy and materials. The increase of these flows also negatively affects urban sustainability. Urban metabolic components provide information on the environmental quality and sustainability of urban areas as they describe the exchange of energy and materials in a city. It also contributes to the formulation of planning and policy proposals to promote the efficient and sustainable use of resources and to enhance environmental quality in urban areas.

In summary, as decision-making actors for the future, in the process of rapid change and transformation that we are in, we must produce smart and eco-technological solutions for the sustainability of the settlements and cities we live in, and in terms of urban ecology we must also ensure the functioning of urban metabolism in a way that preserves the balance of the urban ecosystem. As a final word, to ensure sustainability, we must take account two striking trends; the technologisation of urban ecology and the ecologisation of urban technology. At this point, ecological destruction of the urbanization can be prevented and sustainable ecological urbanization can be achieved.

In this paper, in the flow outlined above, in despite of rapid change and transformation in the world, in order to minimize the environmental problems and to use natural resources without consuming, the importance of planning, monitoring and managing cities as a whole smarter system for sustainability is emphasized. Strategies, goals and approaches that will form smart and eco-tech cities that bring together technological solutions are presented within a theoretical framework.

**Key words:** Eco-tech cities, ecological urbanization, smart cities, sustainable cities, urban metabolism.

# How an Old City Moves to A Greener Future? A Case Study on Nijmegen, Netherlands

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## ABSTRACT

The developments in the modernization process that started with the "industrial revolution" and the "globalization" accompanying this process since the 1980s have brought a multidimensional change with economic, socio-cultural and administrative influences. The effects of these two concepts, that are main actors of change, have been extensively observed in cities, which are spatial reflections of social life. This system of thought which is dominated by economic development, has resulted in rapid change of cities, unhealthy construction, environmental pollution, rapid depletion of resources.

Undoubtedly, the consideration of development with environmental sensitivity is of great importance for the future of mankind. Today, although urban areas cover only 1% to 6% of the earth's surface, they have an exceptionally large ecological footprint and strong influence on ecosystems. "Urban sustainability" emerging as parallel to this fact is considered to be one of the most critical issues of the 21st century and the solution is sought in urban models such as "green cities" or "eco cities". In this context, various national and international organizations are organized to prevent degradation in urban areas and to organize quality living spaces by increasing the livability of cities. One of these organizations, the European Green Capital Award (EGCA), is one of the environmental projects that the European Union has developed to face the challenges of urbanization and to increase the motivation for sustainable urban development in Europe. Every year since 2010, a European city has been selecting as the "Green Capital". The aim of the initiative is to create a stable environmental policy in Europe's medium-sized cities through innovative and entrepreneurial solutions in areas such as sustainable transport, climate change and air quality, waste and water management, biodiversity conservation, quality of the acoustic environment, energy efficiency and performance. Thus, it is to improve the quality of urban living environments. In addition, it is also aimed to encourage, reward these efforts of the cities and to provide cities inspire each other by sharing "good practices".

Within this framework this paper analyses an old Dutch city, Nijmegen. The application prepared by Nijmegen as part of their proposal to become the 2018 European Green Capital is analyzed according to the EGCA criteria and parameters and presented in terms of the backgrounds and the analytical reasons defined by the commission in United Nations Environment Programme. As a result of the assessments, Nijmegen's campaign for the Green European Capital Award showed that citizens and entrepreneurs were involved as much as possible in the process of becoming a healthy, prosperous city. Urban residents, entrepreneurs and civil society organizations are seen as an integral part of environmental development. With the support and involvement of all these actors,

the strategic action plan, which has been carried out at EU level, has made Nijmegen's goal of becoming a zero-carbon city by 2045 consistent. Additionally, the green and blue infrastructure, the development of biodiversity projects, bicycle infrastructure of the city, traffic organization, clean public transport and rational solutions to waste management have brought success to Nijmegen.

The Nijmegen city as a case, suggests that such initiatives have the potential to make such a transformation by contributing to the development and dissemination of ecological urban models of cities for old and well-established urban history as well. As a result, discussing Nijmegen's environmental sustainable development in the process of becoming a European Green Capital - within the context of transition, transformation and authenticity- and examining the potentials of guiding to local governments in creating sustainable growth models, have been found to be important.

**Key words:** European green capital award, urban sustainability, nijmegen, transition, transformation

# Evaluation of Sustainable Campus Applications in Turkey

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**ABSTRACT**

Along with the increasing population in the world, immigration from villagers to cities has increased, followed by irregular and unplanned urbanization, inadequacy of infrastructure and wastes, rapidly consumed fossil energy resources, and so on. brought many environmental problems. Unplanned urbanization emerged with the increasing population, and as a result, unplanned industrialization came along. Irregularly established industrial and industrial areas in cities, environmental pollution is the biggest impact. The elimination of waste from industrial plants, along with the toxic and chemical substances produced during production, and the rapid consumption of fossil energy resources, brought with it a number of environmental problems. This emerging situation has revealed the importance of sustainable development. This study is based on the educational dimension of sustainable development. It is known that universities are the most important educational institutions contributing to the widespread adoption of an environmentally sensitive and innovative lifestyle in society due to their collective, innovative and pioneering roles. The aim of the "sustainable campus" applications, which is a rising trend all over the world, especially the universities in Europe, friendly, environmentally friendly, minimizing energy savings, using efficient waste management, using environmentally friendly products and materials, and contributing to sustainable development. Through sustainable and ecological campus practices, the university will fulfill its social responsibilities by raising awareness of the society, resting on its own feet in economic terms, resisting global climate change and environmental problems. Our study aimed to raise awareness of the fact that rapidly growing universities in our country have the ability to become sustainable campuses on campus in the process of new construction. It has evaluated the top 10 university campus on sustainable campuses in Turkey. The sustainable-ecological campus parameters of the universities are divided into 6 main criteria and 29 sub-criteria, namely "energy and climate change", "waste management", "sustainable transportation", "water management", "environment and landscape management" evaluations were made. University campuses were analyzed and statistical analyzes were carried out. According to the results obtained as a result of evaluations; Among the state universities, Boğaziçi University, Bilgi University among the foundation universities got the highest score in terms of being a sustainable campus. As a result of statistical analysis, state universities have been found to be more susceptible to sustainability than

private universities. . According to the criterion of "energy and climate change", Boğaziçi campus is the best when compared to state university campuses, while Bülent Ecevit University and Istanbul Technical University have the lowest puana. Vakıf universities seem to be inadequate in energy and climate change issues and can not reach the required minimum level. Boğaziçi and Bülent Ecevit University have the highest score in waste management, while Karabük University has the lowest score. In the meantime, it is determined that the applications of green buildings in our universities are very inadequate. With green building applications, designing more efficient heating and cooling systems on campus, optimum and innovative solutions can be realized in building sustainability parameters such as energy efficiency and renewable energy usage, effective lighting. Although our country is very rich in terms of renewable energy sources (sun and wind), the use of these energy resources in our university campuses is quite inadequate. It is envisaged that universities will be able to develop energy plans for optimum energy saving by taking into account the climate and environmental conditions of the region in which they are located and identifying renewable energy potential (solar, wind, biogas, etc.) and annual energy demands. Project support for sustainable campus work has been projected to improve the quality of life on university campuses by moving the features of university campuses to be sustainable campuses to higher levels.

**Key words:** Sustainable, university campus, environmental awareness

# Analyzing Current Transportation System of Metu Campus in Terms of Sustainable Transportation Criteria

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## ABSTRACT

Nowadays, technological developments, rapid urbanization and increasing pressure of nature o and ecosystems have resulted in increasing energy consumption. Due to the consumption of the non-renewable energy sources, the natural environment has been increasingly disappeared, has lost its ability to renew nature, and many environmental problems such as global warming, climate change, acid rain and thinning of the ozone layer have arisen. The rapid depletion of limited natural resources and the irreversible environmental destruction has caused sustainability and energy efficiency have become increasingly important. Because of the rapid depletion of limited natural resources and the irreversible environmental destruction, the concepts as sustainability and energy efficiency have become increasingly important. The need to protect the ecological balance, using natural resources efficiently and recycled change governance policy; designers, educators and investors are taking new precaution and spatial approaches that take ecological design principles into account come into prominence. Within this context, reduction of existing environmental problems and energy consumption is possible through the implementation of plans and designs that use clean, renewable energy resources that are environmentally friendly, compatible with nature.

These developments have also led to concentrate on studies about the relationship between education areas and sustainable development and the relationship between education and sustainable development was discussed at the Stockholm conference in 1972 at first. Educational institutions, especially universities, have effective stakes in terms of research, technological developments and awareness raising for the resolution of environmental problems, but also have detrimental effects on the environment due to the intensive student population and energy usage. These special positions increase the importance of sustainable campus designs. For this reason, the concept of "Sustainable Campus" has emerged and the Sustainable and Green campus applications that are environmentally and dynamically sensitive, use energy efficiently, give importance to energy efficiency and contribute to sustainable development are rapidly become prevalent. The main interventions for the sustainable campus are to reduce energy consumption and emissions, improve materials and waste management, produce renewable energy sources (wind, sun, etc.), design landscaping and structures for soil structure and climatic features of campus, and develop sustainable transport policies and practices.

This study will focus on Sustainable Transportation Systems and Policies, that is one of the Sustainable / Green Campus criteria. According to research conducted worldwide, when energy use is examined according to sectors, it is seen that about 19% of the total energy consumed is used in transportation sector (TÜİK, 2016), and 15% of global carbon emissions are still caused by transportation (Climate Change Action Plan 2012-2023). For this reason, Sustainable Transportation

Systems and Policies, sub-titles of Sustainable / Green Campus Policies, has great importance. The main aims of sustainable transport policies are to reduce the amount of energy consumed and carbon emissions due to transportation, to integrate green energy systems with transport system, and to improve pedestrian and bicycle access.

In this context, METU (Middle East Technical University) located in Ankara that is the capital of Turkey will be examined as the study area in this research. METU is one of the most important, developed and preferred university in Turkey in terms of education, scientific research, environment-ecology, social facilities and campus life. Campus population is crowded day by day and parallel with this increasing population, energy consumption and destruction in nature are also increasing. Transportation system and traffic intensity of METU are also affected by this situation and they are problematic issues in terms of sustainability. Due to the inadequacy of existing transportation policies such as bicycle route, renewable energy vehicles and stops, public transport, in terms of sustainability, the pressure of the campus to the environment is increasing. For this reason, it is very important to determine the problems caused by transportation ((intensive private vehicle usage, traffic congestion) within the campus, to develop policies and practices that reduce energy consumption and encourage green transportation systems.

In this context, the current situation will be observed, and a survey will be applied to campus users in this research. The current situation and sufficiency of pedestrian, bicycle and vehicle road systems, public transportation and stops will be examined, deficiencies and problems will be determined with observation method. Transportation preferences, problems, needs, demands and sustainable transportation awareness of campus users consisting of students, administrative and academic staff. will be analyzed by survey method. According to the results of the research and survey, it is aimed to improve existing transport systems and to develop proposals to integrate sustainable transport systems.

**Key words:** Sustainable transport systems, Sustainable campus design, Green campus, Energy efficiency

# University Students' Responsibility and Awareness towards Environmental Problems: Mersin University Case study.

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## ABSTRACT

With the industrial revolution, mankind has begun to use machines, and environmental problems have also begun to increase. Natural resources are rapidly being consumed through rapidly increasing world population, unplanned industrialization and unhealthy urbanization, nuclear work, regional wars, pesticides used to boost efficiency, artificial fertilizers and detergents, resulting in a great deal of polluted air, water and soil reaching potentially harmful dimensions (Doğan 1997, Erten 2004, Oweini ve Houri, Akt. Uzun 2007, Population Reference Bureau 2008 Akt. Baykal ve Baykal 2008).

Along with these problems, problems such as the climate changes experienced in the world, thinning of the ozone layer, increase of temperatures, melting of glaciers, changing of storms and natural vegetation cover the whole of the globe and bring the problems from the national dimension to the global dimension. (Baykal ve Baykal 2008, Gökmen, 2008). Rapidly increasing environmental problems in recent years have caused serious problems and threatened the life of living things. In order to prevent environmental problems, protect, develop and improve the environment, it is necessary first to question the individual's perception of the environment and the values of the environment. In our rapidly changing world, it is necessary to take the importance of the announcement of the seriousness of the matter and the related precautions as soon as possible the dangerous situations that will result from reaching the present dimensions of environmental problems.

The solution of environmental problems can be achieved primarily by educating individuals about the environment. Environmental education raises awareness of beliefs and personal values in terms of putting and evaluating people's thoughts about the environment (Keleş, 2007). A person who does not have an environmental consciousness can not realize that others will use the world he lives after himself. However, the environment is not a legacy from the past; protection, development and a trust that must be bestowed on future generations (http://www2.cevreorman.gov.tr/ 2012). The development of environmental awareness and sensitivity will enable people to live in a healthier and safer environment, which will only be possible through environmental education in order to educate people with the necessary and sufficient qualities (Özmen ve ark. 2005; Erol ve Gezer 2006). For the solution of increasing environmental problems, it is important that the environmental awareness of the individual increases. In particular, university students are expected to be more sensitive to environmental problems than other individuals in the community. In this context, a survey was conducted with 250

undergraduate students studying at Mersin University. Within the scope of this research, a total of 4 tests were applied to the undergraduate students; environmental behavior scale, awareness scale for environmental problems, environmental attitude scale and sustainable environment attitude scale. In this study, data analyzes were carried out using SPSS statistical analysis program. Transportation results indicated that most of the students did not mention these topics in the undergraduate education they received, primarily on television and internet about environmental problems. In addition, most of the students stated that they sometimes participated in scientific studies such as seminars, panels, conferences about the environment. In addition to this, very few of the students stated that they never participated. The results of the study will be discussed in more detail in the full text.

**Key words:** Environmental awareness, environmental issues, sustainable environment.

# Energy Performance Analysis of a Kindergarten Building

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## ABSTRACT

Energy consumption in Turkey is increasing day by day in parallel with population growth, urban development and industrialization. Currently 35-40% of energy consumption is arising from buildings. Energy consumption of buildings plays an effective role for an important environmental problem such as global warming due to resource use and the carbon emissions. In case of each building is considered to have an average life of 50 years, it is expected that each design should be planned for the future as well as meet the requirements of the current time. At this stage, considering buildings with a life span of about 50 years, it is very important to reduce the energy demands of the buildings and provide solutions for efficient use of the energy. Turkey, which imports about 80% of the energy, is required to develop solutions for energy efficiency in buildings. In order to meet the needs of Turkey, on June 14$^{th}$, 2000 "Thermal Insulation Requirements in Buildings" (TS 825) standard, in December 2008, the "Energy Performance of Buildings Regulations" directive was issued by law. BEP-TR, which was used to calculate the energy performance of buildings, was completed in December 2009 and published in 2010. Considering the amount of building stock, which is very high in Turkey, improvements for existing buildings demonstrate the importance of energy savings to be provided. Energy efficiency implementations that will be applied in public buildings are important, in terms of creating an example for society and widespread application. Tukey has a high proportion of young population which constitutes a large part of schools from public buildings. Approximately 17.5 million students study in the 83,204 school buildings in Turkey. The amount of energy consumed in educational buildings and the effect of thermal comfort conditions on students/teachers is undeniable. As it is well known that comfortable places provide better study performance to students. For that reason, it is important to determine energy consumption in educational buildings and to improve energy efficiency. In this study, a kindergarten building with 2 floors and 4 classrooms in Çanakkale was examined in terms of energy performance. Construction phase was completed in 2013 and the building was opened in the same year. First, energy losses/gains of the building are determined by using TS 825 calculation method. According to TS 825 standard, Çanakkale province is in the second climatic region. As a result of the analysis, the heat transfer coefficients of wall, roof and components from load-bearing system are conforming to the standard. The heat loss from the construction elements via conduction was found as 626.85 W/K and the ventilation-induced heat loss was 550.63 W/K. The annual total energy requirement per unit volume of the building for heating was determined as 17.68 kWh/m$^3$ and it was determined that this was below the maximum value (<19,50 kWh/m$^3$). As a result of this calculation, it has been identified that the building is sufficient in terms of thermal performance according to TS 825. The energy performance of the building was also determined using the BEP-TR II energy simulation program. Based on the results obtained from the BEP-TR II

software, the total annual energy consumption of the building was calculated as 44.940,27 kWh/year. This value arose from 21600,93 kWh/year heating, 19977,22 kWh/year hot water, 1445,36 kWh/year cooling, 385,06 kWh/year ventilation and 1531,70 kWh/year for lighting purposes. The use of central heating system, the selection of natural gas and the young age of the building are positive factors in this energy consumption. However, electricity consumption is high by reason of the purpose of the building is educational. Electricity used for lighting, hot water and cooling increases the building's carbon emissions. In this respect, the building could not meet the standard for carbon emissions. Moreover, it has been determined that the building's facade systems have adequate thermal insulation and that there is no risk of condensation. This study reveals that the energy consumption of the kindergarten building is sufficient according to the both calculation methods. On the other hand, since it is a typical project, different results could be obtained in terms of energy performance when applied to different cities. The energy performance of the building is likely to be inadequate in colder climates. The climate, land characteristics, orientation, topographic structure and other conditions of the building to be designed, should be considered.

**Key words:** Educational Building, Energy Performance, BEP-TR, TS 825.

# CITY - ECOLOGY - CHANGE 2

# Influence of Technogenic Pollution on Ecological Properties of Soils of Baku City

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**ABSTRACT**

The article is devoted to the actual task - the study of the influence of technogenic pollution on the biological properties of soils in Baku. The article analyzes the biological activity of the soil along the main highways, the regularity of the effect of urbanization on the biological properties of the soil: the amount and activity of microorganisms and the activity of enzymes in comparison with the soils of the Central Botanical Garden. The studied parameters indicate a change in the biological activity of the soil under the influence of anthropogenic pressure and can serve as a theoretical basis for the development of methods for monitoring the state of urban vegetation.

It revealed that the activity of urease, invertase, dehydrogenase was lower in the soil near highways which undergo intensive technogenic load compared to the botanical garden soil, for which the degree of technogenic effect is much smaller. The availability of inverse correlation dependence between microbiological and enzymatic parameters is characteristic for soils along motorways: low activity of soil enzymes corresponds to a large number of bacterial microflora (r =-0,76 ±0,15). This leads to the lack of microbiological and biochemical activity conjugation.

The humus content varies from 0,8% to 1,1%, while the humus content in the soil of the control zone is 1,6%. Such a low content of humus is due to the lack of nutrients in urban soils, which leads to activation of the process of humus transfusion. The importance of humus for urban soils along motorways is not only in the formation of soil fertility, but also as an important indicator of the ecological potential that determines the degree of soil resistance to the impact of man-made factors.

Accounting the aggressive environmental conditions on the roadside territory of the Baku highways, it is necessary to reduce the migration of pollutants in the ecosystem as much as possible, localizing them in the soil environment. This can be achieved by increasing the buffer capacity of the soil. To maintain the viability of the ecosystem as a whole, it is also necessary to improve soil fertility. These goals can be achieved by introducing organic and mineral fertilizers, by regulating the water and air regime of soils.

Taking into account the aggressive environmental conditions on the roadside territory of the Baku highways, it is necessary to reduce the migration of pollutants in the ecosystem as much as possible, localizing them in the soil environment. This can be achieved by increasing the buffer capacity of the soil. Thus, the studied indicators allow us to judge the changes in biological activity of soils under the influence of anthropogenic pressing and can serve as a theoretical basis for developing methods for monitoring the state of soils along urban roads.

**Key words:** biological activity of soils, soil enzymes, microorganisms, urban soils under motorways.

# Investigation of the Effects of Exhaust Gas as an Important Factor of Environmental Pollution on Plants and Child Health

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**ABSTRACT**

With this study, it is aimed to be able to draw attention to the contamination of heavy metals coming out of the exhaust gases which are formed as a result of using motor vehicles as an important factor in environmental pollution, and to be aware of the harmful effects of the plants growing around them on the health of the children consuming these plants. Exhaust gases contain some of the heavy metals. Heavy metals (lead, cadmium, chromium, iron, cobalt, copper, arsenic, tin, aluminum, nickel, mercury and zinc) are generally present in the form of carbonate, oxide and sulfur compounds. These heavy metals are spreading by human activities. Heavy metals can be contaminating the environment. On the other hand, it is possible to pass these heavy metals to the grains, to the grasses, to the fruits and to the meat of the animals fed with these herbs, to the fish. In addition, heavy metals can pass to the soil and air. The products that grow in the soil contaminated with heavy metals also contain heavy metals at high levels. One of the routes leading to the diffusion of heavy metals is chemicals used in agriculture. Another factor is industrial wastes. 60% of the heavy metal pollution is lead. Lead is incorporated in the benzene as tetra ethyl lead composition to prevent knocking in motor vehicles. Nickel is coming out as polluting from diesel fuel and motor oils. Cadmium passes from diesel fuel and burning engine oil into the air. These heavy metals affect human health. Especially lead and nickel have toxic effect on plants. Heavy metals cause various types of cancer in the body, organ deficiencies and cardiovascular diseases (Türközü ve Şanlıer, 2012 Gıdalardaki Ağır Metal Kontaminasyonları).

Waste creates environmental pollution due to the burning of the coal, the industrial areas and the traffic density. Heavy metals that cause environmental pollution accumulate in the organism and travel around the food chain and remain in dangerous quantities in the ecosystem for a long time. Cadmium and lead to serious health problems in humans. Nickel has a carcinogenic effect. (Okcu et al., 2009 Ağır Metallerin Bitkiler Üzerine Etkileri, Alınteri).This toxic effects cause more important health problems on children. There are findings about lead poisoning, which is detected as a neurotoxic metal, causing developmental problems in children (Örün ve Yalcin, 2011 Kurşun, Civa, Kadmiyum). This research covers the following problems: what are the contents of the heavy metals

contained in the exhaust gases, what are the common problems with the exhaust gases, what are the specific effects of the exhaust gases on the plants, what are the health problems that occur in the children after consumption of the plants contaminated with the exhaust gases, what is the situation of vehicles, which cause heavy metals, and gasoline types, how can we prevent contamination of plant by heavy metal, why do these heavy metals use in gasoline? As a result of the findings obtained within this scope, it has been determined as an important condition to be careful not to grow plants on the roadside, especially where the traffic is intense

**Key words:** Exhaust, heavy metal, child development, food, environmental pollution, plant

# An Analysis of Transition on Protection-Utilization Balance in Natural Resources Law

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**ABSTRACT**

Natural resources, due to their basic requirements and structure, have features that affect human life directly. Preserving the natural resources is becoming an extremely difficult task due to changing in global balances and increasingly intimidating utilization of the resources. Rapidly changing conditions of the century, the increase of people's effect on the natural resources, and the rapid depletion of natural resources have caused that the context of natural and physical environment has settled in the first place of the world's agenda. As a precaution, tools, methods for protection of these resources are being developed on a global level and efforts for international cooperation and coordination are getting increasingly more intense. Hence the protection-utilization balance is becoming more and more important. This approach which is foresees the more intelligent use of the resources is based on the principles of providing for the continuity of the natural resources and meets the needs of the society. One of the main tools used for preserving this balance is the legal regulation. The article is aimed to evaluate the level of this balance in Natural Resources law and figure out the transition of balance from protection to utilization. Current legislation is analysed on the bases of main laws that are related to natural resources. Regulations related to natural resources, is the main theme of most legal regulations in every level of the hierarchy of norms, starting with the constitution. In order to make a legal analysis which constitutes the subject of the work and which aims to address the natural resource legislation in terms of protection use balance, it is first necessary to define the criteria of these two vague and uncertain concepts. "Protection and Utilization". Therefore, analysing the natural resources legislation in accordance with the determined criteria is important for provide a more concrete perspective to the issue and for determining the adaptation of the actual situation to natural resources in our country to the legal situation. In order to determine the criteria for the protection and utilization, the international agreements to which our country is a party, the legal texts of the European Union on the subject, the existing technical reports and studies have been examined and the following common criteria have been established.

Accordingly, the defined "conservation criteria" are: Provisions concerning the identification of natural resources (Description), Provisions regarding the inventory of the source and the creation of the database (Inventory), Provisions on the Economic Support of the Protection Measures (Encouragement), Provisions on Resource Planning (Planning), Public Participation Provisions (Participation), Provisions on Research and Training (Rear-instruction), Provisions on Support and Standardization of Science and Technology (Technology), Provisions for the Disclosure of Corporate Structure (Corporation), Auditing and Monitoring Procedures (Auditing), Provisions on Sanctions (Sanctions).

Accordingly, the defined "utilization criteria" are: Provisions Regarding Usage Criteria for Welding (Benefit), Inventory making and related usage rights (Inventory), Connecting Resource Usages to Plans (Planning), Promoting traditional forms of use (Traditional), The various provisions of the

State on facilitating the use of the investor, promoting and promoting investment (Sectoral), Provisions for infrastructure establishment (Infrastructure), People's participation in Resource Use (Participation), Determining the powers and responsibilities of users (User). As a result of the analysis of the conservation-utilisation criteria within the identified natural resources legislation, transition that occurred in recent years against the protection criterion on natural resources can be clearly seen.

**Key words:** Natural resources, balance, protection-utilization, law, transition of balance

# Towards to the Ecological Cities, A Case Study of Sakarya

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## ABSTRACT

The cities were designed according to the ecological conditions, but the ecosystem and ecological balances have been neglected due to development of technology. This destruction caused by the humanity by not only having control over the nature, but also changing it, has led to the deterioration of the ecological balance, as well. As a result of these problems, the ecological approaches have begun to be recognized as a must with regards to the planning and designing of cities, with public awareness. In cities, which are provided with ecological solutions that emerge with the concerns on protecting the natural resources have begun to be accepted that encourage the city people to live under better conditions without over-consumption, as well as grounding on clean energy sources, motivating for less motor vehicle usage via a well-designed transportation system, maintaining a proper waste management, and providing more public spaces & green areas.

The emission levels of man-made carbondioxide and other harmful gases (greenhouse gases) as one of the results of urbanization, are related to many factors such as climate, land use, population density and life style. The global warming of 1$^{o}$C has occurred,by the increase of these gas emission levels, and the cities constitute the main source of this situation. The global effects of the cities are called as ecological footprints. The ecological planning/designing brings along the energy efficient solutions based on the renewable power sources that reduce the increasing ecological footprints of settlements and retard of the global warming, as well as the ecological solutions that protect the biological diversity & natural habitat, and the eco-friendly solutions protecting / improving the water resources, agriculture, the quality of air and soil quality.

The emission levels were increased due to building, industry and vehicles in Sakarya city, thus causing the deterioration of the air quality and the ecological balance. Carbon reduction was selected as the baseline in this study for protecting and improving of the natural habitat and resources of Sakarya, and creating an ecological city., The levels of carbon-monoxide and carbon-dioxide gases caused by vehicles, heating and industry were calculated for carbon reduction, and it was planned to minimize or eliminate the level of these gases. For these purposes, it was accepted that all the vehicles are electric-powered, that the coal and natural gas used for domestic heating are replaced with solar energy, and the complete power needs of the industry are satisfied with the power generated by wind turbines and the emission & cost was calculated. In the study, the amount of the emissions caused by transportation, heating and industry and increasing of the carbon footprint were calculated, it was also determined what should be done & changed, within a scenario where Sakarya is an ecological city. According to the result, the things that should be done with regards to the ecological city design studies, as well as putting it into practice, were determined. It

was also determined what would be our income from the carbon emission levels as reduced by Sakarya in the voluntary carbon market. In this study, as well as the based on to reduce the emission levels, it can be clearly understood that the possibility to create an ecological city is quite higher with such activities as increasing the green areas in the city center, maintaining an effective waste management, and planning & implementing a proper transportation plan. Transforming a regular city into an ecological one ensures the minimization of the consequences caused by unbalance, as well as creating a sustainable city and protecting the natural resources. As conclusion, all measures should be taken are also emphasized.

**Key words:** City, carbon emissions, carbon footprint, ecological city, cost

# Eskişehir City Model Analysis within the Context of Environmental Issues and Sustainable Approaches

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## ABSTRACT

The advertising sector that developed after the industrial revolution created the consumption community. Due to the increasing demand, the natural resources have been irreversibly damaged; earth, air and water resources have been polluted with chemicals and petroleum-based wastes. As a result of this, the ecological system became unbalanced and the global environment issues that threatens the natural life and causes many animals to go extinct and diseases to arise merged. Graphic and industrial design that directs the advertising process which markets the consumption has a comprehensive influence on the environment. For example; from the marketing campaign to selecting the packaging material, there is an oscillation effect that the product leaves behind from the production process until the product becomes dysfunctional. One of the reasons for the environmental issues is the design applications that are not environment conscious and the recycling of the waste garbage not being widespread yet.

Within the context of a sustainable city, he Municipality of Odunpazarı and the Municipality of Tepebaşı have exemplary works in Turkey within the scope of recycling the wastes and sustainability. The Cleaning Services of the Municipality of Odunpazarı collected 6700 tons of waste in the Odunpazarı area between 2007 and 2017 and as a result of this they prevented a forest that is as big as 1700 football fields from being destroyed. In the studies that are conducted in this context, a survey to draw attention to the recycling works which are being conducted in Eskisehir and that measures the awareness was conducted and analyzed. The study aimed to measure tendencies of the community of Eskisehir regarding the environmental issues and sustainable energy resources, and waste garbage. A survey study was conducted between 01 March 2014 and 14 April 2018over a sample of 460 people who reside in the Odunpazarı and Tepebasi districts that are considered to represent the Eskisehir community. 231 women and 229 men who are over 18 years old participated in the survey study which was a preliminary survey to measure the ecological footprint of Eskisehir. It was aimed to raise an environmental awareness through predominately the energy consumption and conservation, transportation vehicles, recycling of the packaging waste and the consumption habits of the community. Ecological footprint which is known as a method in quantitatively calculating the sustainability is a calculation method that enables preventing the consumption by raising awareness regarding the resource consumption conception of the mankind. In the survey that was conducted with quantitative research methods and face to face meeting method, 40 questions which consists of 6 demographic and 34 environmental questions were directed to participants. When the answers that were given to the five-point Likert questions were analyzed in the survey, it was seen that average of the awareness level of the Eskisehir community was high in the subjects like recycling, energy conservation, environmental pollution, and air pollution. When the points between 1 and 5 that were given to the questions in environmental subjects by the survey participants are taken, the average of the environmental

awareness level was calculated to be 3,81 over 5. In other words, it can be said that 76% of the survey participants have an awareness in environmental issues. When some of the findings regarding the survey are analyzed; 84% of the survey participants stated that they use energy saving lamps in their homes. In addition, 64% of them stated the 'the reason for the environmental pollution is the increase in population' statement as 'True' or 'Absolutely True'. When approximately 49% of the individuals stated that they separate the garbage and the products like recyclable paper, packages, plastic, glass at home, the percentage of people who say 'I would not throw waste in the street even if there is no one around' is approximately 76%. The answers of 'I Agree' and 'I Absolutely Agree' are given in the ratio of 79% to the statement of 'I am conscious about the whole environment and the issues that are connected to it'. In conclusion, when the findings that are gained from the survey are analyzed, it can be said that the works that are conducted regarding recycling exhibit the success of sustainable works of the Municipalities of Odunpazarı from the promotion design to the application. The awareness conception that is being endeavored to be created in the environment level in Eskisehir will bring transformation and the transformation will bring a healthy sustainable life to the next generations.

**Key words:** Eskisehir, ecological foot print, sustainable design, packaging design, recycling

# Urban Heat Island Analysis – Eskişehir, Turkey

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## ABSTRACT

Urbanization is one of the most significant contributors to global warming as more than 50% of the human population lives in cities. Urban people change their environment through their consumption of food, energy, water, and land, and in turn, the polluted urban environment affects the health and quality of life of the urban population. The growth of population and urbanization has also caused the phenomenon of Urban Heat Islands (UHI) which can be described as the alteration of temperatures in urban areas compared to their rural surroundings due to antropogenic activities. Elevated temperatures from urban heat islands, particularly during the summer, can affect a community's environment and quality of life. The urban area of the city of Eskisehir located in the northwestern part in Turkey, has been rising rapidly in the past few years.

In this study, the effect of UHI is analyzed using Landsat 8 data in the summer period of 2017 as a case study in Eskisehir, Turkey. For this purpose, one Landsat 8 satellite image from 04 September 2017 was downloaded from the USGS webpage. An algorithm developed for retrieving the land surface temperature (LST) from Landsat 8 data has been used. The algorithm uses the thermal data from Landsat 8, as well as the red and the near-infrared data in order to classify the land cover using vegetation indices. In addition, the correlation between land surface temperature and the land cover has been analyzed using normalized difference vegetation index (NDVI) and the normalized difference build-up index (NDBI) to explore the impacts of the green areas and the urban areas on the urban heat island.

The results indicate that the effect of urban heat island in Eskisehir is located in some sub-urban areas. The results are as expected, since the urban area has a negative correlation with the LST. The negative correlation between LST and NDVI indicates that the green area can weaken the effect on urban heat island, while the positive correlation between LST and NDBI means that the built-up land can strengthen the effect of urban heat island in the urban area. UHI effects can occur in the bigger cities, where in one-million populated cities the temperatures can rise up to 2-3 $^{o}$C. In order to reduce the UHI effects the green areas should be increased, green roofs and cool roofs should be installed, use energy-efficient appliances and equipment.

**Key words:** Remote Sensing, Urban Heat Island, Environment, Satellite Images

# Investigating the Spatial Patterns of Seasonal Urban Heat Islands and Cooling Effects of Urban Green Spaces in Urban Areas Using Remotely Sensed Data: the Case of İzmir (Turkey)

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## ABSTRACT

Change in atmospheric temperature brings about alteration of urban microclimate and zonal heating in urban areas partly due to densely built-up areas, decreasing natural areas, increasing impermeable surfaces, and changes in topography. Very high temperatures in urban areas, especially at nights during the summer, are identified as the "urban heat islands" (UHIs). Sustainable design of the urban environment has become a crucial subject for the mitigation of UHI effects. İzmir, the third populous city in Turkey, has been exposed to rapid urbanization, which in turn, results in UHIs as in most of the global cities. This issue is regarded as a major planning problem, especially for the Mediterranean cities with hot and dry summers where extreme temperatures are associated with decreasing urban comfort. Urban green spaces are proven to create local urban cool islands (UCIs). Thus, they have a crucial role in coping with the undesired consequences of the UHIs. This paper aims to investigate (1) whether or how spatial pattern and intensity of UHIs alter seasonally, (2) how spatial pattern and configuration of green spaces affects UCIs, and (3) and the relationship between magnitude of the UHIs and UCIs and their intensity.

A considerable number of studies have explored the cooling effect of the green spaces. However, these studies have mainly focused on single green areas, and the effect of their pattern and composition are largely neglected. Moreover, the cooling effect is generally correlated with the land surface temperature. This paper analyzes the relation between the spatial patterns of UHIs, UCIs, and green spaces taking into consideration their seasonal variation of intensity, distribution, and magnitude. UHI is measured by the land surface temperature (LST) instead of the atmospheric temperature by using Landsat 8 (TIRS) satellite images at 30 m. resolution pertaining to the four seasons (winter, spring, summer, and autumn) for year 2017. The urban green spaces are mapped by using Sentinel-2 at 10 m. resolution through the supervised classification method. LST, supplying detailed in-situ values, in contrast to the atmospheric temperatures, is produced with conversion of the brightness temperature, where a mono-window algorithm is applied. Although there are different approaches for the identification of UHIs and UCIs in studies, here UHIs and UCIs are mapped by classifying the LSTs and LST thresholds on impervious and greenery land cover to indicate classes due to executing seasonally spatial variation. An anomaly based approach is used to quantify seasonal UHI and UCI intensities. The hypothesis that the LSTs decrease with the increasing sizes and diminishing fragmentation of the green spaces is tested by applying regression analysis. The results show that increasing sizes and diminishing fragmentation of the green spaces have a measurable effect on LSTs. These findings shed light on the relationship between the

intensity and urban characteristics and the formation of the UHIs taking into consideration the seasonal effects, and provide information on sustainable urban design to cope with the negative effects of climate change.

**Key words:** Urban heat island, land surface temperature, remote sensing, seasonal variation, urban green space

# Perception of Spatial Values in the Context of University-City Relationship: Bahçeköy Example

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## ABSTRACT

Urbanization while progresses parallel to developments in social, physical and economic sense, urbanization is defined as being closely related to public participation in public life.Universities, which are regarded as an important factor in the development dynamics of the cities, have been investigated in many researches which in relation to their nearby neighborhoods established in accordance with the country policy.Universities play an important role in the urbanization of indigenous people in the direction of interaction with the environment, by transferring cities to information, technology, economic, social and cultural fields.Particularly in the nearby environment of the campus, the demand for the space has led to the acceleration of the urbanization movements and the reproduction of the space.In this respect, affects urbanization positively the infrastructure, equipment, transport functions that have improved in the developing cities in the process.In this sense, it emerges that universities contribute to local economics, social and physical development in the direction of interaction with the settlement area in addition to producing scientific knowledge.

The distribution in urban texture of the universities, which are seen as an important means in the development of the cities, especially in metropolitan the number is high and scattered settlements. It has been weakly observed that the connection with the nearby settlement area of the Istanbul University Bahçeköy Campus, located in the north of the Istanbul Metropolitan Area, is relatively remote as far as the central settlement area of Sarıyer. Campus users are not active participants in the settlement area and there is no spatial conversion to meet student demand. The reason for the break-out between the university campus and the settlement area was revealed reserch question.

The purpose of the study is to determine the cause of the existing weak interaction and to make a comparison in the study case by revealing the effective criteria in the models that offer alternative solution proposals to the problems of the settlement area and form the ideal interaction with the campus nearby environment. In this context, the student profile was searched to reveal the criteria that contribute to the social life in the nearby of vicinity of the campus and trigger the creation of production spaces that provide economic contribution to the settlement area, which is used recreationally, not as a transit route.

For this purpose, a literature survey was conducted on student cities and original spatial values that could be an example of research. The common features of cities that the interaction between the city location and the user is ideally provided, the problems of the place are identified and necessary solutions are produced and trigger public participation have been examined. Questionnaire studies

were applied to the students who were studying at the Istanbul University Bahçeköy settlement. As a result of the questionnaire, the locations where individuals spend their free time were processed in the ArcGIS 10.05 program and it is examined similar features of the regions where they were concentrated in spatial use. Unplanned construction does not allow to the space for establish identity despite the original values aroun it. When the common characteristics of student cities are examined, it has been determined that artistic and cultural activities are intensified, local people are defined as active individuals and common solutions to environmental problems are produced thanks to the existing identity value.

At the end of the study, the locations where students spend their free time are not only an active social life but also suited to student budgets. Because there are no spaces that appeal to students in the settlement area, it prevents the feeling of belonging to develop. Determining the environmental problems of the settlement area and communicating with the public and establishing a common language makes it necessary to increase the time spent in the space of the students. Various proposals have been developed to increase the active involvement in the city of the campus users. Experimental implementation and observation of solution proposals is important in terms of ensuring the sustainability of the study. The end result of the study also reveals another research question that should be considered on the physical, social and cultural analysis of the Bahçeköy neighborhood and the attitude of the people towards the students.

**Keywords:** Urbanization, university – city interaction

# A Sample of Legislation Transition Regarding the Eco- Friendly Products; European Union Ecolable Legislation and Legal Practices of Turkey

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## ABSTRACT

Eco-label scheme was to establish as a voluntary, intended to promote products with a reduced environmental impact during their entire life cycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of products. The EU Ecolabel scheme is part of the sustainable consumption and production policy of the Community, which aims at reducing the negative impact of consumption and production on the environment, health, climate and natural resources. The aim of Regulation eco-label award scheme was to establish a voluntary ecolabel award scheme intended to promote products with a reduced environmental impact during their entire life cycle and to provide consumers with accurate, non-deceptive, science-based information on the environmental impact of products.

The EU Ecolabel scheme is part of the sustainable consumption and production policy of the Community, which aims at reducing the negative impact of consumption and production on the environment, health, climate and natural resources. The scheme is intended to promote those products which have a high level of environmental performance through the use of the EU Ecolabel. To this effect, it is appropriate to require that the criteria with which products must comply in order to bear the EU Ecolabel be based on the best environmental performance achieved by products on the Community market. Those criteria should be simple to understand and to use and should be based on scientific evidence, taking into consideration the latest technological developments. Those criteria should be market oriented and limited to the most significant environmental impacts of products during their whole life cycle. The EU Ecolabel should aim at substituting hazardous substances by safer substances, wherever technically possible. For the acceptance by the general public of the EU Ecolabel scheme, it is essential that environmental non-governmental organisations (NGOs) and consumer organisations play an important role and be actively involved in the development and setting of EU Ecolabel criteria. Besides, in order to facilitate the marketing of products bearing environmental labels at national and Community levels, to limit additional work for companies, in particular SMEs, and to avoid confusing consumers, it is also necessary to enhance the coherence and promote harmonisation between the EU Ecolabel scheme and national ecolabelling schemes in the Community. Otherwise, it is desirable that any interested party may lead the development or revision of EU Ecolabel criteria provided that common procedural rules are followed and that the process is coordinated by the Commission. In order to ensure the overall coherence of the Community's action, it is also appropriate to require that the latest strategic objectives of the Community in the field of the environment, such as Environment Action Programmes, Sustainable Development Strategies and Climate Change Programmes, be taken into account in the development or revision of EU Ecolabel criteria.

EU Ecolabel criteria shall be based on the environmental performance of products, taking into account the latest strategic objectives of the Community in the field of the environment. EU Ecolabel criteria shall be determined on a scientific basis considering the whole life cycle of products. In determining such criteria, the following shall be considered:

- the most significant environmental impacts, in particular the impact on climate change, the impact on nature and biodiversity, energy and resource consumption, generation of waste, emissions to all environmental media, pollution through physical effects and use and release of hazardous substances.
- the substitution of hazardous substances by safer substances, as such or via the use of alternative materials or designs, wherever it is technically feasible;
- the potential to reduce environmental impacts due to durability and reusability of products
- the net environmental balance between the environmental benefits and burdens, including health and safety aspects, at the various life stages of the products;
- where appropriate, social and ethical aspects, e.g. by making reference to related international conventions and agreements such as relevant ILO standards and codes of conduct;
- criteria established for other environmental labels, particularly officially recognised, nationally or regionally, EN ISO 14024 type I environmental labels, where they exist for that product group so as to enhance synergies
- as far as possible the principle of reducing animal testing

According to the regulation articles, the source of the energy is very important provision fort he application to the ecolable. In addition to this, a EU directive coordinates with ecolable regulation which is subjected ecodesign energy related products.

In this study, firstly EU ecolable legislation will be explained and then analayzed of Turkish legislation and practice. Besides, compare currently situation of Turkish legislation with the EU situation regarding to the ecolable legislation finially will be presented conclusion and recomandations.

Key words: Ecolable, European Union, Turkey, Legislation

# CITY – HISTORY - AUTHENTICITY

# Question of Authenticity in Historicism and Conservation

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## ABSTRACT

The human being that Cartesian philosophy defines as the thinking self, the universal rules, the mechanic system, and the moving nature form the basis of a new sense of reality in the 17th century. The new scientific reality acknowledges that nature is a constantly changing as the dynamic state of being and replaces the unchanging divine reality. This motion is generative and creating a new formation every time that ensures the continuity of the state of being. Therefore, this 'process of being' is an historical process at the same time. The new world in which science sets the foundation of the modern age builds up on this paradoxical basis. The man in the changing and renewing life through the modernisation process on the one hand transforms the world with his strength and courage, on the other hand protects the values and memories of the lost world.

This new mode of understanding divided the process of being into time periods as past, present and future. The concept of time in N. Elias (Zaman Üzerine) includes connections between continuous changes and what happens before, after, and depending on the transition period of a particular event. However, the conception of time as the essential parameter of existence differs from the conception of time that constitutes the perception of the past and future in the process of time as being a human and social fiction. Hence, the past is a cultural asset according to Halbwasch (Assmann, J. Kültürel Bellek). It is not found naturally and is fiction. Accordingly, historicity points to a fictitious past and is open to manipulation. The admiration of antiquity, in the Renaissance period, for its art and philosophy and the future imagination based on the anachronic past is historicists. The Italian poet F. Petrarch influenced by the monumental structures of antiquity during his travels to Rome at the beginning of the 14th century and, recommended that these remains should be protected (Özaslan, N. Mimari Koruma Düşüncesinin Tarihsel Gelişimi). Renaissance architecture recognizes these constructions of the past as models in the architecture of the new world. This has legitimized historical practice by ensuring that past's images continue to exist, and on the other hand has brought the problem preservation of past values to the agenda of the new world.

Historicist approach continues today in three basic forms. In the first place, it is seen that the structures and assets of the past regarded as a source and the model for the production of the new. In the second form, there is an eclectic attitude that the images of the past constitute an illusion of the past through new contexts and fictional interpretations. In the third form, efforts are being made to protect against the threat of demolition leading to traditional structures and assets of the past. The legacy of the past declining due to destructive acts of the modern age and its preservation is the result of a historicists understanding. It should be said that because of the fictional and elective character of the historical approach, the common share of these three approaches is the question of authenticity as a problem of representation that is far from being real. The conservation thought, which has increasingly become a widespread in the cultural, economic and social spheres of the modern world, reveals new problems that can drive the images and representations of the

past without arguing the problem of this authenticity. A futuristic imagination involving the illusion of the past will be problematic without defining and discussing the significance of the authenticity in the cultural sphere.

**Anahtar Kelimeler:** Tarihselcilik, koruma, özgünlük, modernizm

# Protection of "Conservation Areas" in The City Transition/Transformation Process

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**ABSTRACT**

Archaeological sites are the areas of significance for shedding light on the history of thousands of years of human history and for carrying out traces of the civilizations of world history. The areas with the highest share in the distribution of the conservation areas in Istanbul are the archeological sites. The largest one of the archaeological sites in Istanbul is Küçükçekmece Lake and its surroundings, which includes Yarımburgaz Cave and was declared a conservation area in 1991. Küçükkçekmece Lake Surrounding Archaeological Sites show the traces of uninterrupted human life from the first human communities. Natural and archeological richness of the lake shore forms natural silhouette of the region and presents a very special geography. Bathonea archaeological excavations in the vicinity of Küçükçekmece Lake, especially on the borders of Avcılar, are aimed to reveal the cultural and environmental values of the region. Considering the archeological values that the region possesses, Bathonea archaeological excavation site has the potential of being the first ruins of Istanbul. Cities that have witnessed the most active developments with humanity are living mechanisms that continue to develop along with the historical process. The fact that the cities are living mechanisms indicates that the development continues. In the process of change and development of the cities, the conservation sites are also in the position of being a continuous transformation center as the parts that keep their existence in the modern urban fabric. Sometimes conservation sites are affected by these developments and fall into the process of losing their qualities. Archeological sites are of great importance in terms of the sustainability of cultural heritage and the traces of the identities of cities and societies. In the last 10 years in Istanbul, which is among the metropolises of the world in terms of social, economic and demographic aspects, the projects called "mega" regarding its effects on the city have come to the agenda. Some of them are still in the planning stage while others are in implementation stage. The area designated as "Settlement Area" in order to liquidate structures under disaster risk in 2012 and to be used as a new settlement area has been updated as "Reserve Construction Area" within the scope of third airport, third bridge construction and Kanal İstanbul projects. 1st and 3rd Degrees Archaeological Sites, which extend parallel to the Küçükçekmece Lake and which are the largest archaeological sites of Istanbul, are all within the scope of the Reserve Building Area. This area also includes the Yarımburgaz cave, one of the oldest settlements in Protection of "Conservation Areas" in The City Transition/Transformation Process Istanbul, and the archaeological site of Bathonea, which continues excavation work. The purpose of this study is; discover the threads that mega projects

presents on archeological sites and natural conservation sites in the vicinity of Küçükçekmece Lake and within the boundaries of Avcılar district and to propose suggestions to prevent the destruction of historical significance of the study area and to prevent the elements causing physical destruction. As a method; board decisions on the selected area were examined and participated in various symposiums, panels and events related to the concept of mega projects and historical environment, and the topic was discussed with experts from different professions. As a result, factors that created contradictions in the historical text and harmed the historical character of the area were identified. Discussions are opened on what can be done to ensure the co-operation of conservation and planning processes. The most important of the applications that can be considered as protection methods in archeological sites is to be declared as archaeo-parks. In this context, examples of archaeo-parks from the country and abroad were examined and deductions were made. It was aimed to give answers to the following topics as the findings of the research; the transfer of 1st and 3rd Degrees Archaeological Sites to future generations, the prevention of the destruction of these areas under the pressure of urban development, the abolition of the uses that damage the old urban fabric, installation of functions identical to their own identity in these areas, which targets and policies regarding the region should be examined for the purpose of regulating and transforming of urban fabric.

**Key words:** Archaeological sites, transformation, mega projects, ruins

# An Analysis of the Physical, Functional and Social Transformation of Urban Cultural Heritage through 'TripAdvisor': The Case of Hamamönü, Ankara

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**ABSTRACT**

Regenerating deteriorated city centres physically, economically, environmentally is a controversial issue in Turkey. There are many planning, rehabilitation, restoration and conservation projects and studies about this issue. Among these projects and studies, local governments, in addition to other stakeholders, have played an important role. Hamamönü neighbourhood, which is located in the province of Altındağ, Ankara, is one of the cultural heritage sites that went through planning, rehabilitation, conservation and restoration projects. In 2000, The Ministry of Culture and Tourism and Altındağ Municipality prepared a report together to start planning, rehabilitation and conservation of this neighbourhood. This is one of the important projects that focused on the historical urban fabric of Ankara and the cultural and historical heritage of the city. This project aimed to rehabilitate deteriorated and abandoned Hamamönü, as it was an important part of the cultural heritage of Ankara, by transforming the neighbourhood into a tourist attraction.

With the technological advances, usage of social media platforms has been increasing day by day. People with same interests share events online and become part of this platform. In addition, online content created by users plays an important role in influencing other users and help them choose between many destinations. Social networking sites such as Facebook, TripAdvisor, Instagram, Twitter and Pinterest are quite important platforms to create such content. TripAdvisor, as one of the social networking platforms, is established in 2000. It served as a dynamic website and an online application that allows its users to review tourist attraction places all around the world and visitors share their experiences there. According to an analysis prepared by TripAdvisor in 2017, the platform has been active in many countries in the world and has around 455 million visitors every month. One can search among approximately 7,5 million accommodation, airlines, tourist attraction places and restaurants around the world. There are more than 600 million reviews on the site about flights, travel destinations, accommodation and possible activities to do in a particular place.

In this regard, in this study, whether the historic and cultural values of Ankara Hamamönü conserved or not will be examined in the light of academic studies that focus on and discuss functional changes and transformations in different ways and the current situation of the area will

be evaluated with observations made in the site. In addition, after planning, rehabilitation, conservation and restoration projects, functional change and transformations in Ankara Hamamönü, whether historical and cultural values of the site is conserved or not will be evaluated by examining the comments of users at Tripadvisor application in physical, functional and social aspects. This evaluations on transformation of Hamamönü will be conducted through content analysis of approximately 750 comments made by visitors in Tripadvisor application. Thus with the evaluations made, the perception and impacts of Ankara Hamamönü projects will be assessed and compared by analyzing the activities, experiences, suggestions, ideas and expectations mentioned in Tripadvisor application.

In this context, this study consists of three parts. The first part is based on the historical background of Hamamönü, Ankara and evaluation and analysis of the projects conducted. Besides the academic studies that focus on the Hamamönü planning, rehabilitation, conservation and restoration will be analysed and with site observations projects are going to be evaluated. The second part is going to be about general information of TripAdvisor and analyses of the 750 TripAdvisor reviews on Hamamönü, Ankara. The interpretations made on TripAdvisor via Hamamönü and the values made about the culture and history of the city will be questioned about the perceptibility for the users. The last part of the study compare analyses throughout the study and puts forward a conclusion.

**Key words:** Urban Cultural Heritage, Transformation, TripAdvisor, Ankara, Hamamönü.

# Ambivalence that Experienced Under the Name of Urban Transition-Transformation: Ankara Hamamönü as an Example of Historical Materialism

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**ABSTRACT**

As Bauman describes through modernity, the concept of present-day time is a concept that stands tense between the past that cannot sustain its life and the future that cannot exist. This tension is a definite clash and for centuries the humanity has been suspended in an ambiguous area that cannot be described. However, progress is also inevitable in this process, a person who does not go back to the past, the point of being unable to get away from himself. In Walter Benjamin's book called "*Das Passagenwerk*", Paul Klee's picture of "Angelus Novus" is interpreted as one of the representations of this process of living on the canvas. An angel figure in the picture, according to Benjamin, turns his face toward the past and he sees one single catastrophe with the collapsed ruins where a chain of events is perceived. The angel, who cannot resist the storm from heaven drifted towards the future where the back has always turned with the storm even though he wanted to correct these destructions. According to Benjamin, what we call progress is this storm. As the distance from time and space to the past increases with this storm, the desires of people are also increasingly for this place to be lost. At first glance these desires take place spatially, and continue in the form of the experiences and the atmospheres of the space. As Boym stated in his book called "*The Future of Nostalgia*"; "Thus places in the city are not merely architectural metaphors; they are also screen memories for urban dwellers, projections of contested remembrances". As the past projections unable to move the present, re-editing and re-instinct emerges. Because, the desire is not only an image that takes place in the memory, it wants to become a place where can be lived and experienced. In this context, Benjamin considers both as a threat to the existence of tradition and to the voice of that tradition when a vision of the past preserved in the form of sudden appearance at the moment of danger as in "historical materialism". This historical repetition is interpreted by Boym through the concept of nostalgia, and interpreted as the repetition of the non-repetition and the materialization of the non-material and these are supported by Susan Sterwart's words, "Nostalgia is the repetition that mourns the inauthenticity of all repetitions and denies the repetition's capacity to define identity".

From this point of view, urban spaces, one of the places where the activities of repetition and mourning are intensively experienced, are encountered very often with the attitude of historical materialism. The studies carried out under the title of rehabilitation and restoration that has come to mind together with mourning and historical materialism is the main points of discussion in this work and the works applied in Ankara Hamamönü district in the last 10 years are discussed. As the

indicators of the defended argument, the works carried out in Hamamönü is completely a reconstruction, except for a few structures and the applications of some non-realistic replicas. As a result of the rehabilitation work, the aura of Hamamönü has been changed revealing the materialistic attitude of mourning.

Research; within the framework of the above mentioned considerations, aims to clarify the concept of historical materialism and to discuss this within the context of Ankara Hamamönü example. With this point of view the work answers the questions of; Is it possible to switch from the materiality of the place in historical repetitions to the Aura of the place? and what the "mourning" action should be? As a research method; the conceptual infrastructure is solved by theoretical readings, following a study of the literature, sampling has been documented on the field and the situation in the region is discussed comparing with the past, present and future triple. The graphical values obtained from the interviews conducted with Hamamönü residents support the study. The findings of the study support the idea that this situation in Hamamönü is an ambivalence historical materialism that experienced under the name of urban transition-transformation.

**Key words:** Mourn, aura, nostalgia, historical materialism, Hamamönü.

# Urban Regeneration as a Tool for Reproducing Historicity: A Terminological Discussion

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## ABSTRACT

The practices of urban regeneration, which can be defined as an effective tool to transform present cities, have recently been used as an approach to the historic environment by claiming to revive historical parts of the city. Stretching the concept of urban regeneration in such a way results in a process in which the physical and social layers of the city are destroyed, and the urban identity and memory of a particular area is erased. With projects that have the primary motivation of constructing new buildings instead of conserving the existent, historical areas are losing their authenticity and turning into urban areas shaped by tourism and consumerism.

This paper focuses on the urban regeneration practices in the historical city center of Ankara. The historical center is no longer under the protection of an urban conservation plan because of the cancellation of Ulus Historical City Centre Conservation Plan in 2005, which made it possible for these places to be a part of the "urban regeneration" areas and brought about a process that focuses on construction of new buildings. The components of the urban fabric that emerged through this process of transformation of the historical center can be classified in two groups: buildings claimed to be the restoration or reconstruction of existing historical buildings, but in fact which are built in a way that has nothing to do with the original architectural features of the said historical buildings, and buildings that have never existed in historical center and are just newly built as additions to the urban fabric. Both groups can be described as collages that historical buildings are ultimately reducted to several different images and architectural elements. Both groups have similar forms and details are almost inseparable from each other in terms of architectural features. Monumental structures in these historical areas are badly restored in a way that would make them part of these decorative surroundings. As a result, these decors, which are produced using the historicity of a place, become the urban areas which the authentic and imitation are intertwined.

The urban transformations projects that destroy the historical environment is presented to the public through the terminologies of urban conservation. Terms such as restoration, reconstruction, rehabilitation, regeneration and renovation are used without respect for their actual meaning and justify perceptions of the historicity of these new decors. The starting point of this research is to find a new set of terms to describe this approach, which results in the almost complete destruction of historical areas, while reproducing historicity. In this sense, the aim of this research is to present a conceptual base for this approach that is fundamentally about demolishing the existent and constructing the new. This study will reveal the terminological ambiguity and tricks used in the urban regeneration projects in the historical center of Ankara and open a discussion of evidence collected from examples of the false historicity that is replacing the original historical fabric. It hopes to bring a new perspective to the widely criticized urban regeneration approach in recent years.

This conceptual discussion derives from Jean Baudrillard's Simulacra and Simulation (1981) where he describes our era as an age of illusions, and more specifically from the evaluation from the book: "an age where everything turns into images while the actual meanings are damaged and where imitation replaces the real". The book's term of simulacra is a copy or a model that replaces reality as a reproduction of actual things or events. Simulation stands for the effort to destroy the difference between real and fake, and to show what is not there as if it were part of reality. With this concept, the historical image of a place and its decors' relationships to place and context make it possible to see these decors as simulations. The destruction of the physical and social components of historical environments results in the destruction of reality. As a result, it is possible to mention the "*reproducing historicity*" under the name of "*urban transformation*".

**Key words:** Ankara, historical environment, historicity, urban regeneration

# A Sustainability Assessment of Traditional Settlement Pattern: The Case of Eski Datça Neighbourhood

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## ABSTRACT

Today cities, as the main places of economical development and human resources, are growing more than ever. Cities are threatening global ecosystem disproportionately by consuming resources from all over the world and producing waste that exceeds the boundaries. As the population of cities increases, the general tendency is mainly to spread to rural areas and this trend is the reason for the demolition of natural ecosystems with agricultural lands. Global reports estimate that the developed countries will increase their built areas to 3 times by 2030.

At this point it is possible to say, how cities will meet the growing population needs such as food, clean water and social organization is not only determine the case of civilization but also the future of this planet. Here, a question arises: how we can make cities more sustainable?

For making cities more sustainable, a new design approach based on applications which are aiming to increase of urban sustainability by environment friendly policies should be adopted. Resource efficiency and energy and climate efficient planning are main tools for development of sustainable strategies. For turning into attractive and livable cities of these strategies, a sustainable design based on microclimate, energy efficiency, material, water and wastewater parameters is required. Today Sustainable design, which is vain to establish a link between nature and culture, both presenting the optimum facilities to meet our basic need and enables sustainability for future generations. In this direction sustainable design criteria can be ranked as; compact growth, mixed uses, pedestrian friendly roads, developed public transport, bicycle use, climate friendly design both in buildings and islands (location, layout, plan scheme, material, indoor climate etc.) common places, sense of community , self-sufficiency.

Historical cities, which are constructed by the traditional energy efficient principles when resources are limited, are precious in terms of showing how to fight with over waste and transferring the knowledge of traditional construction to modern times. When Traditional architecture analyzed consciously it is seen that sustainability was has long been interiorized and it was reached to the climate efficient solutions. Traditional settlements are contemporary and permanent for reflecting lifestyle of communities, interpreting wisely the material and structure and providing integrity between the building and its environment. Moreover times, when the car is not in use, are good examples for city centers in terms of sustainable design.

Taking place in Muğla Province boarder Datça District, despite its natural and cultural appeal due to inadequate transport links, is not exposed to intense tourism and construction pressure and conserved its original building system with masonry stone buildings. Especially Eski Datça

Neighborhood, which is located in the north of Datça and first developing part of settlement, is highly conserved its traditional pattern.
In this context it is aimed to analyze sustainable design principles for Eski Datça, which is conserved its traditional pattern, in scales of the neighborhood, the building islands and the buildings. For this purpose it is estimated to assess the Neighborhood's sustainability performance by the criteria which are collected from sustainable design guides in the parameters of transportation infrastructure and usage habits, energy efficiency (location of traditional buildings, true orientation, shape of traditional buildings, construction materials, indoor climate according to climate); common places and usage habits, production and consumption habits, level of social organization (cooperatives, associations etc.).

In the lights of data obtained from this study it is expected to build a sustainable development methodology for modern cities and thus guiding the current designs.

**Key words:** Sustainability, Sustainable Design, Traditional Settlements, Eski Datça Neighbourhood

# The Role of Traditional Architecture in Sustainable Development (Case Study: Iranian Wind Catchers)

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**ABSTRACT**

The mentioning of sustainable development in recent years, especially after report of the Environment and Development World Commission in 1987, shows deterioration of the global environmental situation. Nowadays the world is under various economic, environmental and social pressures. In three past decades, there have been signs of sustainable development for responding to pressures. Although the history of this idea goes back to the Environment and Development Commission, but the report of "Our Future" has given a special emphasis on this concept. After that, the development and environment issues have been at the center of attention and agenda of the United Nations. Urban spaces have been formed in order to provide the psychological and social human needs. Providing human social needs in urban spaces is one of the main goals of sustainable development.Thus, it is necessary to create urban spaces that achieved by local values, communication identifies and it is necessary to create healthy condition that adapted needs too. One of the hierarchies of climate design in each climate is wind; specially in climates which wind patterns affect on design process. Iranians have used special measures to promote their living conditions and to maintain themselves from bad natural condition. One of these measures, which have played a significant role in the traditional architecture of Iran, is the Wind Catcher element, which is known as a static cooling system. Wind Catcher is one of the important components of architecture, with various shapes and structural elements of traditional Iran, which is responsible for cold cooling in warm-dry and warm-humid climates. The main purpose of this article is to identify one of the organs of native Iranian and historical architecture, to answer the question of how to use natural energy in its natural form and achieve sustainable development? As a result, we have tried to describe the role of Wind Catcher in sustainable development and method of this research is descriptive-analytical.

**Key words:** Wind catcher, sustainable development, civil architecture, renewable energies.

# 'Originality' Problematic of the New Building Facades Located In the Buffer Zone; a Review about Safranbolu Example

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**ABSTRACT**

The study of originality problem of the new building facades located in the buffer zone is made to show the consequences of increased speed of construction in Turkey, especially cities which have historical environments. As known, historical sites are important for the identification of the cities. After the Industrial Revolution in the world, people's habits and living spaces transformed and the cities were also affected by this change. It is observed that countries have experienced these stages of change at different times but later all have experienced similar strains. When the Republican period of Anatolian cities in Turkey are researched, it is seen that there are settlements which show free development around the existing texture of the traditional city. And the cities' master plans were made when these areas became insufficient with the effect of increasing population. Despite there were urban plans prepared with the concern of protection at that time, the texture of the historical cities were destroyed as a result of actualizing of the urban plans which were formed with totally different concerns. The historical buildings were left alone among the modern buildings due to the construction work such as need of new settlement areas, road widening etc. Following these developments, faults have been noticed and it has been decided that some measures must be taken to protect the old towns. It has been adopted that the cities should not only be constructed with the master plans, but especially the cities with historical centers should be prepared according to the urban plans that have protection concerns. Thus, the process of documenting historical areas has accelerated in terms of building, urban piece and the city scale.

It is important to consider and preserve oldness in terms of ensuring cultural continuity. Various ways are being tried to improve the possessed values and transfer them to future generations. In historical cities that have reached nowadays with this consciousness and knowledge, this time a new subject has begun to arouse curiosity. How should the contribution of the new building groups around the old texture be assessed to the urban skyline? When building historic settlements, how the city images that have meanings as a whole is taken into consideration, it is still a controversial subject. In this context, studies that affect the world agenda evaluate how 'new' should be nearby old texture with New Construction Methods in Historical Environments. On the other hand, in Turkey, Safranbolu has been the first city that the conservation works have begun in urban scale. And in the city there is wide historical texture spread over various area. The studies for Conservation Master Plan were initiated in 1975 with the aim of not destroying this texture. The registration process of buildings were done with the dedication of the team who made the plan and the maintenance and repair works of the old buildings gained speed with the support of the local

government. The city of Safranbolu, located in UNESCO's World Heritage List, is still known as a successful example area on conservation practice.

It has been observed in Safranbolu, where various conservation sites are located in together, that new buildings appeared around historical centers changed the traditional skyline of the city. This study aims to re-evaluate the subject of 'new texture around old texture' which is drawing attention in the world agenda and it searches about knowledge and concern level of Safranbolu in scale of Turkey. Since the city has been exposed to rapid and unqualified construction in recent years, it has been estimated that the final situation should be considered through various examples. In this context, the concept of the Historical Environment has been mentioned firstly in order to understand the changes that have happened. Then, the points to be considered when constructing the New Building in the Historical Environment have been discussed. Various examples which were built with these concerns from around the world and Turkey have been presented together in order to evaluate Safranbolu about new construction principles. The methods of construction of the examples have been reviewed. The architectural elements that are taken into consideration have been emphasized for understanding how the new texture that surrounds the historic textures should be. Following these examinations, the new buildings in the Buffer Zone, defined around the boundaries of the First Degree Archaeological Sites, the First Degree Natural Site and Urban Sites exist in Safranbolu Conservation Master Plan, were chosen as case study.

In case studies, analyses were made on the building facades which are thought to be the architectural part of a building that influenced the city skyline. In order to generate data for these analyzes, the architectural elements of the Traditional Turkish House have been examined after the examples constructed in historical environment from Turkey and world are presented in table form. The characteristics of the Traditional Turkish House and Safranbolu Houses and the parts that relate to the environment have been studied. As a result of these researches, the idea of classifying architectural elements among themselves and creating a template table has emerged. With the help of this template which exist the architectural elements classified in terms of used material, building technique, storey number etc. the identity card of the sampled buildings were prepared. Because of the similarity of architectural elements, it is realized that it is not enough to evaluate the building facades individually, and that collective evaluation is also necessary.

At the end of study; it has been found that the examples made with the style of assimilation, which is a new construction method in the historic environments, have been found frequently. For this reason, numerical tables, indicating the implementation frequency of architectural elements like oriels, bands, and frames etc. which also exist in traditional houses and quietly affecting the building facades, are presented. As observed in some of the new buildings in these tables, the style of analogy has gradually resulted in imitation and production of a bad copy. This situation showed that; instead of an architectural style that reflects its times in terms of style and material, it adopts an architectural language which creates confusion about the authenticity of old buildings in the historical surroundings. It has been concluded that the creation of a new building in the historical environment, which is an unconscious housing production in Safranbolu, must be taken seriously by the specialist of the subject and the production of information about sanctions for implementation is inevitable.

**Key words:** New building in historical environment, buffer zone, Safranbolu house, frontal analysis.

# Installing the History of the Forgotten City: The Relationship Between Urban Memory and Public Space

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## ABSTRACT

The reciprocal relation between historical, economical and social developments and urban space also exists between urban memory and urban space. Therefore, the analysis of the dialectic relation between urban memory and urban space and investigation of environmental perceptipon and their representation in the memory provides substantial potentials for understanding the abstract repercussions of memory on urban space beyond conceiving it only as a physical asset. There are many questions on evaluation of the environmental perception and analysis of the representations on memory; how is the knowledge on urban space represented through cognition, what are the processes of that, what are the personal restrictions to express the experiences and perceptions on urban space, what are the convenient methods and tools for evaluating all of them. These questions have been still argued.

Cities are places where various aspects of past events are projected and expressed through personal memories and narrations; urban memory can be regarded as an expression of collective memory that has been shaped within a particular space as time goes by. Cities, which are comprised of different lifestyles and production modes, maintain their existence by cultural differences. Some cities transform their cultural capital into economical capital easily. Place which is one of the most important products of culture has tıme, place and integral relations as well as concepts like culturel stock as being very valuable achievements for the individual and communıty, ideology as identity on the lead, hegemony, consumptıon culture, modernizatıon, globalization. Globalisation and new world politics led to a consumption culture among societies and obliged the transformation of humans to memory museums. This study; considers urban memory as an important aspect of the cultural heritage of a city to be captured and preserved for future generations. Cities have a soul. A soul made by its essential characteristics, built by its citizens. Since this soul translates the history of its urban spaces, it should not be erased. The memory is the most important bond between the individual and society. The memory which is occurred by the individual production and social relations, is affected by many external elements such as socio-economic conditions, life styles, traditions and at the same time effects the external elements. But this is not one-sided interaction. On the one hand, the elements in space change the memory, on the other hand changes in memory

may change the use of space and the physical appearance of space. We tend to link memory to past. But it goes far beyond it. Memory is the link between the past and the present, It is also the foundation for the future. Also, memory provides us with references to understand the present and is closely related to a basic human phenomenon: change. Without memory, change will become oblivion and disaggregation, in which any act is a mere mechanical reaction, disregarding past or our own history. The most scary truth that every living creature has to face can be considered as evanescence. Human beings vary from the other living creatures by consciousness of this unplesant truth. Through the ages humans tried to leave an indeliable mark to time and place that they were exist as a guard against evanescence.Events, places, buildings and objects such as; museums, archives, monuments, squares, special days, memorials, traditions , photo albums can be accepted as the memory spaces with the values and meanings that they convey to society.

The most important areas are public spaces which is collective memory formation and effective in sustaining the relationship between indiviual and memory. On the public spaces which communities come together in order to express themselves and protect of the rights, interaction with the memory is very strong. This study introduces the concept of urban memory and how it is related to space and time.

**Keywords:** Memory, Urban memory, Public space

# CITY - CONSERVATION - AUTHENTICITY

# Investigation of Single Unique Constructions in Changing Cities in the Context of Conservation Problems

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## ABSTRACT

Cities, as a universal environment, have both the architectural heritage of the past and the architectural design approaches that the age brings. In this sense, developments in natural and physical factors, design and technology that guide the past, present and future architecture lead to changes and transformations in many places of cities. These changes and transformations are faster and more destructive in some cities, while in some cities they are spreading over a longer period and slower. Moving from here, the architecture of the cities, which bear the traces of the past and belong to today, can sometimes be intertwined; sometimes the architectural heritage of the environmental and structural measure is rapidly disappearing.

The change in the cities can take place on an environmental scale or in a building specificly. The aim of working in this context is to contribute to the transfer of future generations by examining the protection problems of structures that are preserved or destroyed in a singular scale, continuing their existence in the converted environmental texture in the cities that are under the influence of different parameters. These buildings reflect the way of life, architectural understanding and construction technique, social and cultural situation of the period they belonged as well as important information about the city's original environmental and architectural values.

In the important regulations, meetings and agreements that govern the work carried out both in our country and in the world on conservation; It is emphasized that conservation is not transferring an architectural work as alone and independent of the environment which it is in to the future generations. In this sense, structures bearing original qualities should be conservated with the environment they are in as far as they are on a singular scale. However, in many of today's cities, rapid changes in the environmental scale have caused the original structures to be left alone and unprotected in the changing urban textures. In the scope of this study, the original buildings in the centers and newly developed regions of the cities were examined and the place of urban change / transformation in architectural conservation was discussed in the question lights that developed in these buildings; “What is the effect of the change / transformation in the city on the original structure and the surrounding area?”, “How does the change in the environment affect the use of the single unique constructions in the context of protection?”, “What are the problems of conservation of the original building which became isolated in the changing / transforming city?”.

As a working method, different examples of different structures in various functions are discussed from different cities where the process of change is continuing and the factors that link the past, present and the future of the physical environment with the movement are discussed from the viewpoint of conservation. Nevertheless, the necessity of conserving the original structures that

continue to exist within the changing cities and the conservation problems have been examined. The current situation of these constructions is evaluated and the effects of the altered urban textures, which they now take part in, on the conservation of these constructions have been examined.

Findings from the study suggest that rapid change in the cities is very effective in preserving and destroying original structures. In the changing cities, the original buildings which are not conserved together with the qualified environment in which they are located are losing sight of their social, economic, cultural, architectural and structural characteristics even though they are conserved on a single scale. Conservation should be in the urban scale, which is a universal environment; due to the rapid change in the cities, it has fallen to the singular structure scale. The changes that took place in the cities have made the unique structures remaining in the new settlement textures unattainable. Sometimes they have been ignored and they are hard to protect. As a result, the conservation problems of original structures that have different functions in different cities were identified on the qualified constructions remaining in the new construction and selected as examples and conservation recommendations were made in the light of these determinations. It is thought that the work done will contribute to the conservation of the original architecture and the environment that are under the influence of the changes in the cities.

**Key words:** urban change, original structure, conservation, architectural heritage

# Authenticity Problem İn Traditional Houses Refunctioning : Case Study Of Odunpazarı

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## ABSTRACT

The social structure that has been changing throughout the history changes the physical environment where it exists, as well. Because of these changes affecting the cities that have cultural, political, economic and historical traces of social life, the conservation approach that has developed since the 20th century emphasized the value of traditional urban texture and the conservation and sustainability of these historic areas have gained importance. All these developments, alongside providing understanding of the value of cultural heritage, have brought about the phenomenon of heritage industry and cultural tourism into these regions.

In recent years, the number of works for the conservation and restoration of historical urban texture is increasing with growing interest in our country. A significant majority of urban sites, which are our cultural heritage, are traditional houses. Only physical conservation of these houses is not sufficient in modern conservation approach. It is also important to ensure the sustainability of traditional houses and their continual living. The houses that can not provide today's comfort needs due to changing comfort conditions and living standards are beginning to be non-used and abandoned over time. It also seems that, depending on the effects and needs of cultural tourism different functions are given to the traditional houses and therefore, many practices that would damage the authenticity of the traditional house are done. Located within the borders of Eskişehir, Odunpazarı urban site, where there are many restored traditional houses that have been re-function with the influence of cultural tourism is chosen as a sample area in this study to examine the value of authenticity in conservation processes. Within scope of this paper, four traditional houses whose spatial layouts are undergoing major changes because of their new function, are examined in Odunpazarı. The surveys and the plans have been utilized during the analysis process of these buildings.

Odunpazarı, which constitutes the historical urban texture of Eskişehir, was declared a historical and urban site in 1973 by the Ministry of Culture. The first conservation application in Odunpazarı started with 8 buildings in Kurşunlu Cami Street which were taken by Anadolu University and restored with a new function. During this restoration, the original buildings converted into guest houses have been destroyed and reinforced concrete buildings whose facade have been preserved but layouts have been completely changed, were built instead. It seems that different functions such as museums, offices, hotels, cafe-restaurants, shops and workshops have been given to

traditional houses in order to provide new necessities of cultural tourism that develop in parallel with the restoration works in Odunpazarı.

The building restored as a cartoon museum by Anadolu University in 2004, is one of the early restoration examples in Odunpazarı. Two traditional houses have been combined to meet the larger space needs for the functions of the museum. Sivrioğlu House restored as a boutique hotel is now being used as Eskişehir Turkish World Culture Capital Agency. Analysis on the house and its survey, show that some places in the ground and in the first floor are combined to create larger space. Kayıkçılar House was purchased by Eskişehir Industrialists and Businessmen's Association (ESİAD) and restored in 2009. During its restoration, the walls of the building have completely been removed and the building itself has undergone major restoration. After the restoration, the size of the meeting room formed by the combination of the two rooms on the top floor is remarkable. Nowadays, Balkan Culture House is used as a culture center and restaurant. Unlike other examples, new places have been added to the original house in order to provide the need for spacious space of new function.

For the survival of traditional houses in the face of changing technology, social structure and comfort conditions, the effort to give new functions to the houses is meaningful and valuable. The new functions given to the houses bring new needs, as well. However, idea of creating a larger space causes the deterioration of original layout in traditional houses. This paper suggests that the value of authenticity in the conservation process is ignored because of conservation strategies in line with today's needs and resources of cultural heritage. It should not be ignored that authenticity value that is one of the most important reasons for the conservation of cultural heritage is an attribute that should be sensitive while the conservation principles are determined. For this reason, attention must be given not to cause irreversible value decrease while new functions are given and the new functions should be arranged in accordance with the spatial layout and character of the traditional houses.

**Keywords:** new function, authenticity, cultural heritage, traditional house, tourism

# In Transition and Transformation Process, Behaving "as if" Protecting: "Bodies" that may not wish to be a Museum

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## ABSTRACT

In today's cities, with the convenience provided by technology, the desire to find the newest and the best and to live a good life increases day by day and structures which are, unable to sustain their function, unable to keep pace with the speed of urbanization and innovations disappear with the same speed -to make room for the new ones-. The structures that can save themselves from this process, which have not completed their physical life with still hope, have been brought to life with the efforts of adaptive reuse when they were so close to be history and about to lose their connection with the environment they are located at. As mentioned in Ernest Burden's book Illustrated Dictionary of Architectural Preservation, re-functioning can be described in simplest way as making modifications to the structure to meet new needs. However, in Benay Büyükarslan and Dicle Günay's *Industrial Heritage Re-Functioning Process and Istanbul Salt Warehouse* article; issues are indicated about the re-functioning process today, that its historical layers shall be readable to user and the necessity of correspondence of new function with context and special requirements. Though it is an effective solution to equip the structure with a new function, every new situation that moves away from its original function and / or unable to integrates with it leads to destruction in the body and spirit, in other words the aura of the structure. The most frequently encountered case in the process of re-functioning process of historical buildings is that the products inside are very much "exposed" by removing them from the foreground and they are tried to be protected with a function which is far from the original. With this new re-functioning approach which is considered appropriate for the structure under the name of "museum", the *aura* is separated from the *body* and this body which lost its *spirit*/*aura,* only *undertakes the display of decor*.

In this study; in the light of the above-mentioned thoughts and within the context of adaptation of historical structures, the case of transforming the historical ones to museum/exhibition use as a re-functioning method is questioned. The purpose of the study is to question the state of being "exposed" by questioning the body's spirit leaving its soul over the structures that have various functional use but are currently used as museum/exhibition within the context of protection of historical structures which have been existed with the spirit of the city and holds the soul of the place they are located. The structures evaluated in this study are limited with Ankara Anatolian Civilizations Museum, Ankara CerModern Art Center, Ankara Erimtan Archelogy and Arts Museum and Ankara Çengelhan Rahmi Koç Museum, and questions are tried to be answered to what extend the museum/exhibition function can be integrated to the structure and is the structure capable of

preserving the *aura* of the body which is already a part of. As the method of study; the transformation processes of four structures of which common destiny is to be deprived of their functions and have to endure their existence as museum/exhibition is dealt with, and the changes of structures in this process are supported with visual findings and the relationship of "*new soul with the body*" is being argued. The verbal meetings undertaken with individuals from different disciples are to understand the body-soul contradiction in the study. The study aims to explain that giving a museum function seems to bring a sensitive touch to the body, in fact this seemingly harmless function contradicts with the aura, even not leaving a clue behind from the remaining and for this reason actually not every structure may not wish to be a museum/exhibition "*at the end of the road*".

**Key words:** adaptive re-use, body-soul contradiction, museum, aura, Ankara.

# Historic Industrial Structures in the Service of the Urban Transformation: An Urban Transformation Story in İstanbul, Şişli and ''Bomontiada'' Image

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## ABSTRACT

In today, the regions that is under the urban transformation either, begin a new quest with unconscious suggestion , or very rarely if there is a "historical" value within the area, he/she chooses to take the transformation around by placing it at the focal point. In other words, urban transformation consumes the history by manipulating . In this way, history reluctantly serves popular culture. Today the urban transformation in Istanbul Şişli is happening around the ''Bomonti Bira Fabrikası'' now called '' Bomontiada '', holding on to this building and taking its focus. Bomontiada, which has lost its original function, is in danger of abandonment over time, and it is unable to keep up with time, but today it plays a leading role in the scenario of a transformation story in city, but it is hardly noticeable between the rising skyscrapers.

Today, besides mostly drinking consumption function, Bomontiada, which can bring together succesfully a lot of activities such as visual art workshops, exhibitions, workshop studios, seminars, concerts, the only thing missing is the representation of the original Aura. The study; is based on the question of the ''is it possible to hope to find life again at this ''place'' with protect these ''aura'' and make it feel the ''aura'' to the users without its own authentic fuction?'' Theodore W. Adorno's *''Functionalism Today'' article;* issues are indicated about importance of the present function as the every building has its own social function and aesthetical quality , and it is not possible to seperate the functionality from the style, because the rejection of a style is another style in itself. Although protecting ''aura'' with the function of a building thus its authenticity is an opinion that is supported by many theorists / practitioners, when the function is no longer live, body-aura togetherness unfortunately can not be a matter. Benay Büyükarslan and Dicle Günay's *''Endüstriyel Miras Yapılarının Yeniden İşlevlendirilme Süreci ve İstanbul Tuz ambarı Örneği'' article*; emphasized the importance of suggesting a function that can be easily read the soul of the building by users while preserving the sustainability of urban memory, spatial and contextual values of the building and the whole layer of the structure of economic inputs. In fact, re-functioning of industrial buildings to reintegration into urban life is a paradox in itself. Because what these buildings represent is more important than what they will serve to, while these buildings are being re-functioned because of their symbolic presence in urban memory. In this case; the new function eclectic to the spirit of the place, brings the question of how long the imaginary expression of social memory in peoples' mind would last. The building may gain a different identity and a new "imaginative expression" as it is trying to exist in its ''place'' by a new function that ''visits'' itself.

In this study; the new function-body associations of such industry building will be examined by conducting a literature search on the examples of the beer factories. On the other hand, it is tried to answer of these question, how much the spirit of that place feel to the users, is ''Aura'' being kept alive by the help of experiences and how will be found in the memory of future generations by help of the users of the Bomontiada and the interviews with users living in Şişli district. Scope of the study; firstly 'Bomontiada' and 'Heineken Experience' will be examined to answer the question of how the trace of original function should be transferred to the user's memory. . Indications of the study shows that, many users are using the space without even knowing what the objects that are displayed for the purpose of representation and they generally use the space without being aware of the functioning of the factory. Walter Benjamin has stated in the letter *The Work of Art in the Age of Mechanical Reproduction* that if the proposed new function can not be blended sufficiently with the physical conditions of the structure, then the "aura" of the place will not be felt by the user, the building will be only a shell, and the user will experience the place as a *spectacle*. In contrast, Roland Barthes expressed in his work "The Eiffel Tower", structures that do not have any function can exist in cities with symbolic qualities in time, and their function can also change because of their social meaning.Today Bomontiada has undertaken a decor task with his body and successfully performs his duty as a *spactacle*. But, as Marc Auge wrote in his book "Non Places", even those places can have the ability to make instant contacts and create experimental spaces. It is inevitable that Bomontiada will offer a new experience to its user without its own ''aura'', it will give people different images with new experiences and it will take place in memories with another image other than "old beer factory" image.

**Key words:** industrial heritage, adaptive reuse, aura, spirit of place, urban memory and image, beer factory.

# Transformed Spaces, Spatialised Transformations

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## ABSTRACT

Transformation in architecture is defined as the principle that an architectural concept, structure, or organization can be altered through a series of discrete manipulations and permutations in response to a specific context or set of conditions without a loss of identity or concept.

Since its existence, the man has been subjected to constant transformation and desires to transform. The desires of transforming and being in constant transformation have affected cultural, economic, social and physical movements in positive and negative ways. The replacement of anything related to the past with the new one has led to the destruction of memory and context.

So, it seems that one of the crucial needs for architecture in this changing world is to respond to the changing requirements of the man and to allow him to experience his architectural ambition, where –at this stage- transformability comes as an important, suitable choice within the solutions. In this case, we may say that, "in good hands" the transformable architecture is a potential strategy for architectural environments, buildings and structures that need to be reconfigured to respond functional, formal, aesthetic and semantic requirements.

As man first transformed the place where he lived in, due to his own needs, today the political and economic decisions and/or impositions expose the phenomenon of spatialised transformation everywhere needlessly. In this context, the purpose of this study is to find out the answer to the question of "is the space being transformed or the transformation becoming a space?"

Within this scope; our aim is to examine the transformations of Tekel (Regie) Building (Trabzon, Turkey) and FIAT Lingotto Factory (Torino, Italy) which have lost their functions over time and reborn today. By addressing the scope of transformation, the reasons for selection of these two buildings are the facts that the two buildings are from two different countries and cultures which were first constructed as industrial buildings -had to be transformed by the loss of their functions- have the same transformation faith that their main functions have been transformed to shopping malls.

In the light of this reasoning and exemplifying, the functional transformation lived in the claw of the global capital will be examined in the content of transformation strategies. The readings to be made on the man needs and spatial requirements, the first step will be to investigate the changes in the building scale and the effects on the surrounding areas and cities in which the buildings are located. In the second step, the related surroundings and cities will be identified in relation to the

new venues produced. The answers to the questions will be put forward whether the space is being transformed or the transformation is becoming a space.

From an architectural point of view, we do believe that the relationship of space and transformation, the awareness of cultural identity and sustainability is a bivious gift from society to profession. And architecture is the medium through which everything meets and gets its body. Perhaps the largest challenge is to understand why and for whom things will be preserved in the future of transformed spaces and/or specialized transformations.

**Keywords:** Space transformation, industrial building, shopping mall, Trabzon, Torino

# To Revive the City Memory on Today Before The Yesterday, After The Tomorrow: Historical Samsun Tekel Cigarette Factory

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**ABSTRACT**

Historic industrial buildings bearing the traces of the city's industrial production history, changed shape today, lost its function, often suffered memory loss while waiting for its new function as uncanny areas. In this way different regeneration proposals have been introduced; but it is often forgotten that the real actor who created the city was the city and that he created himself while creating it, and that he was transforming himself in this way and involved in the city. In that case, it is very important to find traces of the city's memory in the practice of transformation. If we see something familiar and striking in one place, we passed through all the associations about it in our memory filter and try to reconcile the memories with now, build myths about that place. In this way we make the places we meet in our memory visible, call things today about our memories, create a new layer in our memory and make the memories become alive. A transfer from the past to the present and to the later takes place which makes it easier for us to adopt and to feel attach to that place and become more meaningful for us.

Bergson mentions two forms of memory in his work called *Matter and Memory*. Image-focused memories imprisoned in the first memory of past events, when they entered into the circuit in the second memory they multiply and vary. In the second form of memory, a situation in which every act is carried out in its original situation, differentiated in that situation and different experiences occurring in a different conception is emphasized. The first form of memory is based on repetition and remembering, the second is based on imaginative action and both of these forms exist together. It is the second form of memory that witnesses the existence of past, the present and the future; it exists inside the present and is transferred to the passing future by multiplying its bonds with the past by accumulating. When we look inside today; how can past, present and future relations are defined? At this point, looking at Deleuze's time definition in order to reveal the relation between non-linear time and memory, it is possible to say that the past is a reflection in today as *image-memory* base. At the present time passing at any moment, *image-memories* allows for different memory experiences by being reconstructed and disrupted. The memory in which these experiences are recorded is where all the experiences of the past have been accumulated and replicated at each passing time. If there are no readings about memory, the experiences that lived up to now will be lost in the delusion of all the living things and confined to a melancholy situation. Besides, whoever witnesses the stories of the present and the future will not comprehend

enough the present. So it is then possible to say that the past has not ended, and that all these images will increase with present-day experiences through all these *image-memories*.

In his work Les Paradis Artificiels, Baudelaire defines the growth of memories in layers as *palimpsest* and says that they are in no way recoverable, cannot be compensated, cannot be erased, and cannot be destroyed. This approach of the accumulation allows us to see the conceptual potentials of memory while describing the practical function of memory as the use of past experience for the present. Although the rhetoric of "Sadness for the Ended" seems like a nostalgic and romantic phenomenon, entering into the concept of what if ended, we may think that something has passed through the question of whether there are any documents to be transferred to the future in the past.

With this work; through the historical Samsun Tekel Cigarette Factory, as one of the modern industrial structures built to meet the social needs of the period, *image-memories* will be revealed in different periods. The intention is to develop a research on the experiences of factory identity, the involvement in idle and undefined situations, and the many experiential acquisitions that accumulate in today's socio-cultural and commercial identity. In doing so, all the experiences are brought together with that place and the past is called to the present by making the memory visible. As a method of working, a mapping is made on *image-memories* using the oral history in order to reach the present. Similar mapping method is also used for the "present" and supported by verbal expressions, and how the memory of the city has been changed after the transformation is discussed. It is an inevitable fact that structures consumed and transformed in a system where everything is consumed. However it is shown that, to consume traces in the memory of individuals by physically disconnecting to a place or consuming that place is not possible. *Image-memories* preserved in the memory as layers, must find a place to locate in the past, in the present and in the passing time. However, the study showed that when the transformation is being carried out, the memories are compressed and all the possibilities that the memory can come out are being destroyed.

**Key words:** Transformation, memory, time, image-memories, layer

# Urban - Space - Memory Shaped "Place" - Eskişehir Sugar Factory

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**ABSTRACT**

The dynamics of our rapidly urbanizing country are undergoing differentiation and undergoing new shaping. The patterns of social intercourse in the cities are discovering new patterns that are unusual or reshaping existing ones. In re-shaping / shaping, that is to say, in architecture, when they realize that they have what they have, they are dealing with a number of places that are unfamiliar with discovering what they want, organizing their time and space. Editing, definition, drawing, everything is definitively defined as thought. In everyday life, however, everything, smells, sounds, images, colors, objects, feelings overlap. For the memory that the city is written and erased, and can be built up again (and again), the main stop is undoubtedly the architecture. The architectural space is more layered and more continuous than frozen photo. With Auge's (Marc Auge, 1995) definition," lost places" are places where there is no memory, based on temporality, not on permanence. Inner voice is being forgotten and always is been acted according to outer sense. How the architects / designers see the present reality in the past, memory and spirit free space and how they design, what and how to relate can only be measured by the reaction of the memory of the city.

The city has a memory and this is not the history. The memory of the stone is far from the solution method of the historians and the root attitude of origin. The city keeps its memory in stone, in the building. The memory of the city is all the architectural structures of the city. They are there when they are demolished, rebuilt, restored, and are not there anymore. In the simplest sense, a overlapped city describes the memory of the city. The city, which was built on the cemeteries, on the filled sea, on the ruined night streets, in the fruit gardens, in the water beds, abandoned the city memory. The city has been destroyed to rebuild the city, a culture and countless experiences have been lost at that time. The city, which has been lost again on the old disappearances and rebuilt, is now trapped in very deep layers, like a parchment on which the memory is rebuilt. The city, which carries the traces of the past is made of stone, relic and remains.

Our memory is formed by the associations that are produced in our senses and in our minds. The memory that we both remember and change by changing is the one that changes all of us. What changes the space is the memory of the space. Memory is a social construction, something that does not exist by itself. The social memory - the 'places' are the places. Temporary, sterile places that are away from the experience and interaction of the place are places that can not detect the memory of the place by way of change or recall. The real problem is how to bring the space into a place where it is perceived or

comprehended without experiencing the space, without making it a place to be settled and usable, without seeing it as a place of experience and interaction. City of Eskisehir, Turkey is a town in the historic effort to come forward with the development of national industry. Many structures and structures attached to the historical depth of urban space add value to the city's refined urban identity.

Eskişehir Sugar Factory is one of the most important representatives of Eskisehir city and in the first years of the Republic, in the development of the city and in the project of modernization, Eskisehir Sugar Factory holds a very important place in relation with the city's industry.

Like other sugar factories established in the Republican era, the Eskişehir Sugar Factory, which resembles the "company town" (industrial city) model, is a settlement model based on the reconciliation of industrial and rural lifestyles. Its industrial roles have been tried to be shaped together with rural life habits it is a structure.

The city's multi-faceted industrial structure is one of the first modern architectures of the wealthy factory; modernity and gentrification, which have gained meaning with the past, with ordinary but meaningful style of everyday life. The new industrial production-based areas created after the 1980s on the world scale have been tried to be shaped together with their industrial roles, rural life habits, It has become.

As part of the research, the Eskişehir Sugar Factory as an industrial production facility in Eskişehir has been examined not only as a physical and geographical place, but also as a place of memory with its past experiences. The result reached in the study will be a part of the life world in the long run with the associations produced in the memory, perception and mind of the Eskisehir Sugar Factory. The most basic proof of this is that as an industrial production space, Eskişehir Sugar Factory will be remembered in the time-space continuity and will continue to be a part of life with its industrial roles- rural life habits.

**Key words:** City, Eskişehir Sugar Factory, production, memory

# City Dreams Against Center Ankara Reality in Industrial Heritage EGO Hangars

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## ABSTRACT

Recently, cities have encountered destructions in their crucial points with the aim of realize the profitable projects. For the sake of the development of the cities, big scale city projects are considered essential but they damage to cities in terms of social, cultural, economic, ecological and technical aspects. In this context, nowadays, in the industrial heritage EGO (Electricity- Gas- Bus) Hangars area where is intersection of new and old city Ankara, ''Center Ankara'' project has been constructed. EGO Hangars are one of the first industrial construction, built in 1930s- early age of republic- in the city of Ankara. In addition to industrial heritage value of the hangars, location of the area is also valuable cause the hangars close to other cultural and historical sites such as Atatürk Cultural Center, Hippodrome Area and Turkish State Railways Housing. Besides, EGO Hangars area is a part of the city park-green axis- of Ankara in the future planning of the city between Atatürk Cultural Center and Atatürk Forest Farm. While Ego Hangars are needed to be protected as an archeological site, the area is zoned for construction and released with the urban transformation decision. In this site, aforementioned project ''Center Ankara'', includes office, shopping mall, housing, residence, is started to build. Intense and high-rise structuring and overpopulation dramatically damage to environment and infrastructure. In this study, Center Ankara project, which consumes industrial heritage and cultural memory, is compared with conservative projects designed for the same site. Although Center Ankara project construction is inexpugnable, with this comparison, it is wanted to emphasized that development and urbanization with conservation and transformation is more precious than destruction. Through the Ego Hangars example, it is aimed to raise awareness about conservation, transformation and involvement to social life of remaining idle industrial heritage buildings and sites. When the projects are compared, some criteria like intellectual idea, connection to the city, quality in the city scale, respect to industrial heritage, suggestion to social life, increase public awareness, economic and ecological factors are examined. In the study, Center Ankara project is compared with a competition winner projects, ''City Dreams- 5, Evaluation of EGO Hangars and Site National Idea Competition'' organized by Chamber of Architects. City Dreams are competition series which aims to transform and reuse with an original design of historical, cultural and industrial areas in the city center of Ankara. In this respect, City Dreams- 5 seeks the ideas about regenerating the hangars and their site to social life, redesign and refunctioning according to public and city demands. When the awarded projects are investigated, creative and conscious perspectives are produced against anomy, cultural degeneration and lack of memory. In assessment phase of the competition, citizens, experts, local managements, public administrations, non-governmental organizations and civil initiatives are included to provide collective production process. In chosen projects, target is providing different experiments via preserving physical and historical presence of the hangars. The successful project ideas present green area to the city, usage industrial heritage as exhibition places, questioning historical development process of the Ego Hangars and using the potential of connection of site and its

environment, creating spaces for local authority and democracy. In contrast to these valuable and creative public ideas, applied Center Ankara project includes office, housing, shopping mall, hotel functions. Though, this project offers serving the purpose of the city, defending public interest, enriching the city center but this project is a totally destruction of the industrial heritage of the early republic. Also, this project is a cloned city project which poses many infrastructure problems particularly in transportation. Consequently, in the intervention process to the cities, city dreams should meet with the public and it is not impossible to apply city dreams ideas. Even if, to live consumption focused, harmful to environment, profit-oriented projects, it is utilized public opinion. Otherwise, creating space is ended up just as a failed architecture.

**Key words:** EGO Hangars, conservation of cultural heritage, idea competitions, city projects

# CITY - CHANGE - TRANSFORMATION

# A Reading on Changing Housing Patterns within the Context of Boundary and Threshold of Public-Private Areas: Eskişehir Ertuğrulgazi District

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**ABSTRACT**

Eskişehir, one of the most important cities indicating industrialization and economic development activities, the modernization period of Republican Turkey within the spatial reflections. Industrial complexes founded by both state and private attempts and new dwelling sites developed near the complexes in conjunction with the construction of railway line passing throughout the city compose of an important part of the modern dwelling stock. Ertuğrulgazi District constructed in 1950's by state railways in order to meet the inhabitancy need of the workers is one of the most important worker cooperatives reflecting the modernization period of Eskişehir.

The effects of the Second World War and new regime with multy party system accelerate urbanization and industrialization activities as the result of the migration from rural to urban. As a consequence of massive migrations, housing problem and mass housing occur all over Turkey (Üstün, 2010:21). Precautions applied by local governments as a solution to rapid urbanization make becoming a homeowner difficult for middle class of the society. One of the solutions is establishment of dwelling cooperatives for construction activities. "Law of Property Ownership" bases of this mechanisms (Tekeli, 2014). Start of being applied of Master Plan in 1956 and tendency of workers for owning a dwelling supplied that 1290 houses were constructed through seven cooperatives founded between 1950-1956 (Aksoylu, 2014 Spatial Development of Eskişehir in Modernist Period). New housing patterns stated within the boundary of industry complexes which are dissociated from the high-density apartment buildings sites develope a specific genre (Üstün, 2014: 64). Ertuğrulgazi District that started to be constructed in 1958 is also created with this manner and today it has been in an urban transformation period.

At the beginning of 20th century, new proposals for dwelling patterns called "garden-city" aimed to design mass housing with slight storeys and low-density, related to the nature and far from industry complexes then this settlement pattern had been applied in many cities of Europe until 1970's (Üstün, 2010: 44). Ertuğrulgazi District and the other housing settlements developed near the boundary of industry complexes can be evaluated within this context. In recent years, for the reason that the observed rise in the growth of the city through the west, new recreative, touristic and urban social equipment's occuring near the borders of this district cause an important transformation. The perception of the housing pattern from the street view, the quality and density of open and built areas started to change.
The determinant factors of housing buildings which reflect the daily life practices, the features of their construction time, information and techniques are open areas and their borders. Although the

construction conditions and the financial tools for construction – state, individual, cooperatives etc.- are substantial for creation of open areas, daily life practices differentiate the spaces in time. For this reason, the aim of the research, the transformation of this important housing pattern within the context of changing borders and thresholds of public and private areas.

The origin of concept pairs called “public” and “private” reach out to the antique period and many discipline adopt and discuss them in their own frame. Architecture discipline discussed them in recent years that, what the determinant factors of their physical and perceptional borders are, if the borders of them become flu and if there is a need for any alternative transition concepts. It is claimed that, the distinction of public and private correspond to separation of ‘polis’ and ‘oikos’ of ancient world with determinant borders (Habermas, 1997: 60 Structural Transformation of Public Sphere). Arendt (Arendt, 1958: 58 ). The Human Condition) consubstantiates them with ‘common areas’ and ‘property’; Colomina (Colomina, 2011: 8 Privacy and Publicness) handles them with the relationship of sighting/being sighted through privacy concept; Geuss (Geuss, 2007: 27 Public Goods, Private Goods) claims that private is not opposite of the public, Tanyeli defends that these are invented in the 20th century (Tanyeli, 2007: 60 Public Area-Private Area). These debates enable to make a reading on the spatial borders of houses. Within the scope of the research, the approach of Colomina which handles the spatial distinction and organization of houses of Loos and Corbusier, the most important representors of 20th century with opposite notions such as sighting, being sighted and peeking or being peeked through privacy and publicness will be made use of. In this scope, the authentic pattern of Ertuğrulgazi District will be revealed, and the transformation will be scrutinized. In the research, a conceptual reading will be done through the elements of the borders and thresholds such as door, window, ramp, stairs, furniture, fence, plants, trees, water and so on by delaminating the spatial organization of the house to the layers. It is expected that the research will be a base for the next ones in order to read the authentic housing patterns and contemporary transformations.

**Key words:** public area, private area, houses, Ertuğrulgazi District, urban transformation

# Changing and Transformation Process in Urban Area: Trabzon Çömlekçi District

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## ABSTRACT

In the 19th century when the trade volume of Trabzon city increased significantly, the most important commercial transit point of the city was Çömlekçi Port. However, the increased commercial transit capacity, along with the necessity of constructing new transport lines in the city, created a driving factor for the lack of port capacity and the construction of a new port. As a result of many studies in order to solve the problem within the process, a modern port example in Trabzon can only be seen in the 1950s. The construction of the new harbor, which is an important breakthrough for the commercial potential of the region, has led to the construction of many hotels in the Çömlekçi Neighborhood to meet the increased accommodation requirement. With the construction of the new port and the way of passing by the shore, the communication with the sea that the neighborhood has been closely related since the past has begun to break.

The Soviet Union's collapse and the struggle for people's economic difficulties living in this country, he has brought a new financial ways quest, Western Europe, Turkey and the Middle East, has been a leader in residential areas of women's suitcase traders from the Soviet Union. These commercial activities were seen to have increased in the Eurasian (Russian) Markets built by the municipality in the 1990s, especially in the Eastern and Central Black Sea regions. In Trabzon, the Çömlekçi Neighborhood region was found suitable as the settlement area of the Russian Market and the market area served as an important commercial point until 2000 when it was moved to Pazarkapı Moloz site. The increase in the numbers of hotels in the region since the years when the external migration has increased has negatively affected the social perception of the region, and as a result, it is inevitable that the residential settlement is gradually dispersed and the region becomes idle.

TOKİ and Trabzon Metropolitan Municipality initiated the Çömlekçi Urban Transformation Project in 2009, in order to remove the other market factor of the region with the transfer of the Russian market, the negative view that the idyll buildings have created in the city's face and the bad image of the area. From the beginning of the project, it is stated that the present texture of the region will have a modern line, by emphasizing the negative image in the social memory, in the images and writings. The project, which is declared as comprehensive and multi-stage, has been made expropriation and demolition work on the 1st stage. And 2nd stage is still going on.

In the study, the spatial and social transformation process will be under scrutiny during the historical process of the Çömlekçi district, which constitutes an important commercial point for Trabzon. The port's role in the city and its spatial presence due to its international commercial activities, as a result of the formation of a negative social memory by the "Russian Bazaar" established in the region over time and as a result of the distribution of residential settlements, the transfer of the bazaar area and the formation of the social environment on this district after the settlement and the new project planned to be revived in the area was defined as turning points for the spatial and social change / transformation process of this neighborhood. These are the main research questions that how the Çömlekçi region changes its position in the urban organism, under which conditions the change / transformation process in urban history is changed through which decisions, and how these decisions impress the urban and social memory.
The aim of the study is to mount an argument of the stages of the urban change / transformation process of the Çömlekçi Neighborhood, an important trade point of the city, and to find out how and through which decisions the region was planned in the process of urban and social change / transformation.

In this study; from the historical photographs of the area are used to observe and analyze the urban change / transformation process of the region, the decisions made by the municipality for the region from 1931 to 2015, examined from the Reports of the Municipal Assembly; Trabzon Metropolitan Municipality introductory booklets and brochures and local newspaper archives are used for the identification and examination of the projects planned for the area.

It is obvious that the Çömlekçi district will carry out and also undergo a considerable change / transformation process in the direction of the decisions and practices of the local government in the historical process. An important area in which the residential and commercial area coexists has gradually evolved from residential function and the region has turned into a dormant, unemployed neighborhood for users.

Will the Çömlekçi district be transformed into a living, prestigious neighborhood which is imagined with neighborhood relationships by the "Çömlekçi Urban Transformation Project" aiming at abolishing the negative image of the city and bringing the Trabzon city to a "contemporary and modern" area and how this change / transformation will have an impact on the social memory? These questions are waiting to be answered as an important question mark.

**Key words:** Changing, Transformation, Çömlekçi, Trabzon.

# Image-Memory Relationship in the Process of Urban Change: Adana Sample

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## ABSTRACT

The start of modernization and industrialization movements in the 20th century, rapidly developing technology, and densely population migration have caused a continuous increase in city settlements across Turkey. This sudden and fast developing situation has led to the deterioration of urban fabric, emergence of unidentified structures, and to a new structuring that is independent of the past. This increase causing to urban change and transformation has also led to the problem of safeguarding of cultural heritage in social memory. The rapid restructuring of cities has caused the position of past to reduce in the memory of the city and even led to the majority of them to be forgotten. Due to these reasons, it has been recently accepted that civilian structures are also worth preserving cultural assets, and a new dimension has been gained to the concept of protection.

The relations of architectural structures to their locations in the city, and the gaps they create form our urban sense. Accordingly, the change, transformation, appearance and disappearance of architectural structures affect our perspective of the city and urban memory. A city, as a living organism, contains life experiences, the old and the new, traditions, cultures, and changes in itself. As well as a city wraps itself up in a lively and dynamic structure when looked after well, cared, and appreciated, it becomes stable and disappears after a while when it gets started to be forgotten and being unidentified.

It is an undeniable fact that the urban changes and transformation movements that have been continuing up to now in our country have come to such a point that the stability in cities cannot be provided, the structures accepted as images have changed, and there has been a disconnection in urban memory. Today, the works named urban transformation, considered necessary to keep up with the changing conditions of the current period, have not only pulled down a building but also have also damaged public memory which is integrated with the city, which creates the sense of identity and is accepted as an image. The urban change and transformation decisions and their reflections inevitably have raised the question of the protection of cultural heritage. It has been found that some recent architectural practices, which were accepted to be documents of the concept (political, social-economic, etc.) of the period they were built, lost value, didn't see the outstanding value, and were destroyed throughout the process.

Although the need to build new administrative building arose in the newly established Republic of Turkey, since there weren't enough domestic architects, some of these projects were made to the architects from Europe since 1927. One of these foreign architects is Prof. Hermann Jansen, a city planner. The architect making studies in the provinces including Ankara, Mersin, Eskisehir made the construction plan of Adana in 1939. He cared the expansion of the city, moving it to the north in

this plan, and later, as the expanded as contrary to the plan, an additional plan covering Karsiyaka neighborhood was made in 1943.

When we look at the city of Adana, today, we see that migration, zoning practices, urban development, and transformations have changed Hermann Jansen's city plan, and a part of the plan has not been implemented.

The study aims to examine the qualified 20th-century modern architecture products included in the scope of Hermann Jansen's city plan, destroyed /disappeared in the context of urban transformation, and have faced with the danger of destruction.

It has been determined that some registering studies remained lack or incapable in some buildings, especially in 20th-century modern architecture products, the outstanding value hasn't been attached to these buildings accordingly. Their position in urban memory disappeared especially in the process of urban transformation or faced with the danger of disappearance.

As a result, many architectural works constitute the personality line of the cities and determine the urban silhouette. For this reason, the purposes of the study are to document the 20th century modern architecture products in the Jansen's plan since both they are one of the contemporary examples of the period and are indicators of contemporary life in cultural and social field, to reveal their importance in terms of architectural, social and cultural history, to preserve their places in the social memory, to raise awareness and to increase structural awareness.

**Key words:** Memory, urban transformation, urban memory

# An Effort to Keep the "*Aura*" Despite the Change and Transformation: Erzurum, İbrahim Pasha District

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**ABSTRACT**

David Harvey exemplifies Goethe's Faust to understand modernity. Faust, the intellectual novel hero who lives in the traditional society at the beginning of the 19th century, wants to change not only his life but the whole human life. For this he will build a new social environment that will wipe out the old world. Faust takes on the personality of those destructive potentials we are familiar with as *'developer'* in today's modern age, and engages in a major construction activity and modernizes the material world by using the possibilities he has provided with the help of Mephisto. Faust's motivation to create a modern world has overwhelmed the old world and only one elderly couple has remained as an example of old-world beauties. Faust was unable to withstand the old might be a good thing, but when it destroys the pre-modern world, it will abolish the reason of its existence. Marshall Berman describes it as *"the Tragedy of Development" in his book The Experince of Modernity.* Faust is an utopia in the world of Goethe, but he found his place better in our world. Today, we often find examples of this tragedy with the motivation to create a modern world in the construction facts of different ideologies. This situation can be staged in different dimensions, such as an effort to reset the memory by destroying the past, or an effort struggle to restore and bring back the fake with simulations in different places and contexts. However, some ideologies are tightly bound up with the idea that this last remaining escape may be beautiful, and strive to transmit it to future generations within the framework of sustainability principles. Nevertheless, disposing of a place with only its physical qualities invalidates it, and it becomes everywhere. A place, like palimpsest, can gain a meaning and a soul in collective memory by establishing itself behind a later one. In this united soul coexistence, a place provides us to connect with the past and expects us to be able to bring it to the future. From such a point of view, the places to be transferred to future generations would find meaning either with their original use or with their closest use.

The research questions the original use as a basic component of *genius loci* that is the reason for its existence with its *aura*. Those lived experiences, events and memories that exist in the place.For this purpose, a group of historical Erzurum houses as an example of a different ideological view is addressed in this article. These houses which are combined by trying to keep their original qualities intact in order to live and promote the neighbourhood culture and the environment which is deteriorating in the process of change and transformation of the city today are protected with the concept of "House of Youth" very close to the original function. With this example in particular, the sustainability of this typology is questioned with the interventions made to the original. In the practice of combining these houses with the effort of bringing back the neighbourhood culture, it

is important that those who are lost and those who belong to the original. In this context; firstly a conceptual structure is created by reading on place and *genius loci* theoretically, then the literature reviewed about the traditional Erzurum houses and their general characteristics are examined and finally the unique spiritual existence is being discussed with the clues remaining in the Youth House. Oral interviews with young people who are present-day users of the venue constitute the other part of the study. The findings of the study support the idea that Erzurum houses, which have undergone transformation with the aim of being a Youth House, can protect their unique *aura* despite many interventions.

**Keywords :** The spirit of the place, collective memory, original spirit, *aura*, historical Erzurum Houses

# Historical Urban Public Spaces in Place-Making Perspective: Case Study Erzurum City

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## ABSTRACT

Historical cities are recognized as cultural heritage. They must be preserved, keep alive, and transferred to the future generations. During the history, Erzurum has been one of the oldest settlement and civilization centers in Anatolia with geopolitical significance. With these features, several important historical monuments and cultural values are settled in the city.
From the early civilization until now urban public spaces have owned an important role in the cultural, political, and economic life of people. During the time, form and function of the urban public spaces have varied dramatically, based on particular cultural arrangements, yet retaining a host of similar features. There are many definitions about the public spaces from the perspectives of the different disciplines in social science, planning, and architecture. Public space refers to an area or a place that is open and accessible to all citizens, regardless of gender, race, ethnicity, age or socioeconomic level.

Modern period planning policies focus point has been on the requirements of cars rather than the needs and expectations of pedestrians. Therefore cities have lost many qualities that they used to have in the older precedents. Focusing on forms of mobility, across and through the city, the car has reconfigured urban life, involving distinct ways of dwelling, traveling and socializing. Whit reconfiguration of the urban life, changing in the using of urban public spaces and decreasing the quality has become visible. On the other hands, Place-making has long taken center stage in urban planning and design, where capital funding is spent on the shaping and making of high-profile places in towns and cities. Place-making is the process of creating “quality places" that people want to live, work, play, and learn in. Today in order to create “quality places”, the creation of these key elements are necessary: creation mix of uses area, visually attractive and effective public spaces, preservation of historic structures, respect community heritage, pleasing facades, arts, culture, creativity, recreation, and green spaces.

Place-making is the art and science of making authentic, vibrant and resilient places that are valued by their communities and admired by visitors. It is a holistic, multi-disciplinary approach to planning and development that involves understanding the culture, qualities, and wisdom of its community. Place-making is concerned with not only the spaces in our cities but the human interactions that make cities great. It’s all about People-Place-Connection Due to Erzurum strategic position at the confluence of main roads, history of the city is full of spectacularly eventful. The city has been the seat of many a glorious civilization and has been ruled by great leaders. Many historical buildings are settled in the city, especially, the Seljuk buildings in the city are remarkable. According to different studies, the urban development process of Erzurum began before the 15th century in the rectangular area surrounded by Grand Mosque, Twin Minaret Madrasah, Yakutiye Madrasa and Ahmadiyya Madrasa. After the1830s, the urban form has changed with the demolition of the city

wall; that once fortified city started to extend beyond the wall. After the republican period, urbanization process has started in Erzurum at the same time in the whole country. In 1939, the first plan of Erzurum was made by French Urban Planner. The main aim of this study is focusing on the place-making concept in order to catch on as another way to improve the quality of various places in historical public space, and by extension, the community, and region in which those places are located as well.

**Key words:** Public space, historical city, place-making, quality places, Erzurum.

# Identity of Transformation: The Sample of Sükran District

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## ABSTRACT

Consumption-oriented cities, which are the result of the consumption-oriented society that emerged with the industrial revolution, have to be in constant change and transformation in order to meet the needs of the society. Depending on this, the places can continue to exist and renew themselves in the context of changing actions and needs. At this point, urban transformation is attempting to undertake the task of recovering exhausted, depleted, and depressed spaces that are so damaged that it can no longer meet the current era. The urban transformation that emerged in the western countries after the Second World War, which has emerged as a renewal-oriented one, has continued to be diversified in accordance with spatial requirements in the following periods and nowadays it has begun to be implemented mainly in poor neighborhoods or in areas with loss of function in order to provide economic and physical development. Urban transformation applications, which should be considered in a very broad scope, include socio-economic and cultural changes taking place in a comprehensive intervention not only to destroy and rebuild actions. The transformations desired to be realized in the historical city centers are implemented as urban renewal works aiming at bringing these centers back to the urban life with the preservation of touch and cultures and becoming unqualified and dysfunctional. Urban renewal; is a transformation and planning approach involving social, economic and physical interventions made with a perception of permanent improvement in the changed regions. The aim of this study is to analyze the results of the applications made by examining urban regeneration and renewal practices in historic urban centers that have lost their function and become obsolete, through historical, cultural and urban identity. In this context, the project and application area of Sükran District urban regeneration has been examined as an example. The Sükran District in Konya, Meram District brings together the old city center of Konya together with İhsaniye (Hamidiye), Sahata, Aziziye and Şems-i Tabrizi neighborhoods. Located between Alâeddin and Mevlana Dervish Lodge which is the two most important urban centers of Konya in historical sense, this neighborhood is also very close to Bedesten Bazaar which is the most important commercial area of the city. With increasing immigration from 1950 and the law of apartment ownership, which emerged in 1954, this region became quite frequent and intensely structured, leaving the identity of the region on the back. This area, which has a lot of immigrants with the relocation of property owners to new urban centers and their relocation of places with low income and education rate, has become an unidentified, depressed and ruined area over time. This area, which has many structures in historical and cultural sense, is aimed to be transformed with the urban renewal and transformation studies initiated by the Municipality of the District and to renew the ruined and depressed area in accordance with the historical identity of the city. When the transformation is planned, a traditional design conception has been adopted in accordance with the historical city identity. As a result of the transformation to be carried out in accordance with this understanding, intense and frequent construction in the region will be replaced by small and discrete structures. In the renewal project made in this direction, it was aimed to clean the elements which disturb the traditional texture first

from the field. Once these elements are cleaned, cultural assets planned to be protected will be transformed into public spaces with spatial arrangements to be made, while the region will be reintroduced to urban life with less and separate planned accommodation, housing and commercial structures. This renovation project, which is planned to provide a return to traditional urban identity in the Sükran District where the depression has become a region and has lost its historical identity, will have considerable effects on the urban scale in terms of preserving the historical landscape and bringing it back to urban life.

**Key words:** Change, urban transformation, identity, Konya, historical environment

# Re-functioning in Sustainable Conservation: A Case Study for Celal Street, Konya

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## ABSTRACT

The environment undergoes a change and transformation with it in accordance with the nature of man. As a result of this change and transformation, both the needs and the spatial requirements depend on them. Historical environments, therefore, are in a very important position today due to their increasing population density and industrialization, as well as being valuable in urban terms and being seen as suitable areas for meeting spatial needs. These environments stand out in their rapidly developing and changing cities with their historical and cultural characteristics and at the same time they mean a great gain from the socio-cultural and economic aspects towards the city by the evaluation of the existing potential and the introduction of new functions. This makes it possible to re-use and preserve the original features and values of the original functions with suitable functions in the contemporary process. Therefore, traditional planning, which has lost its function due to proper planning studies and conservation practices, has become a historical and cultural tourism center. The concept of sustainable conservation includes re-functioning with the transformation of available resources in historical environments. This understanding aims to improve the physical, economic and social conditions and to renew in these areas in the urban sense. The harmony of the existence of the historical place and the function defined in this place forms the basis of the element of sustainability. In general, the way to keep a place alive depends on an analytical definition of what it will be used for in the cultural evaluation stage. In this way, conservation in historical environments is done in order to prevent the architectural structure, which is a reflection of the social, cultural and economic circumstances of the society in the past, to prevent it from being defeated by the changing social and economic conditions of today and to live by integrating it with the modern society. This decision is based on the importance that the desired structure of conservation belongs to the historical document quality, the old character and the aesthetic value. Traditional constructions in historical environment may become unable to respond to the needs of time-changing society. Within the needs of modern society, these structures may lose their original functions, or structures may be functionally obsolete. Re-use for architectural structures that are not used for various reasons and abandoned allows them to continue their existence in society for another purpose. In addition, re-use is seen as the most economical and easiest way to accept the collection. The most important point in re-use is that the structure determines the new function, whether it is suitable for the structure, and whether the new function meets the needs of the community. A new function that is appropriate to the structure and responds to needs allows the structure to maintain its existence for a much longer

period of time. Incorrectly determined functions cause the construction to shorten its life further, or it can cause damage that cannot be rectified to the structure. Within the scope of this study, Celal Street which is located in Konya Province, Karatay District was examined. Celal Street which is defined as Konya Historical City Center is located right next to Mevlana Dervish Lodge which is one of the two most important urban focal points of Konya Province. This environment, which is located in the residential area during the traditional period, is now transformed into a commercial and tourism functional area. For this reason, traditional buildings, which are located in Celal Street and used as housing at the end of the 19th century and early 20th century, have been re-used with the understanding of sustainable protection within culture and history tourism. With the literature survey and in situ photography study conducted for the study, conservation and renewal studies for traditional touch sustainability and reworked structures have been evaluated and it has been questioned whether the structures respond to space needs for collecting through their new functions.

**Key words:** Change, conservation, Konya, re-functioning, sustainability

# Cultural Capitals of Europe, Islamic World and Turkish World in Context of Urban Contribution

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## ABSTRACT

Providing the development of the cities is not only possible by making places that strengthen the economic, social and political structure of the cities but also by the development and protection of the cultural heritage. As expressed by Ruskin Keleş in his work entitled "On Urban and Culture", the perception and understanding of urban culture as an artistic and cultural activity of the municipality's theater representations, exhibitions, book fairs, folklore performances and the like these is an inadequate and incomplete understanding of urban culture. In addition to urban culture, art and cultural events taking place in the city, it should be defined as dynamic accumulation which also includes the society and the experiences that make up the social structure of the city. For this reason, urban culture has a characteristic which causes changes and transformations on the political, economic, cultural, social and administrative areas of cities through micro scale to macro scale.

Today, globalizing cities are trying to maintain this process, not only by their own means but also in the structure of international organizations, in order to protect and develop their cultural heritage and contribute to city tourism and economy. Therefore, the programs of cultural capital established by international regional organizations in order to increase membership and to discover cultural richness among the members provide an important opportunity for cities in this sense. Among the most known and prominent of these programs are the European Capitals of Culture program run by the European Commission, the Islamic World Cultural Capital program run by the Islamic Education, Science and Culture Organization (ISESCO) affiliated to the Organization for Islamic Cooperation and Turkish World Cultural Capital program run by the International Turkish Culture Organization (TURKSOY). In order to understand what the concept of cultural capital is in general and how it contributes to the development of the city, it is important to understand the working dynamics of these three international organizations.

In this study, it was planned to discuss how these organizations are conducted, what they are aiming for and how they contribute to the city. It is also aimed to introduce the contribution of the culture to the city through international organizations and how these organizations carry out these processes through the concept of cultural capital which is considered in the scope of the study. In this respect, answers will be sought in terms of the European Culture Capital, the Islamic World Culture Capital and the Turkish World Cultural Capital, which are determined by different institutions in terms of what the concept of the cultural capital is, how it is selected, how the election processes are and how it is the cultural capital.

In the study, literature review, resource collection method will be used. It is aimed to obtain data through the evaluation of available resources on the subject of research with this method. A lot of written resources will be used in the study, especially the related institutions such as European Commission, ISESCO and TURKSOY for information sharing through electronic and digital platforms and books, articles, institutions related documents and reports for the theoretical framework of the subject.

When the European Culture Capital, the Islamic World Cultural Capital Program, and the Turkish World Cultural Capital Program were examined, the following conclusions emerged from the findings of what was the concept of cultural capital, how it was conducted, what it was aimed at and what contribution it had to the city.

It is possible to say that the European Capital of Culture program is an institutional structure, since it has been in existence since 1985 and there are reports published after more than 50 countries have been awarded and the elections have been objective starting from 6 years ago to include certain criteria (https://publications.europa.eu/en / publication-detail / - / publication / 658e3186-7d3e-11e5-b8b7-01aa75ed71a1, 19.05.2018). On the other hand, the Islamic World Cultural Capital Campus program is being implemented in three different cities (Arab, Asia and Africa) in the same year and is addressing the widest area. Since 2005, 43 cities have been awarded including 2018, with the standard criteria, and lastly, the fact that ISESCO and the chosen country's executive calendar together constitute the institutionalization of this program (https://www.isesco.org.ma/capitals-of-islamic-culture/, 19.05 .2018).

It is possible to say that the Turkish World Cultural Capital program is in need of development according to the election and execution processes because of the fact that the it is a new program that started in 2012 and the long term preparatory work can not be done due to the election process so that being determined a year ago and the candidate countries are determined not by the predetermined criteria but by the votes of the representatives in TURKSOY Permanent Council, (www.turksoy.org, 19.05.2018).

On the other hand, the European Commission's financial support for selected European countries, the support of ISESCO in the process of selected cities, the assistance and investments made by selected cities at the central government's own budget, and the increase in tourism income coming to the city of culture, emerging as elements of developing the cities . Being a Cultural Capital as stated in the European Capital of Culture program reports; renewing the cities, making the international profile of the cities more qualified, developing the image of the cities in the eyes of their residents, giving a new life to the culture of a city and enabling development tourism (https://ec.europa.eu/programmes/creative-europe/actions/capitals-culture_en, 19.05.2018).

Ultimately, it was determined that the European Capital of Culture and the Islamic World Cultural Capitals programs are more institutionalized and that the Turkish World Cultural Capital program is a new but open to development, and it is also determined that being the Cultural Capital is an opportunity to develop the cities.

**Key Words:** European Capital of Culture, Islamic World Culture Capital, Turkish World Culture Capital

# Housing Development Administration within the Scope of Strategic Communication Management

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## ABSTRACT

The change-transformation process is still continuing in the concept of Public Administration as it is in every area today. It can be said that this process supported by the development of democracy as well as technological innovations. According to this, the flow of life is faster in the world, and the transportation of information is easier. As a result, people are demanding faster and more transparent service reception in each area. This demand is a demand for the public sector as well as for the private sector. Governments have also endeavored to put forward measures to increase the quality of service with the private sector in order to stay behind this demand. The implication is that understanding of New Public Management arose with the neo-liberal ideology that emerged in the 1980s by supporting “optimal state” concept, which proposes a structure in corporate mentality that sees the citizen as customer by targeting carry out government with the logic of the private sector instead of the bulky, dysfunctional state organization and the concept of "state-market partnership" that governance brings to this understanding (Güzelsari, 2004: 20) and postmodern approach supporting mechanisms which citizens are involved in their decisions with advocating the need for the state to take more accountable and transparent activities.

This mentality has found its life in Turkey, especially in the last 15 years that the privatization process, build-operate-transfer models, the e-government applications, the right to information has increased very much up in various ways. One of the examples of this understanding is the Presidency of the Housing Development Administration (TOKI), which shows itself in the housing sector of the city. The presidency is obliged to keep up with the needs of the age as much as it is in terms of structure, in terms of marketing, because it serves an area where the private sector also exists. For this reason, strategic communication management has a separate proposal for TOKI as a mechanism for notifying the organization of the organization and services, as well as for informing the target audience about the services.

In this study, it was aimed to analyze the Chairmanship of Housing Development Administration as an application example of strategic communication management in line with the aim of providing more transparent and more efficient public service which the new of postmodern public administration principles desire. Being only organization providing services at the residential sector that both the private sector and public sector operates in Turkey with the opinion of "state-market partnership" has played a role in this.

In the study, answers will be searched for the questions about the elements of Strategic Communication Management that how target group and the effective channels that the messages go through according to the target group determine and the most important the mechanism that controls whether the messages reach the target group correctly at the end of the communication process determined, by the Mass Housing Administration.

Literature research will be used in the study by resource collection, evaluation of the available resources and interview method. In the study, at the theoretical framework of the subject many written sources, especially books, articles, institution’s related documents and reports, and

information sharing of the institution's through electronic and digital platforms will be used. In addition, information on the basis of interviews with the authorities of the institution will be used.

As a result of the study, it is understood that TOKİ conducts a strategic communication process that use a wide range of mechanisms from the e-government to using all channels from traditional media and social media to other communication environments like communication campaigns. Nevertheless, the fact that some information, especially the current annual reports, is not shared with the citizens is a staple to be addressed.

When analyzed in terms of new public management , TOKI's selection as Super Brand as a single Public Administration in Turkey by leading independent brand in the world metering program Superbrands's 2016-2017 Turkey in determined as a result of a consumer research (www.toki.gov.t is, 5/19/2018) proves it is a successful example in the sense.

**Key Words:** *Housing Development Administration (TOKİ), New Public Management, Strategic Communication Management, Target Audience, Feedback*

# CITY - MIGRATION - TRANSFORMATION

# A Critical Evaluation on the Economic, Social and Environmental Aspects of "Urban Transformation" Practices

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**ABSTRACT**

Cities as heterogeneous, complex and dynamic systems; undergo a spontaneous transformation or consciously subject to an alteration and formation under the influence of some social, physical, economic, environmental and ideological factors. The transforming city, at the same time, affects the environment and the urbanites, changing the daily life and the habits. As Harvey emphasizes, the space has a nature that is shaped both by human being and also that shapes the human being by social aspects. Any alteration and transformation that takes place in the context of the city can increase the quality of life by making the built environment more sufficient; or it can negatively affect the activity of life in economic, social, cultural or environmental aspects. According to urban scientists, from the past to present, the irresistible profit making instinct of the capital plays an important role in producing and transforming the socio-spatial formation of cities, despite all destructive and destabilizing social and environmental consequences. "Now the cities are managed with supply-oriented and income-centered urban policies for the reproduction of capital and with the urban expansion and transformation processes required by these policies instead of being managed in accordance with long-term and well planned development projects, demand and needs estimated for different segments of society." The transformation of today's cities and the role that architects and city planners play in mediating these transformations, constitutes the crux of the problems and the oppositions that are present in today's urban and spatial context. In this regard, the practice under the name of "urban transformation", which has been on the agenda of local and government administrators for many years, as a policy of urbanization, has become a matter of debate and a problematique. Under the influence of neoliberal policies, the practice of urban transformation, which is carried out only in the context of the economy, omitting all other features of the space, has caused radical changes in cities and urban life, and has had a devastating effect on the built environment and urbanites. In this study, it is aimed to develop a critical perspective on the cities and urbanization conception that change with the occurrence of urban transformation. Also it is intended to reveal the realities behind the urban transformation practices by evaluating its economic, social and environmental aspects through examining the literature and referring to various examples around the world. The concept of urban transformation is described in its most general definition as "actions and strategies to improve the economic, social, physical and environmental conditions of the urban spaces which are at the point of collapse and deterioration". This concept, which is a necessity for healthy and qualified cities, is regarded as an investment tool in today's society and it is being used as a strategy based on income. Economically inert regions, inhabited by low-income residents are taken from the hands of their inhabitants under the pretext of gentrification, revitalisation, etc. And also; abandoned, not earthquake resistant, depressed areas, are turned into new centers of attraction. In the meantime, the poor community of the city is discarded out of the city. As a result of neo-liberal urbanization strategies such as attracting

investment to the cities, creating brand cities and marketing cities themselves; large-scale urban projects, in which a quality of life that benefits the elite is encouraged by cultural facilities and services for luxurious consumption, prevails in the cities, in a way which is far beyond the realities of society. Flashy investments such as shopping malls, residences, hotels, business centers, sports and entertainment centers are being conducted in accordance with special benefits by capturing urban centers. These exclusionist urban spaces are introduced through environmentalist discourses such as "urban village", "eco-friendly", "inside of the green", "ecological", in addition to the discriminating discourses like "privileged", "sterilized", "luxurious". In a society that is aware of spent resources and develops environment-oriented strategies in the field of construction, these projects put on the concepts of "sustainability" and "environmental awareness" as a mask and use these concepts as a marketing and sales policy, without an integrated approach, with only a point solution and segmental applications. These projects, emerging in socially unfair and environmentally harmful ways, foster both social and spatial desintegration, class discrimination and environmental destruction by seizing our living spaces under the name of urban transformation. They also harm the history and the identity of the city, as well as the recollection and the sense of belonging of the urbanites. Criticizing urban transformation practices which has no social and environmental sustainability becomes important in terms of evoking the notions of "right to the city" and "human rights". It is necessary to emphasize again that everyone has the right to live on equal conditions in qualified environments. Cities that are becoming more unplanned and more similar in the cycle of urban transformation are numbing and stressing people out, every day a bit more. In order not to ignore the real problems of the city and the urbanites anymore, it is necessary to give the urbanites the right to speak for their cities and also it is needed to explore the ways in which the urbanites involve directly to the decision process and the transformation of urban spaces.

**Key words:** Urban transformation, criticism, right to the city, neoliberal policies, sustainability

# Usability of the International Sustainable City Models to Obtain the Urban and Environmental Transition, Transformation and Authenticity of Turkish Cities

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**ABSTRACT**

Today, environmental problems, especially climate change, are at the top of the world's agenda. The main reason for this is the nature of the problems that do not depend on the boundaries of the country or region. Especially global warming threatens all living and non-living beings in the world and results in very serious consequences such as melting of glaciers, rise in sea level, reduction of fresh water resources, changes in food production conditions and disasters such as floods, storms, temperature fluctuations and drought which lead to increase in deaths. It is inevitable that many plants and animal species will disappear due to extreme weather events. Another negative consequence of poor nutrition and unhealthy environmental conditions is that diseases will spread among people and other living things. Beside them, climate change has economic impacts.

The climate change experienced in our century is also referred as 'anthropogenic' (human-induced) climate change, because greenhouse gas emissions that cause climate change and other environmental problems emerge as the result of human activities in the cities. Therefore, it is important to focus on the cities, where human activities are concentrated, for success of the efforts carried out by the international community in the fight against environmental problems, especially against climate change.

Different countries, international associations and international organizations produce sustainable city models and criteria to find solutions to the environmental problems and to create more liveable urban spaces, to protect the natural environment, to ensure the continuity of ecosystem services in these urban areas and to solve the economic, social and cultural problems that arise in the growing cities. Although the convergence around these common goals, different sustainable city models and criteria have shaped according to the place of those models were designed, the problems in the urban areas or the priorities of the country or establishment that produce the set of criteria.

The aim of this study was to assess the usability of sustainable city models particularly in Turkey cities for the solution of environmental problems, including climate change, and evaluate the usability of them to provide necessary transition and transformation in urban areas and support the Turkish cities to find their authenticity.

Within the scope of the study, firstly the sustainable city models were investigated generally and the approaches and criteria of the environmental, cultural, economic and social aspects of the

models were researched. Then an evaluation was made to find an answer the question whether these models have usability to provide the necessary contribution for transition and transformation of our cities and to find solutions to current problems or problems likely to occur, and the applicability of these mentioned models in Turkish cities to resurrection the authenticity of them. As a research method in the study, the data required for the solution of the research questions were gathered from the related sources and the method of interpretation and evaluation were used together.

In line with the stated aim an evaluation was made and it was found that considering the special conditions of Turkey, these sustainable city models can provide important contribution to the creation of the sustainable urban and natural environment by means of the selection of suitable criteria and developing them considering the local conditions. The way to reach sustainable cities in today's conditions is creating a participatory approach which aims integrated management of natural resources influenced by environmental problems especially by global warming, ensuring the usage of the local energy resources, providing the technological infrastructure for eliminating the concept of waste, conserving the cultural values, creating the intelligent transport and infrastructure facilities and identifying all necessary strategies and policies considering local conditions and adaptation.

**Key words:** Sustainability, city models, climate change, environment, locality.

# Can Sustainable Urban Transformation Sustain in Turkey?

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**ABSTRACT**

The augmentation in resource consumption after Industrial Revolution, and the environmental issues that it caused, did not draw attention until 1960's. The rapid increase in population and the inability to provide the needs of this new population has caused irreversible effects on the environment. In 1960's, the damages that were done in the environment started to be understood, and the new protective approach, later on started to state that the Earth was running towards an apocalypse, and that the humanity would destroy the world we live in, and eventually itself, unless there will be an intervention.

In 20th Century, with wars and economic depressions, economists gave priority to subjects such as preventing unemployment or increasing the production. With this understanding, the damages done in environment were put in background. Environmental awareness that started in 1960's has started to draw attention in 1970's. With the reports that were prepared, and the conferences that were held, the damages were put forward. This situation encouraged both the academicians and the policy makers to discuss and find solutions about the future of the world. United Nations Conference on Human Environment that was held in 1972 has included the rights of future generations to resource usage. Again, in the same year, the term "sustainability" that started to be discussed after "The Limits to Growth" report of the Club of Rome, which argued that the resources of the Earth would come to an end in a recent future, has become important in the entire world with the Brundtland Report, and the countries have started to work on how they could transfer the resources to the next generations, and leave a habitable world, when preparing their development policies. With 1990's, the term sustainability has started to be mentioned in many fields (sustainable agriculture, sustainable energy, sustainable food). Again, in these years, the urban transformation projects highlighted sustainability. With the recognition of the negative impact of carbon emission and the damages that the cities make in environment, discussions and researches about what cities can do about this issue has gained speed. Regarding sustainable urban growth and sustainable urban transformation that comes with it, studies has started to be held about reducing the environmental damages. It gained importance to conduct urban transformation projects in regard to sustainability principle. It carries major importance for the future to shape the urban transformation projects that are planned in a way that the materials used in the projects would not harm the nature, and the land usage, infrastructure and settlement types would address all sections of the society, so that the city would comply with the environment. Regarding the three dimensions of sustainability, which are social aspect, environmental aspect and economic aspect, would provide a chance for the cities, which are a part of environment, to fulfill its duty in sustainability, with transformation practices that are more livable, equalitarian, and in which participation in the process occurs more.

This study analyzes the urban transformation projects in Turkey, in terms of sustainability, and to show how much of these projects can be defined as sustainable. It will demonstrate if these projects are really conducted compatibly with the spirit of sustainability, or if they are prepared only mentioning this term. Urban transformation projects will be elaborated, and the problems in the compatibility to sustainable urban transformation principles will be detected. Solutions will be developed for these problems. Furthermore, the compatibility of "zoning amnesty" regulation, which is in the focus of the recent discussions in Turkey, with Law no. *6306* on Transformation of Areas under Disaster Risk from Perspective of Public Spaces, will be discussed. The situation caused by the law that came into force regarding the danger of disaster (earthquake) on one hand, and "zoning amnesty" regulation that is currently prepared on the other, will be analyzed.

**Key words:** Sustainability, Urban Transformation, Zoning Amnesty

# Investigation of the Alienation of TOKI Residents; Example of Şırnak Yenimahalle

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## ABSTRACT

When the housing policies for the low income in the world are examined, it is seen that certain regions have different developments and changes because of political reasons, population increases, migrations, etc. Accordingly, housing presentations and housing policies also showed differences. Housing is %95 of the production of structure in Turkey. The housing problem is one of the most important problems in our country. Rapid population growth and the great pressure of the rural-urban population movements have resulted in numerically significant housing disadvantages. On the other hand, it is also evident that the quantitative shortcomings of mass housing settlements and their surroundings realized in various ways in order to close the housing vacancy.

Today, Turkey's Mass Housing Administration which is quite dominant in the housing market is performing very serious work to close the numerical housing deficit. Recently, it cannot be denied that there has an important way to close housing vacancies, especially for lower and middle income groups, as can be seen.

Since the year 2000 in Turkey as an institution that plays an active role in the cities it can be seen that TOKI has investments in different areas in the city as the construction of stadiums, student residences, hospitals, public buildings. However, you are not aware of the life in these houses if you or a close friend is not living in these houses. TOKI houses create a living space that comes later or does not come to mind.

Within the scope of the study, Yenimahalle TOKI houses of Şırnak, a less known face of the city, are considered. The aim of the study is that, unlike the literature on TOKI housing, the class of civil servants who come from outside the city and are foreigners in the city do not have any alternatives other than TOKİ in the development of the city and do not get acquainted with the city for various reasons, is to reveal the state of alienation.
First of all, a detailed literature search was made about TOKI concept, establishment purpose and studies. Later, information about Şırnak province, which is a research area, was given. Finally, Yenimahalle, which consists of 16 blocks covered by the study, was selected as the 13th block

sampling group within TOKI houses. A questionnaire consisting of 3 sections were conducted between December 12 and 25, 2016, which is a data collection tool based on volunteerism of 80 people in 54 branches with 13 blocks. In the first part of the questionnaire; questions about the personal information of the participants, in the second part, Likert scale of 5 alienation of the neighbourhood and city; in the third chapter, questions about alienation in human relations were asked. The analysis of the questionnaires was done in SPSS 22. 0 package program. As a result of these analyses, graphs showing a number of percentiles were created.

As a result of the evaluation of the findings, it was seen that the majority of the survey participants were not happy in the environment; they did not talk very much to other people and they had the problem of alienation to the environment in terms of human relations.Moreover, in the simplest sense, this situation has led to the desensitization of groups that are not aware of each other. This resulted in a social environment in which alienation and intolerance developed by the loss of social reconciliation and tolerance. This situation is increasingly threatening to lead to conflict. As a result, it is thought that TOKI housing should be built away from the city and not serves only a certain number of people.

**Key words:** TOKİ, Şırnak, alienation, officer

# An Assessment on the Transformation Processes in Port Cities: An Analysis of Hamburg HafenCity and Rotterdam Kop Van Zuid Waterfront Regeneration Projects

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## ABSTRACT

Port cities have differed from other cities due to their geographical and physical characteristics. Despite the authoritarian spatial power of the Agora in the center of the city-state in ancient Greek settlements, the port area of the city has shaped the city life as an economic and commercial center. Port cities have been characterized as, the cities in which port identity is the predominant factor, which shapes economic, commercial and social activities. In these cities, port activities have the founding role in terms of spatial organizations, transportation systems and other settlement decisions in their historical background. Port cities react in the fastest way to the economic and technological developments, so these cities are experiencing constant change and transformations.

This study aims to reveal the processes of HafenCity and Kop van Zuid waterfront regeneration and urban mega projects in two of Europe's most important port cities; Hamburg and Rotterdam and the impacts of these projects on urban space. These two port cities, which also take place in the list of global cities, are selected because of being affected by the changing economic and technological conditions, having the urban spaces transformed rapidly and being evaluated as laboratory sites that famous global architects and designers showed their architectural practices.
The port areas, which were the economic and commercial centers of the cities moved to remote areas away from the city center as a result of the changes in the industrial production processes and developments of port technologies in the 60's. As a result of these developments in maritime and transportation technologies, the necessity of constructing new harbors far from the center has caused the port functions in the city center to disappear. The old harbor areas, which contain the city's industrial heritage and which are the threshold spaces providing the connection of waterfronts areas with the city center, have turned into abandoned brownfields areas. These areas, which threat the safety of the cities increased or decreased port activities, are seen as potential areas that can be evaluated for the cities racing in the global market. Abandoned port areas have formed a basis for urban transformation to generate suitable areas for mega urban transformation projects, to create a new urban image in the global race, to take place on a global scale, to strengthen the urban economy by creating points of attraction for investors and visitors, to solve the unemployment problem by creating new jobs, to empower the social structure by creating living urban spaces. These regions also offer convenient locations for global cultural-art activities

and create urban spaces with perceptibility, accessibility and visibility for iconic structures that enhance the attractiveness of cities.

The port cities of Hamburg and Rotterdam that are at the center of the transformation projects due to their spatial and functional diversity have been chosen as the application areas for mega projects. The waterfront regeneration projects in two most important ports of Europe, the transformation processes of these port cities and the effects of the transformations decisions on urban space in these cities constitute the scope of this research. In this study, the Kop Van Zuid Project, which is implemented in 125 hectare-area and aimed to provide a connection between the city center (north) and the old port area (south) located along the shores of the Maas River and another Project, HafenCity, which is implemented in 157 hectare-area in the largest second port of Europe; Hamburg, aimed to provide a connection between the city center and old port area, which is the largest inner city urban transformation project in the world will be examined comparatively. It is conceived that by analyzing the common and differing aspects of these two projects, the implementation processes and the effects on the urban space, an evaluation for the restructuring processes of many port cities in transformation could be executed. Port cities Hamburg and Rotterdam that were at the center of transformation have been chosen as the application areas for mega projects owing to their spatial and functional diversity.

This study aims to reveal the causes of mega-urban transformation projects in Rotterdam and Hamburg, the actors involved in these processes and the relationships between actors, the phases of the projects, and the spatial uses of urban waterfront areas before and after the transformation. In order to do so, reports, assessments, project data, urban development and strategy plans of waterfront regeneration projects will be examined and analyzed. The obtained data, positive and negative aspects of the projects, similarities and differences, effects and project processes will be evaluated comparatively. As a result of this analysis, in the restructuring processes of the port cities, it is planned that the roles of actors, the processes of design and implementation processes will be examined and the effects and aims of the waterfront regeneration projects will be deciphered.

**Keywords:** port cities, Kop Van Zuid, HafenCity, urban mega projects, waterfront regeneration

# A Global Change: International Mass Migrations and Cities Under Risk

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## ABSTRACT

Cities in the 21st century; besides the natural population growth and internal migration from rural areas to urban ones, have been under the influence of international mass migrations for some reason such as wars, conflicts, tensions, etc. Especially the cities of the developing countries which is close to the conflict regions geographicaly, have started to face the problems caused by urbanization on the one hand and the unplanned, uncontrolled and intense population increase due to the mass migration flows on the other side. As a result of global change, this situation is a catalyst for fast and distorted urbanization. Rapid and crooked urbanization problems are getting diversified and deeper, bringing cities with various risks. Today, some of the risks that cities face have come up with the need for a global transformation beyond being solved by measures at the local and national level.

Purpose of the study; is to examine the risks that are caused in the cities by the international mass migrations that emerged as a result of global change. One of the questions that the study seeking for this purpose is whether the change in the international system has an effect on the migration movements or not. In order to answer this question, the relationship between the changes in the international system and the mass forced migration will be examined. Then the changes that mass migrations bring to the cities will be examined, either. Another question that needs to be answered in the study is whether globalization has an impact on the population of cities. To answer this question, globalization and urban relation will be examined. Finally, it will be analyzed with a holistic view centering on the "change in the international system and the mass migration relation" and the "globalization and urban relation" in the cities, and the risks that the cities face will be evaluated with social and spatial dimension.

A descriptive research method will be used to investigate the cause-effect relationships between the subject-matter relationships in the study. The theoretical background of the work is based on the "Push-pull" theory developed by Everett Lee from migration theorists and the basic predictions of urban sociology theoreticians of Louis Wirth's "Urbanization as a form of life". Lee (1966) has developed the "push-pull theory", which emphasizes the impact of immigrants' driving factors on the settlement site they live in and the attractiveness of the settlement site they want to live. The target location of the international mass migration movement, which takes place with the intense influence of the push forces of the country/region they live in, is the cities in the countries that are immigrated. The influx of immigrants to these cities affects the size, density and homogeneity of the population in the cities of the host country.
At this point, Wirth's (1938) three key features of urbanism are gaining importance. These are the size, density and heterogeneity of the population.

According to Wirth (1938), the intense increase in the number of people living in a settlement affects the relationship of the urbanites with each other and with the city. According to Wirth (1938), the increase in the number of people living in a settlement affects the relationship of the urban people with each other and with the city. The increase in the urban population constitutes an infrastructure for social differentiation. The density and heterogeneity of the urban population cause the social structure to become complicated.

As a result; mass migrations caused by the regional instabilities experienced as a result of the changes in the international system put cities at various risks under the influence of the phenomenon of globalization. These risks can be realized in the spatial dimension as well as in the social dimension. The formation of different living spaces in the cities and the coexistence and work of the communities with different cultural characteristics in the same settlement provide multiculturalism from one side and cause competition and power relations between individuals and groups from the other side. Immigrants nowadays have become a reality of the cities. For this reason, measures are needed to reduce the effect of mass migration on the rapid and crooked urbanization of cities.

**Key Words :** Mass migration and cities, cities under risk of migration, globalization, migration and cities

# An Eternal and Literary Turnback Story from Urbanization to Counter-Urbanization

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In today's global hegemonic world, the city is now characterized by different arguments: the persistence of intensive migration, unplanned urbanization, the continuation of the dominance of the urban fringe, economic crisis, the marketing of the city as a commercial commodity in the global arena, and so on. Increasingly urban and urban areas are becoming not only the areas of concentration, agglomeration and rising, but also the subject of a continuous process of change-transformation from social, spatial, economic, environmental, technological, legal and managerial aspects, etc.

On this spiral, people who can not meet the needs, demands and expectations that the city can not find an answer are naturally moving towards the edge-cities or suburban areas, which are more attractive for them. This mobility action is sometimes carried away further away from the city as a vital necessity, beyond the pastoral longing that is a keeper or a prairie.

The escape from the city was once subjected to a force of recoil right from there (the village or the countryside), the entropy of which has served as a place-pulling force. The city, where parents have to migrate, is now a difficult place for children to live, hard to work, and a hard place to come and go; there is only one possibility for the aging parent now, to retire and return to the land that attracted them, like as Alamancılar. The city is now a dystopian place for them.

For second generation children it is not so easy to return. Urban and urbanization has been habituated to the blood, it is not easy to leave it. The new place to go is not a village, it is a place that is similar to a dog but is also a city. In this way, both the parents will be happy, they will be mysterious with the soil, and the children will not be disconnected from urban life. The name of this place is utopian, both urban and rural, both outside and inside of the city.

There is a return of reasons such as decreasing proportional increase in proportionality, lack of attractiveness of rural production, lack of possibilities such as education, work and health, attraction of the city, but this return is not from city to city (not even from city) it is seen that the urban area rushes towards the urban-rural areas (rurban) adjacent to the rural area of the city's periphery, and as a result these interfaces are under the pressure of urbanization. As a result, there is another metamorphic situation called disurbanization.

The aim of the work is to explain the situation of the person between the push of the city and the pull of the rural both in theoretical and literary relation. The main question of the research is precisely this: If the city and the rural are united, what kind of life do people follow? What kind of entropic place does the contradiction between urbanization and counter-urbanization create for man?

In this study, the story of rural and urban urban-rural unity or rurbanity between urban and rural is being resolved from different point views and this story will question the extent to which the urbanization pressure extends. This shows that the people who attract the people of the city can not be urbanized (and maybe they can not urbanize) with a structure called counter-urbanization, not that they are not actually degraded. At the end of this process a spiral contuinity occurs and repeats itself over time.

**Keywords:** Urban, urbanization, counter-urbanization, transformation, migration

# Reconstruction in Historical Texture: Odunpazarı Historical Urban Site

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## ABSTRACT

Historical texture is a living organism maintaining its sustainability. While trying to respond to developments and transformations in time, it also tries to maintain its historical identity. In an attempt to sustain the historical identity of cultural heritage that constitutes the historical texture, reconstruction practices in recent years are being discussed by conservation discipline.
Not only the natural disasters like earthquakes, fires and floods, but also wars, economic, political and socio-cultural developments and changes, unplanned urbanization in the historical area, unconscious development and ruinous state of housing result in reconstruction practices. The objectives of this study are to summarize the concept of reconstruction within the framework of conservation approaches, to determine in which cases reconstruction decisions are made, to evaluate reconstruction practices and to specify key points in appropriate reconstruction implementations. While having an important role in the formation of urban and cultural identity of Eskişehir, owing to its historical and traditional texture, Odunpazarı has become a depressed region of the city due to the facts that low-income residents have taken the place of the original ones and the physical condition of the structures is poor. However, recently Odunpazarı Historical Urban Site has become one of the social activity centers offering various functions to people by means of street rehabilitation projects structured by the Municipality, regulations for Conservation Oriented Zoning, activities performed within the context of Eskişehir 2013 Cultural Capital of Turkish Worlds, and indexed by UNESCO Temporary Cultural Heritage List. In this study, to form a basis to review and evaluate the reconstruction practices in Odunpazarı Urban Site, twelve buildings have been selected. The selection was accomplished by performing a search through the decisions of Regional Council for the Conservation of Cultural Property in Eskişehir by the keyword "reconstruction" in between 2014 and 2018.To achieve the purpose of the study, first, the literature review about the concept of reconstruction within the framework of international protection approaches is given. Then, the definition and scope of reconstruction indicated by Resolution 660 of the High Council for the Conservation of Cultural and Natural Property is examined together with the Law No. 2863 on the Conservation of Cultural and Natural Property in Turkey. Afterwards, the examination of selected twelve buildings through their files is performed. That examination consists of the following items: parcel knowledge, registration date and number of structures, application-petition-reports about structures, ground of reconstruction, reconstruction report reasons together with date and existent projects (photo album, measured drawing project, report and details, material analysis, deterioration sheet, restitution project and report, period sheet, reliability legend, reconstruction project and change of function). Obtained data is tabulated and

analyzed to evaluate the reconstruction practices at Odunpazarı Historical Urban Site in between 2014-2018. Analysis results indicate that, structures decided to be reconstructed are either ruined because they are abandoned and unused or classified as “danger of collapse”. It is revealed that measured drawing projects of such structures were not prepared properly and they do not have restitution sources. Therefore, not qualified and inaccurate details were found in the reconstruction projects. Furthermore, avoiding the analogies, it is also discussed how a proper reconstruction implementation should be performed to ensure that structures are transferred to future generations. Accordingly, suggestions about what should be done before and after in the case of “danger of collapse” are presented. Apart from previous studies that generally focus only on one single building, the current study investigates the entire historical texture of Odunpazarı Historical Urban Site. It is believed that the outputs of this study, regarding reconstruction decisions and practices, serve as a basis to solve problems faced with reconstruction applications, to adopt academic point of view and to provide the sustainability of structures without losing their historical identity and originality.

**Keywords:** Reconstruction, danger of collapse, documentation, restitution, Eskişehir.

# CITY - SPACE - TRANSFORMATION

# The Effects of Vitalisation of Idle Urban Spaces Through Urban Activism to Urban Environment: "Kıyı Köşe" Competition Projects

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## ABSTRACT

Built environment and society interact with each other. Social changes in a society effect socio-spatial disciplines like urban planning, architecture and environmental design. One of these social changes is being an active user of an urban space. The increasing number of user participation in design disciplines has also effected turkish society and urban design in Turkey.

Some organizations such as "Architecture for Everyone", "TAK Kadıköy" and "TAK Kartal" were established to support the users' participation. TAK Kadıköy and TAK Kartal opened competitions called "Kıyı Köşe" for idle urban spaces to make them alive with creative ideas.

Since then, three of this competitions for Kartal district has been realised. The last one named "This Corner is Ours" designed by Paradox Studio was completed in June 2017 on Kordonboyu Neighborhood. The studio came with the future users together to design city furnitures to vitalise the specified idle place, so that the users will embrace the place after construction and they will be satisfied with the design and its environment. The second project completed in June 2016 by DGA Architects. This space is on a dense area on Tarım Street, surrounded by Yakacık Tax Office and Doğuş Otomotiv Showroom. It serves to citizens who visits the Tax Office and have to wait there. It was also intended to create spaces for art performers and portable commercial units. And the first project applied were the stairs on Yunus Neigborhood, Bereket Street.
The author questions as follows:
*Participation:* How this participatory processes continues; how they effect the design and its environment; what are the advantages and disadvantages of this kind of participation methods;
*Selection:* What are the criterias for the selection of this idle spaces; how does the selection of the idle urban spaces effect the usage;
*Intention:* Did the process and the result occur in the way the designers intended; if yes, what made it successful; if not what are the reasons of the failure;
*Urban Space Quality:* Have the projects effected the usage of urban environment; the quality of the urban environment.

The method of this research is first of all collecting the data from printed and digital resources. After collecting the data, the researcher analysed the project space as an observer, then as a user and conducted interviews with other users. Researcher also made interviews with the staff of TAK Kartal and with the designers of "Kıyı Köşe" competition projects to be able to superpose the results.

The aim of this study is to inquire the effects of vitalisation of idle urban spaces to urban environment and the user's satisfaction with regard to urban space quality. Successful examples from Europe will also be discussed to be able to compare them and to be able to be aware of other realised projects. The researcher has indicated that the process of users' participation has less effects after construction but nonetheless the projects have effected the urban environment positively.

**Key words:** Urban activism, participatory design, urban space quality, user satisfaction.

# Post-Use Evaluation of Urban Transformation Areas: Bingöl Example

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## ABSTRACT

Population growth experienced since the mid-20th century city in Turkey and rapid urbanization are larger. This growth continues unqualified with migration. Along with this increase, the need for housing to accommodate the growing population of the cities was born. In the direction of living urbanization process, low-storey houses were replaced by multi-storey residential areas and settlements. The need for conversion has arisen as a result of the problems that arise from the need to resolve the need for peace in a short period of time. In 1990s, the effects of globalization began to be more visible in our country. In the years after 2000, urban transformation is now taking place in the law. As mentioned in the study of "A Method on the Provision of Urban Transition User Participation in Resolving the Housing Problem" of Kaş in 2014, the urban transformation as mentioned in the study of Konya; in the slum areas, in the urban centers, in the areas where the industrial areas leave the urban centers, and in the areas of disaster damage and urban risks.

Urban transformation projects usually take place in big cities in Turkey, while reviewing smaller and emerging applications such as urban Bingol generally remain off the agenda. As in all the others, urban transformation projects are becoming increasingly common in Bingöl. Urban transformation in Urban transformation in Bingöl started in areas where structural, infrastructure and superstructure problems arise.

The purpose of this study is; In Bingöl, it is aimed to reveal the urban change that occurred in 1971 and 2003 after the earthquake, the transformation in the physical environment and the urban transformation that took place in the city universally, and also to evaluate the performance levels of the houses in the İnönü Neighborhood Urban Transformation Area according to some criteria and to determine the user satisfaction. Earthquake dwellings were built in İnönü District to place earthquake victims after 1971 Bingöl earthquake. Over time, the settlement area of the buildings began to become uncomfortable. User dissatisfaction has begun to emerge in Inönü District which has gained the appearance of slum neighborhood. Thus, a new settlement area was constructed with TOKİ business association in the region. The post-conversion changes made in this area, where user dissatisfaction occurred before, and the satisfaction levels of users are also a matter of curiosity. The areas suffering from the disaster are continuing to be transformed in this way in Bingöl. This study is important in determining how healthy the continuation of this will be and also in terms of increasing the design quality of the houses to be built. As a result of the study, users will be evaluated in relation to the building. As a result of this evaluation, information about the functional, technical, aesthetic and behavioral performances of the houses in the transformation area will be obtained.

In the study, first a number of source searches, literature and archival research will be done. The literature part of the study will form the post-use evaluation method and urban transformation concept. The dissertation examples will be examined and the data will be collected. In line with the aim of the work, the authorities will be interviewed and detailed information on the urban transformation area will be sought. Karagenç, 2002 "Evaluation Model for Symbolic Performance in Mass Housing Areas" and Korkmaz, 2006 "Post-Use Evaluation of Mass Housing in Diyarbakır and Şanlıurfa: A Comparative Analysis" . The conversion area will be examined using this method. In Preiser's 1988 study, KSD "KSD is a systematic and elaborate evaluation process of structures that are built and used for a while. The focus of KSD is on building users and their needs. " In the course of KSD, the participants are conveyed to the design and use by taking the view of the participants. The purpose of KSD is to identify the users and requirements and to create available and accessible information sources. This information provides a solid basis for building better buildings in the future.

After all began in the 1980s, urban restructuring process used in 2000, adversely affected the urbanization process in Turkey. It is understood that the urban transformation experienced in this affected city and disaster is not very similar to the concept in the literature. Turkey's Bingol and in particular in many cities in this process, "building renovation" being named as the process is considered to be more appropriate. After the earthquake of 1971 and 2003, the city was seriously damaged and the reconstruction of the earthquake was almost complete and the city was covered with a concrete slab. The city is making an idle progress. Especially the areas constructed by TOKI do not show any difference in design from the buildings made in other cities. The result of the study is

The performance levels of the residential dwellings will generate data for the new conversion areas. The data obtained without this work should be a guide for new designs. It is aimed that the data obtained will be used as a criterion in future housing production.

**Keywords:** Urban transformation, Bingöl, post-use evaluation (KSD), user satisfaction

# An Evaluation of Participatory Design Examples in the context of Recognition and Conservation of Cultural Heritage

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## ABSTRACT

From the past to the present, humankind has been able to produce objects that can meet the daily needs from the pottery to the shelter. Every object that it produces has become part of the cultural heritage in time. Thus, culture has always existed as objects continue their existence. From this perspective, architectural structures are also an important part of the cultural heritage. They have become a social problem through the concepts of "change", "transformation", "renewal" or "reuse" in time. Especially, it is possible to see that -with some applications that support the concepts in mentioned- original structures give to place the new structures which lost their originality and is not accordance with the spirit of the city, the strret or the neighborhood. As a result, urban and environmental problems are increasing day by day. The formation of this situation provides awareness for a number of potential spaces. Designers, people of the region, local government and non-governmental organizations and other various professional groups are seen to participateto support potential spaces. The action of people or institutions for the conversion, renewal or reuse of potential spaces is accompanied by the "participatory design".

The concept of "Participatory Design" is frequently used and important in today's design concept. It is seen that this concept is used much more in the urban spaces where people's daily life passes. People can have some of expectations from these spaces. Thus, "Participatory design" approach brings many disciplines, many institutions togetrher in order to create environments where they can share their ideas and exchange ideas also it continues to exist as an understanding that the users of the space that is to be designed are also paying attention and consideration. The most important distinction to be mentioned here is the idea of bringing individuals who doesn't have design education, together with designers. Various Project examples are developed with participants are involved different processes from design to practise. Generally, the participant process is completed by selecting the right solution proposal through the developed project samples. However, it is also possible to see some examples of standard "participatory processes" consisting of idea and practise phases, which continue in the context of various events created after the construction has finished.

One of the examples given in this study is the "High Line Park" project in New York, one of the largest metropolitan cities in the world. The project started as a freelance journalist and an artist's pioneer who came together under the name of "High Line Friends" with the formation of a group

with a high awareness for the re-activation of the abandoned railway, which started to end with natural herbs. It is one of the important examples that the participant process has achieved for the purpose of selecting the best design project with an idea competition held in 2003. Another example is the "Preston Bus Station" project in Preston, England, which has been faced with demolition. This Project also has been achieved as a result of having a group with a high awareness, as in the "High Line Park" project, actively advocating many ideas and choosing the most appropriate design idea and becoming a youth zone. As can be seen from these two sample projects, the designers have not started the process by itself, and it seems that many different professional groups are involved in the design at different points, continuing the power unity at every stage of the process.

This study aims to reveal how important the concept of "participatory design" is through the examples of "High Line Park" and "Preston Bus Station" where positive feedback is obtained by individuals who are awareness of the situation and it is aimed to raise awareness about this subject. For this;

- Who are the groups with high awareness?
- What kind of design process is being followed?
- How many types of participants are there?
- What are the levels of participation of participating groups in the process?

The answers are searched for these questions. By using qualitative research, observation and data collection methods in this study, it is ensured that events are presented in a realistic and holistic way through similar and different situations between two samples.

**Key words:** Urban Space, Transformation, Change, Participatory Design, Participation.

# The Journey of Söke: Transformation by Design

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## ABSTRACT

Söke is located at Aegean Region (the western part of Turkey), administratively a county of Aydın Province. According to Turkish Statistical Institute's 2017 census data the city has a population of 118.855 inhabitants that comes in the third rank among the counties in Aydın Province. Söke's local economy is largely based on agriculture and food industry that makes 70 % of total GDP of the region. Söke is well-known in Turkey with its intensive cotton production areas. Büyük Menderes River Basin gives life to the City including ancient Ionian city of Priene, natural protection sites of Bafa Lake and Dilek Peninsula National Park's Karina wetlands. In short, Söke, with her tremendous local assets, is one of the flourishing regional capitals of the territory.

The aim of the study is to illustrate the spatial transformation process started with Ministry of Urbanization's 1/100.000 scaled Master Plan's decisions that make city's long term and high-level vision beginning from large-scale urban functions (i.e. airport, hi-tech greenhouse production zone, university, fair) to implementation plans and urban design competitions and projects respectively.

Due to the difficulties in re-planning Söke's city center with an existing planning context, in the very heart of this journey there lies an inductive model stems from operational level planning and design interventions instead of the typical course of top-down classical land use planning. Starting point here is the local assets of communities and the city. With the enhancement of local asset base via good asset-based design, Söke is a unique case to follow supporting the principle of subsidiarity.

Söke's urban transformation covers a large central city zones including the potential interventions within the frame of multi-disciplinary and multi-actor perspective. In line with 2025 urban vision of Söke, the very beginning of this transformation started with the higher aims of being a metropolitan sub-center of Aydın Province and therefore related vocabulary of planning and design implementation sub-sets were conceived rather than an ordinary land-use planning mechanism based on quantitative estimation of urban space via floor area ratio, building heights, set back

distances etc. In other words, Söke's urban model has shaped both higher-level spatial strategic planning that gave the City's future spatial vision and associated investment decisions within an integrated framework of urban planning and urban design from large-scale urban design projects converted to implementation plans and master plans.

In these above-mentioned processes, the rebuilding of the order of planning hierarchy will be dealt via urban design inputs provided by variety of actors and levels. To further increase to efficiency of urban planning decisions transferring bottom-up evidence based learning and information collection process in local and micro level spatial practices constitutes very beginning of the inductive model. This also allows creative use of existing regulatory and technical framework that gives room to emergence of informal practices and improvisations within the model.

In this study, Söke case will be exemplified in order to cope with negative externalities in daily living environments, prevent safety and security risks, increase quality of urban life and city's order, health and aesthetic concerns, define innovative and alternative development strategies in line with the innate sense of quality planning and design decisions for the healthy, livable and good quality urban life and bring strategic choices in a participatory and inclusive manner.

This journey, started with the higher-level Söke Master Plan decisions in 2014, continued with large-scale urban design thinking of "Söke Town Center Urban Regeneration-minded Design Idea Competition based on Land-use Plan Implementation" in 2015 and further extended to micro-scaled, place-based and local asset-based urban design solutions in 2017, will be focused on three basic research questions:

- In regulatory context of urban planning and the accepted hierarchy between planning types and scales which results they produce in terms of the ambiguous position of urban design?
- What are the role of deductive higher-level and inductive operational model urban decisions on the shaping of urban vision and its associated implementations? Is there a paradigm shift possible within the existing hierarchies?
- Which possible implications are offered by 'transformation by design journey of Söke' aiming to increase urban quality of life, City's health, public space and aesthetic standards by high quality design language?

The methodology of the study mainly covers collection and scanning of archival records and documents based on urban planning and urban design studies between the period of 2014 and 2018. This also covers recent participatory design workshops, informative meetings on urban regeneration stages, analysis of awards, grants and competitions aiming to discover their contributions to the process. And then semi-structured interviews will be conducted with the key urban planning and urban design figures involved in the process in order to get fruitful insights about the above-mentioned research questions.

Especially, in order to increase the productivity of participatory processes, delivered techniques and mediums alongside with the direct or indirect participation behaviors of people of Söke to urban design and planning also creates the peculiarities of this study. Systematic collection of planning and design ideas is not only important for urban design and planning, but also efficiency of local government decisions.

As a result, the impacts of 'Transformation by Design Journey of Söke' and findings and implications regarding to this process will firstly be evaluated in the setting that prioritizing design and planning interaction. Secondly, urban design's capabilities will be discussed in terms of its potential contribution to proceed from urban standards to urban quality language within the light of experimentations in the case of Söke. Lastly, preliminary results stemmed from Journey of Söke will be shared about the principles, rules and regulations when urban design, urban planning and urban

regeneration considered in an integrated manner. Additionally, findings and reflections produced by the cooperative practices of municipality, universities, NGOs will be discussed.

**Key words:** Söke Town Center, Urban Planning, Urban Design, Urban Regeneration, Local asset-based Design

# Analysis for Change of the Turkish House in the Context of Neighborhood with Space Syntax Method: The Case of Konya

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## ABSTRACT

In architectural sense, space has taken its place in the new reality. The reality of a building is not created by the elements that make it, but by the spaces created and experienced by them. There are people as a user in the form and nature of the place. So spaces are spaces where people's experiences and life style are compressed. In addition, human beings are social beings and are defined as long as there are social relationships in society. These social relations are also an important part of architectural space design. When we look culturally, it is undoubtedly neighborhood that has the most important place among these social relations. Neighborhood has a spiritual function that fuses and reassures the community. Rituals like Turkish neighbors are welcomed and welcomed by written sources in Turkish rituals, such as making them feel lonely, meeting the needs of their neighbors, supporting them in difficult times, and mutually welcoming them. Both pre-Islamic and post-Islamic periods are very important for Turkish culture. On the basis of everyday life there are neighbors and neighbors. Houses are personal and private places where daily life can be read easily through the design. For this reason, when we want to see the traces of the neighborhood on the residence, it will suffice to analyze the spatial arrangement. Space syntax is a very effective model of architectural representation used in the analysis and interpretation of space. This representation model analyzes how architectural spaces are linked to each other and which cultural, social and behavioral codes they contain. These codes have an important place in the formal process of traditional and modern dwelling. Therefore, architectural design cannot be considered with the user and the environment. Increased migration from rural to urban with industrialization and excessive population growth have led to design priority as merely creating accommodation spaces, which have led to the construction of houses that are unsuitable for human privacy and social communication needs. People, who are forced to live in the bottom of the house and in the cramped houses, with spatial inadequacies, have become unable to meet their social needs. Functionally resolved spatial construction of the traditional rights of the traditional period and the respect for the privacy has left its place to the plans which are intertwined and interfere with the environment and which allow only shelter. Therefore, while the traditional Turkish house is unplanned but harmonized with nature and man, the planned design of modern architecture has often taken the second plan of harmony with nature and interaction with people. The aim of this study is to determine the change that the Turkish House has experienced in the traditional and modern periods in the context of neighborhood relations that we have defined as socio-cultural data in the housing design through the sequence analysis. The province of Konya has been selected as a study area because it is a province where traditional life is still continuing and modern life pass is planned. The transition to the modernization and apartment building process in Konya has been shaped by the opening of new construction areas for modern houses, not by removing traditional

wafers and replacing them with modern touches but by preserving traditional touch. Therefore, while traditional life continues in the same way, steps have been taken in order to start modern life. Within this scope, five houses were selected in the city of Konya in chronological order from traditional and modern period. In the study, spatial planning was used as a method and spatial schedules and data obtained from the program named AGRAPH were used in the analysis of residences. Using this software, spatial access graphs of five selected houses were extracted and through these schemes, neighborhood factors were tried to be read through connections and interactions of spaces. As a result, the fact that space is related to environmental and social networks in the layout of space reveals that space and neighborhood are two concepts that will not be considered apart from each other.

**Key words:** Change, Konya, neighborhood and housing, space syntax, Turkish House

# Geodesign Framework as a Collaborative Method for the Master Plan of Harran University Campus

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**ABSTRACT**

During the long adventure of his existence in the world man has shown endeavor in living in a harmonic way with the earth and due to this harmony negative impacts on the environmental conditions have been kept to a minimum. Recently, because of rapidly growing population and urbanization, changes in a social and technical way have occurred to this harmonic life philosophy, in processes of planning and design ontology has been forgotten and it has started, not to take into consideration natural and artificial environmental factors. This has had a negative effect on the nature of the environment, leading to an increase in environmental disasters and consequently human deaths. Thus, mankind begins to search for the way of living in harmony with the environment as it was at the beginning. In this context, the Geodesign framework which its methodology introduced by Carl Steinitz emerged as an environmentally sensitive and collaborative design concept. This understanding, which brings together ideas from different disciplines and suggests the most appropriate design as a result of collective reasoning, takes the nature to the center and gives the opportunity to see the effects of the changes made in nature to human beings and act accordingly. In this sense, a development plan within the scope of the Geodesign principles for Harran University Osmanbey campus, with an area of more than 2000 hectares, is preparing. Within this framework, ten systems have been prepared which indicate the themes planned to be changed. These are: agricultural areas, greenhouses, organic food production facilities, forest, recreation areas, solar energy plants, teaching facilities, transportation, housing areas and villas. These systems were built on the Geodesignhub.com platform, which provides a collaborative web environment for Geodesign. Spatial data such as infrastructure, superstructure, digital terrain model and orthophoto for these systems have been obtained through the Unmanned Aerial

Systems (UAS) and fieldwork. The evaluation maps for each system created through analyzing obtained data using Geographic Information Systems (GIS) software and these maps were used to determine the most suitable location for the changes to be made. Evaluation maps based on the judgement of experts in the respective field of specialization. It is unlikely that users or managers in different disciplines will have the same views in design. In this context, design groups with different opinions and priorities are created and brought together in planned workshops. In the first stage, each group presents its own design in accordance with its own priorities and needs, and in the following process these different designs are reduced to a single main design through dialogue. In this sense, four different design groups were created on the Geodesignhub platform for the Harran University Osmanbey campus master plan. Participants in the environmental, development, agriculture and management groups, which are the academicians and managers from various departments, came together at the first meeting of this work and presented their designs. After the designs were finalized and each group explained their design with a short presentation, the meeting was concluded and it was planned to reduce a single final design with the agreement of the groups of these four designs obtained at the next meeting. Looking at the results from the initial designs, it seems that each group wants to make changes where it sees appropriate according to its priority but does not consider other systems when making these changes. This tendency, which human being has shown by its nature, is also predicted in the Geodesign processes. In this context, the impact maps showing the impact of a change in any system on the other systems are exist in the Geodesign process and in the Geodesignhub platform. For instance, it is considered a negative impact to put a building in an area that is suitable for agricultural areas or where there are existing agricultural areas, and this is shown in the impact map. In this way, the impact of all the systems planned to be changed can be monitored by this process and the planning can be made by choosing the most suitable area for the changes. In this study, Harran University Osmanbey campus development plan, which will be formed by adopting a relatively new process of Geodesign framework, is examined and the findings obtained from the workshop with the stakeholders composed of different disciplines are examined. Nowadays, the harm done to the nature has reached to very high levels. Human and nature will be re-established a healthy relationship with the framework of Geodesign which is more suitable designs that can be made by evaluating the effects of human-made changes on nature, environment and other planned changes.

**Key words:** Geodesign, campus master plan, GIS, Geodesignhub, collaborative planning

# Conversion by the 'Invisible Hand' to the 'Visible Heart'

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**ABSTRACT**

The capitalist mode of production, in which the first principle of the economy is *'the individual's work for his/her own personal profit'*, and the system of economics that conforms to it affect all areas of social life every day. The *'Invisible Hand',* which was formulated by 1776 A. Smith, states that balance will be achieved without external intervention. By valuing goods and services of buyers and sellers on the market, it transforms everything, even peoples' emotions. Feelings and behaviours that reflected the environment, instead of the emergence of natural and spontaneous.

Globalisation, which is regarded as a development in which goods and services, production factors, technology and financial resources can freely circulate among countries, began accelerating after 1980. In the economic sense, it began to manifest itself by opening up countries through removing obstacles to obtaining goods and services and allowing capital movement. During this context, many negative effects, such as poverty, unequal income distribution, deterioration of working conditions, de-unionisation processes and immigration began emerging. Although there is extensive literature on globalisation's economic and social impacts, there is no consensus on the outcomes. Instead, two primary views have emerged. The first is an anti-globalist approach, which argues that the globalisation process is against underdeveloped/developing countries and in favour of developed countries, thereby increasing the injustices of poverty and income distribution. The second is a globalist approach, which claims that globalisation will help development by providing resource transfers to underdeveloped countries. However, there is a general consensus that globalisation is a consequence of a major change/transformation process on a global scale and that it accelerates these changes and transformations.

Globalisation has made the world economy more integrated by removing obstacles to obtaining goods and services and capital movements among countries. In addition, accelerating the flow of information and technology has brought countries closer to each other in terms of cultural and institutional aspects. However, there are also negative developments threatening world peace and prosperity, such as global environmental pollution, depletion of natural resources, massive poverty, unemployment and social exclusion during the process of change/transformation.
The unequal distributions of income and poverty have always played important roles in the history of humanity and have thus been the subject of extensive examination. Although national incomes increase, the *'poverty problem'* remains and is an extremely important issue because income distribution among consumer units still reflects significant inequalities.

Notably, urban poverty must be emphasised, specifically regarding women. The capitalist mode of production and the devaluation of women's labour are among the reasons for women's secondary position in the labour market, decreases in flexibility and job security and the fact that women comprise most of the spare workforce, home-based workforce and small entrepreneurial business owners. Women face unequal access to resources and public services. In short, *'invisible women's labour'* is outside the *'invisible hand'* of the market for a variety of reasons. Women face significant difficulties in the psychological, social and cultural dimensions of poverty as well as income disparities. In the struggle against poverty, women are especially obliged to produce food, collect firewood and participate in other subsistence activities. Poor women are trying to make more expensive goods and offer services below market rates from their homes. In this sense, *'invisible labour'* begins with duties and responsibilities within the family as *'Invisible Hearts'* and provides the social life as well.

In the process of globalisation, where rapid and destructive effects predominate, urban poverty must be *'Converted by the 'Invisible Hand' to the 'Visible Heart'*, which must be done via women's actions. To achieve this, holistic and coherent policies are needed that will create access to all opportunities, healthy living and working conditions and education.

In this study, the issues of *'urban poverty'* and *'invisible women's labour'* are examined within the context of globalisation, with examples from different countries given. Additionally, policies that need to be developed during this process are presented and supported with concrete practical examples to develop corresponding recommendations. Finally, the topic is also explored from other perspectives such as politics of local governments, urbanization, spatial segregation, urban poverty, immigration.

**Key words:** Labour, invisible women's labour, urban poverty

# CITY - MANAGEMENT - CHANGE

# No Principles, No Punishment: An Assessment on Turkey's Urbanization Records

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**ABSTRACT**

Throughout the Republican period, especially after 1950s, Turkey's Reconstruction and urbanization record is generally recognized as 'crooked, irregular and corrupted' in the literature. The actors in urbanization policy, public institutions, professional associations and academia are in a consensus that Turkey has not achieved in healthy urbanization records so far. During the times that Turkey suffered from political crisis, urbanization movement also tried to adapt itself to the new eras in parallel with political system. The transition to a multi-party political system after the 1950s brought about radical changes in urbanization efforts as well. Same recorded both after the 1980 military regime and after the 2002 economic crisis that led the country in the single party government that lasted over one decade. As Turkey developed economically so the urbanization rates followed in parallel. The huge migration movements from rural to urban areas experienced without stopping, but urbanization and modernization efforts did not catch up with contemporary and universal values due to the improper design of the urbanization policy and poor legal regulations about it.

The main characteristics of Turkey's urbanization outlooks during political turning points have been as follows;

- Not enough urbanization before 1950, the majority of rural population was dominant,
- after 1950s, the cities couldn't create proper solutions to the movements of internal migration from rural,
- after 1980s, Urbanization policies designed to remedy the shanty housing problems first but it did not bring a healthy solution to the problem,
- After 2002, Turkey achieved great economic development comparing to the past as benefited from single party government in politics, but the interests of the actors in the urbanization and construction sector (contractors / landowners / public officials who have legal authority over urbanization) have been main concern, so that period is characterized as the corruption period of urbanization.

The urbanization principles are mainly the engineering principles itself that oversee and regulate the shape and intensity of buildings, economic activities, population living on, the design of buildings according to all land characteristics, climate, geography and culture, to control the effects and numbers of vehicles, and to supply the cultural and traditional needs of the community regarding settlement. The principles of urbanization are very important factor regarding maximizing the utilities of the both community and individuals living in the urban areas and securing the conformity of the urbanization for all settlers as well. As long as the reconstruction and urbanization system is far from the healthy appearance in the whole country, it leads to the damage of whole

income groups' interests, not aiming at lower or higher ones. In such a bad urbanization regime, rich and poor equally suffer from bad effects of distorted environments. It cannot be possible for an individual being away from that problematic situations by spending money personally. Inadequate roads and parking slots can pose a discomfort for all vehicle drivers&owners, insufficient green urban areas and parklands create common problems far all. In a Rule of Law regime, the Rules are determined by written texts issued by national parliament. The criminal law regulations function as deterrence and can protect the designed system from misdoings of several interest groups.

According to the evaluation made from two basic principles mentioned above;
in Turkey, the urbanization principles have not been designed in legal texts, in the Urbanization Law.
in Turkish penal code, the crimes against urbanization policy have not been defined clearly and not brought any punishments for misdoings to urbanization.

It ıs argued by the writer that the lack of two mentioned above have been the root causes of problematic urbanization records of Turkey so far. The deficiencies mentioned above are inexcusable for a rule of law regime and not only created bad urban outlooks in general but generated some corrupt groups who abused the weakness of urbanization system on their own behalf. This study focuses on how Turkey can achieve in reaching to the desired urbanization outlooks. For that what could be done in terms of Law both in Urbanization and Penal codes. The writer would like to recommend some main principles on urbanization policy for Turkey. In addition what should be issued as crime against urbanization policy are discussed in the study. The basic assumption is that Turkey has been suffering from poor and inadequate legal regulations in urbanization policy. The study is based on a review of the legislations at all levels in the urbanization system of Turkey. In addition to the legislative review, the results of the audit conducted by the author in two different local governments, which were performed in 2008 and 2013, are evaluated together. Additionally the findings of an EU project in which the writer participated in and made contributions are also reviewed.

**Key words:** Urbanization principles, crimes & offenses against cities, irregular urbanization, corruption.

# Innovative Development Implementation Tool with Changes in National Development Legislation: "Transfer Model of Property and Development Rights" (TMPDR)

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**ABSTRACT**

The concept of property and rights of development (particularly transfer) has become a concept that has been seen in recent years in national conservation and development legislation. However, the concept is still undefined in the legislation (at the level of translation and quotation). These changes in the legal-managerial framework have also created the subject of this work. The concept first came to light in the year 2004 with the change of 17.item in the conservation legislation (LCCNA No. 2863) and it was used vaguely. The use of expressions is still in force without enforcement. The concept was then used within the scope of the law known as the Disaster Law (dated 6306 and 2012). In our development legislation, the right of development is a united states. In this case, however, the concept of transferring the rights of only development is often used without description in the law numbered 6306. Although the concept has been found in this law, a practical application has not been made yet. The issue of this law after its release in 2012 has also been published, but it has been amended three times. This vehicle, which is in the capacity to be used as an important means of development in urban transformation in our country, has not yet been recognized enough. However, despite this, it is seen that the vehicle can be subject to project and parcel based limited applications. This situation causes the vehicle to be left on the local scale only and not to be used effectively. The tool can be brought to a level where it can be a solution to the injustices of development on the national scale. For this, various scientific proposals (models *) have been developed and published in meetings with scientific journals. It is clearly stated in this study that the conceptual level should be opened in summary, and detailed legal arrangements are needed. The study provides the problems of zoning practice in the recent past, as well as legal aspects of this (TMPDR) tool in the context of urban transformation.

**Key words:** Property right, Right of development, Transfer Model of Property and Development Rights (TMPDR), Development plan innovative application tools, City and Regional Planning

# Interdisciplinary Collaboration in Urban Design Studies

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## ABSTRACT

Urban Design is an area of expertise that deals with environmental responsibilities, social equality, economic viability as a whole while organizing urban space. At the same time, the place in the cities we live in is a concept that reveals the quality and authenticity. The Directive on the Preparation and Evaluation of Urban Design Projects by the Ministry of Environment and Urbanization on 02.04.2018 The Urban Design concept includes '' natural and historical, cultural, social and economical features and land structure; vehicle transportation, parking and service relations and pedestrian relations; showing the relation of structure, street, texture, open and green areas and details of urban furniture; taking the infrastructure elements as an interdisciplinary approach with a holistic approach; expressing image, meaning and identity properties'' (Anonymous, 2018). With the general description of urban design, the 'urban space' is a multidimensional, multi-dimensional, detailed analysis of urban detail, including physical, socio-cultural and socio-economic contexts. we can say that it is an arrangement method (Kaplan et al., 2003). Urban design objectives are the identification of the urban character in the context of raising the quality of urban life and the sustainability of this holistic identity through design guidelines. Target in urban design (Anonymous, 2016);

- To increase the quality of urban design,
- Integrating urban design with protected areas in the development process,
- Strengthening the identity and character of the centers,
- To increase the diversity of private identity areas and areas,
- Establishing the urban design relationship between the urban unit and the unit,
- To provide rich and diverse experiences for pedestrian use,
- To create areas with identity character and scale relation in human scale and to spread them to new development areas in the whole city,
- Creating a city center where safe, strong urban residents can live 24 hours a day,
- To connect art with city and city.

In the direction of urban design goals, it is a detailed spatial arrangement and application in city scale. Therefore, urban design can mainly include many professional disciplines. These basic disciplines include different specializations together with landscape architects, city and regional planners, architects and other support disciplines (infrastructure engineers, economists, sociologists, map engineers, archaeologists, art historians, etc.). However, the discipline of urban design is not yet clear in terms of "scope, quality, legal and managerial" in terms of occupational duties and responsibilities. In this context, basic disciplines such as urban design, landscape

architecture, city and regional planning, building architecture should jointly act jointly in an interdisciplinary study.

The main duty of all professions in urban design is to meet the social and cultural needs of the city, to create a healthy and reliable environment, to increase the quality of life and to achieve this aim for natural, economic, demographic, social, cultural, historical, taking into account the characteristics of the urban area on the sectoral scale; (Gül and Polat, 2009). In this context, it is important that the principles of organization, design, implementation and management of usage, restriction decisions are integrated. For the contemporary habitable cities in the future, it is possible to embrace the concept of professional ethical approach by preserving our existing values with the ecological approaches in the targets of the sustainability principle and to realize the discourses and actions in line with the urban design principles and targets.

In this study, the importance and the content of urban design will be put forward by considering the urban design direction and guide, and the areas of responsibility, work style and scope of the basic disciplines will be discussed. Suggestions will also be made on how urban design, interdisciplinary approach should be at the level of higher education at the undergraduate and graduate levels and in free market applications.

**Key words:** Urban design, interdisciplinary approaches, space design, sustainability, universal design

# Comparison of Turkey's Environmental Impact Assessment (EIA) Law with the Other International and National Directives

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## ABSTRACT

Global environmental disasters that threaten the growing population and the world in the last century, have forced the entire humanity to have environmental awareness and to use the areas in which we live more prudently. In this context, significant work has been done on international platforms, and the remedy has been sought to manage limited resources effectively and to minimize the environmental adversities. The Brundtland Report on Environment and Development in 1987, the Rio Summit which took place in 1992, is the main work for sustainable environmental management movements. Within the scope of sustainable development approach to manage human activities in harmony with nature, an environmental impact assessment approach has emerged to minimize the harmful effects of human activities on the environment and to prevent or mitigate potential harmful effects. Environmental Impact Assessment (EIA) is the study of the possible effects of a plant's activity on the planning stage to minimize the negative impacts of human activities on the environment during the environmental management process and to provide optimum benefit. EIA studies, which are decision-making tools for the realization of an activity, help prevent the negative impacts of the application. Having the idea that the prevention of potential adverse effects is much easier than eliminating the environmental adversities that have occurred. EIA first emerged in 1969 under the National Environmental Policy Act (NEPA) in the United States. The whole world then showed support for EIA, and it received considerable support from Europe. In this context, the European Union Directive on EIA was developed in 1985. In 1988 it started to practice in England. When we look at the process of spreading of EIA into the world, we have established EIA systems in different forms, spreading all over the world, starting from developed countries primarily after entering into force in NEPA. Canada in 1973, Australia in 1974, West Germany in 1975, France in 1976 and later underdeveloped countries. With the ratification of a European Directive on EIA in 1985, encouraged EIA legislation to enter into force in many European countries in the late 1980s. The formation of new countries after the dissolution of the

Soviet Union in 1991 led to the enactment of EIA legislation in many of these new countries until the mid-1990s. At the beginning of the 1990s, the number of EIA regulations and guidelines set up in Africa and South America also increased significantly. By 1996, more than 100 countries had an EIA system (Sadler 1996).

There are different EIA systems applied around the world. Some EIA applications are in the form of mandatory regulations, acts or statutes. These generally require that the competent authorities prepare an adequate EIA report before an authority is allowed to proceed to the project. In other cases, EIA directives were established. These guidelines cannot be enforced, but usually the administration imposes obligations on the organization. Other legislations allow state officials to demand the preparation of EIAs at their discretion. In other applications, EIAs are prepared in a procedural manner as they are often requested by funders such as the World Bank as part of a fund approval process. These classifications are not necessarily indicative of the extent to which the EIA has been carried out well. For example, it is stated in the literature that Brazil and the EIA regulations of the Philippines have not been implemented or implemented in practice (Glasson and Salvador 2000, Moreira 1988), as in some EIA applications in our country, which basically refers to the European Union Directive. However, a source stated that Japan's EIA regulation guidelines and reports have been fully implemented (Glasson et al., 2005). Another important distinction between the types of EIA systems being implemented in the United Kingdom is the definition of EIA requirements and non-essential actions according to type of activities. In some countries, EIA is required for government projects only, special projects only, or both. In addition to the different applications, some international development and financing institutions, as well as legal applications, have been provided with various EIA guidelines including the European Bank for Reconstruction and Development (1992), Overseas Development Administration (1996), UNEP (1997) and the World Bank (1992, (Glasson et al., 2005).

Looking at Turkey in this process, it is seen that EIA studies have reached legal status with Article 10 of the Environment Law, which was executed in 1983. On February 7, 1993, the Ministry of the Environment enforced the regulation. The first regulation was revised on June 23, 1997 to overcome the problems in practice and to ensure effective and efficient implementation. Within the scope of harmonization with the European Union legislation, the EIA regulation was revised again in 2002 and 2003 in line with the EU EIA Directive and published in the Official Gazette dated December 16, 2003 and numbered 25318 (Turan and Güner, 2017). Following the regulation published in 2003, Has been revised in 2014 and finally the Regulation on the Amendment of the Environmental Impact Assessment Regulation in the Official Gazette dated 26.05.2017 numbered 30077 has been finalized with its latest revised version.

In this study, the EIA emergence process after handled on a global scale with emphasis on the world of the fundamental differences of Turkey to comply with the EU legislation, the EU EIA Directive that the EIA what the general nature of the regulations developed in line will be discussed may be due cause of the glitch occurring in the implementation process

**Key words:** Environmental Impact Assesment (EIA), EIA Regulation, Environmental Law, International and National Directives.

# Automatic Detection of Tree Density and Planting Intervals in Urban Landscape Using UAV-based Digital Surface Models

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## ABSTRACT

Forests, which provide economically significant benefits as a source of wood raw materials and various byproducts, are one of the most important natural resources of the earth with respect to ecological, esthetic, social and cultural aspects for protection of soil and water resources, balancing of climate, creation of a living environment for fauna, etc. In order to ensure the conservation and sustainability of this natural resource, forest inventory and forest management plans are prepared and especially ecological sustainability policies of countries are shaped in this context. Therefore, studies are being carried out to determine many factors such as forest tree existence, stand type, surface cover ratio, distribution pattern, connectedness and number of individuals. Particularly in the studies on the determination of the number of the trees and distances between the forest trees, terrestrial measurements which are very time consuming and costly are being used. In parallel with the developments in remote sensing technologies, studies on the forest tree presence have increased rapidly from aerial photographs and satellite images since 2000s. This method produces fast and high accuracy results, but still generates high cost in providing very high resolution and up-to-date satellite data. This makes the use of unmanned aerial vehicles (UAVs) particularly advantageous in small-scale studies such as tree numbers, crown diameter, planting intervals. Nowadays UAVs are actively used for the production of fast and current high resolution data in many areas such as forestry.

In this study, it was aimed to determine the number/density of forest trees and planting intervals automatically from UAV data. In this context, autonomous flight was performed in the sampling area with a standard UAV and 2.5 cm spatial resolution image data was obtained. A Digital Surface Model (DSM) has been created for each tree to be pre-processed such as calibration, binary and multiple mapping, filtering and mosaicking. A Digital Surface Model (nDSM) has been obtained by removing the Digital Terrain Model (DTM) from the DSM. Then, 5m threshold value was applied considering the average height of the *Pinus brutia* species subjected to the analysis, so that the tree areas were determined. In the next step, using the Python programming language, the Canny edge detection algorithm was applied to determine the tree crown boundaries and then the center

points of the tree diameters were determined. Optimum planting distances between the determined center points and the *Pinus brutia* populations were compared and the planting intervals were interpreted in the context of national and international literature information in the context of landscape planning principles.

As a result, with the developed method, the number of trees in an urban forest, the planting intervals are determined automatically and with high accuracy. This study has widespread impact with applied methodology, used algorithms and data acquisition techniques for tree extraction, forest exploitation, forest inventory and sub-inventory studies, urban and rural forest planning, forest number sustainability, and dilution work done in this context. This method is also more advantageous than terrestrial measurement techniques and satellite image detection methods in terms of availability in particular where rapid, high accuracy and low cost are particularly achievable and terrestrial measurement techniques are difficult to implement.

**Key words**: UAV, tree detection, automatic extraction, urban forest, DSM

# Utilization of Technology and Standards in Local Governments within The Context of Geographical Data Infrastructure (GDI)

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**ABSTRACT**

Municipalities are the most important local government units that are obliged to fulfill the urban services such as planning, transportation, environmental health and cleaning, community policing and social services. Since their initial establishment, there have been many developments and changes in the structure of the municipalities. Today, municipalities are expected to provide productive and efficient services. It is crucial for managers to make correct, fast and efficient decisions to meet the increasing needs resulting from the rapid population increase in the urban and rural areas, which are under the responsibility of the municipalities. A healthy urbanization can be realized by responding to the economic, social and physical needs of the city.

With the development of technology, the services provided by the local governments have become faster and more transparent. Depending on these developments, “establishment of geographical and, urban information systems” has been defined as one of the municipality tasks in the “Metropolitan Municipality Law (number 5216)” and “Municipaity Law (number 5393)”. Thanks to the legally recognized Urban Information Systems (UIS), more qualified urban services can be performed today. Besides, graphical and non-graphical data, which are mostly produced by different professionals, kept in complex structures, and scattered through different departments, can be integrated in a common platform. Data stored in UIS are shared with the citizens, municipal officials and partner institutions quickly and securely.

With the technological developments, the data interoperability from local to national scale has become an important issue. In order to ensure effective data sharing between the public and private sector institutions, it is necessary to establish an "information highway", through which various institutions or groups of users can easily access the data they need. The concept of the "information highway” now takes its place in the literature as "Geographic Data Infrastructure (GDI)" (Cömert, 1996). GDI requires a standardized data production and sharing. Technology, policies and standards are the three fundamental components of GDI. As a policy component, legislative arrangements for establishing organizational structure, data sharing and pricing are required. Within the framework of the technology component, it is necessary to establish GIS servers and portals, which provide access to and sharing of data with communication networks. If GDI is defined as data infrastructure of UIS in the local scale, then the concept of “national GDI (NGDI)” becomes important for ensuring the data sharing in global level. Within NGDI processes, standards for service-based interoperability from local to national level have been developed. As a

standard component to ensure this synergy; data models, meta-data and data exchange standards should be determined. There are several standards for data sharing at the national and global scales (ISO, INSPIRE, OGC, WMS, WFS etc.). In spite of the fact that, data using from national to global scale is not very common in Turkey, several standards, based on the globally recognized ones, have been developed (TDGIS, TRUIS, etc.).

In the scope of the study, Infrastructure for Spatial Information in the European Community (INSPIRE), International Organization for Standardization (ISO), and Open Geospatial Consortium (OGC) standards, which have been adopted as the major references for the determination of UIS data production internationally, have been analyzed in terms of standards, definitions and implementation examples. "Turkey's National GIS Standards Determination Project (TDGIS)" conducted for standard data producing at the national level and "Turkey's Urban Information System Project (TRUIS)" towards determining UIS standards were investigated. The consistency of the UIS studies with the international standards and current situation have been evaluated. These evaluations have been analyzed via Ankara Gölbaşı Municipality UIS studies and works.

Within the context of this study, it is aimed to reveal the problems, benefits and difficulties of using the national and international standards within UIS, which have recently become an important matter of interest and focus in our country.

**Key words:** Technology, Standards, Local Governments, Geographical Data Infrastructure

# The Ownership Structure and the Abandonment of Historic Buildings: Are They Related?

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## ABSTRACT

The conservation of historical environments, where the direct traces of human-space interaction of the past are seen, is very important in terms of transferring spatial information to future generations. Even though endurance of historic buildings is a major conservation policy, these structures have occasionally been abandoned throughout the World. Abandonment of the historic buildings can easily be ignored, and may not be regarded as a crucial problem. However, abandonment has social, economic, physical causes and consequences. It is real and solutions are possible.

The studies focusing on urban conservation emphasize that the city identities are lost through globalization. Parallel to changing living conditions and technological progress; historic buildings do not respond to new needs and face with the abandonment problem. Abandonment is a frequent problem in historic city centers of Turkey. Buildings with rich historical backgrounds are less demanded compared to modern apartments. Historical environments, where the buildings are abandoned by owners without being rented or sold, are at risk of urban decay.

The social and economic factors are regarded as the main causes of abandonment in the literature. Abandonment studies should consider a wider variety of factors with different contents. The purpose of this study is to reveal the effect of the ownership of the buildings on the abandonment of the historic buildings. Research questions are defined respectively: (1) Is there a significant relationship between the abandonment of buildings and the concurrent ownership? (2) Is there a significant relationship between the number of independent units of plots that have concurrent ownership and their abandonment status? (3) Is there significant relationship between the abandoned buildings and occupier status (owner, tenant, public, other)?

It is very important to investigate the causes of abandonment in legally protected historical environments where the urban conservation plans are prepared, also called the “the living museum” within the context of urban planning and urban design disciplines. This study aims to draw attention to the problematic areas of the city in the context of property information.

The study area is Bayındır district in Izmir with a rich historical background and a well conserved urban pattern. Despite strict legal protection with the conservation law and related legislation, the abandonment rate of buildings in the historical site in Bayındır is 19%. We believe that this small city with a relatively high rate of abandonment of historic buildings is convenient as a study area to determine the factors that lead to abandonment.

The study has four phases. The first phase involves the determination of the abandoned buildings in historical area. The second stage consists of deriving the ownership data (concurrent ownership information) from the institutions for the plots located in the historical site. The third phase involves defining property status (housing owner, rent, public, other) and the fourth phase consist of statistical analysis of these data. The results show that there is a statistically significant relationship between ownership status and abandonment. Policy implications are discussed.

**Key words:** Abandonment, ownership structure, historic buildings, urban conservation

# ENVIRONMENT - ENERGY - CHANGE 1

# Additional Cost and Benefits of Ecological Applications in Residential Settlement Scale

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## ABSTRACT

Today's architectural and urbanism approach has adopted a process that does not pollute the environment, protects resources, produce needs instead of consumption. Today in Turkey, Urban scale construction system is still being applied in the conventional style. The reason for avoiding ecological systems is expressed as the increase in initial cost.

Running out of fossil fuels has lead to use of renewable energy sources. The energy is heavily used in the construction sector. The decision for use of renewable energy sources was effective of designing buildings ecologically. Today ecological structures are developed with the addition of mechanical systems. It is recommended that mechanical systems be added where the passive system decisions are not enough to make efficient use of the energy while in the design phase. The advance technology of mechanical systems makes cost of the construction expensive. However, in a short period of time by amortizing itself, produces energy and gaining investors in the process. In this study; it is aimed to investigate and disseminate the gains generated by using eco-measures at the settlement scale.

For this purpose;
• Use of passive systems as much as possible in the design phase,
• To show that the additional cost due to the addition of mechanical systems is recovered in a short time and that the user is profitable in the ongoing process,
• It is aimed to show that the eco-measures will reduce the additional cost of construction as the building capacity grows and shorten the recovery time.

In this study, it was detected some systems that provide no gain when added to the structure. Although the initial investment cost is very high, the systems with little or no recycling are not preferred in market conditions. Such systems are needed to become widespread. Certain systems have been recognized and implemented and domestic production has greatly shortened recovery times. Despite the high initial investment cost, systems with high annual recovering rates are short-term amortization and continue to bring high rates. When the construction capacity grows (according to small constructions), it has been seen that the installation costs are reduced, the annual recovery amounts are increased and the depreciation period is much shorter.

**Keywords**: Eco Design, Cost Analysis, Recover, Regain

# A Research on Renewable Energy Resources: Evaluation of Solar Energy Potential of Eskişehir – Han District

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## ABSTRACT

Today, the population of the Earth increases continuously, significance advancements in technology are achieved and cities turn into intensely populated spaces. This rapid cycle results in unplanned constructions and expansions. Expansion increases the energy need, which is mostly provided from fossil fuels. One of the most important consequences of fossil fuel use is the global climate changes and the resulting global disasters. These disasters threaten not only the cities but also the rural areas. Because of these negative environmental effects, especially developed countries have started to focus on new resources to meet their energy demands. Considering this, the most important agenda of the century has become the renewable energy resources. Amongst the significant examples of this case is Germany's innovative energy policies assured by national legislation in 2010 and its target to generate national energy demand from renewable energy resources until the end of 2030, and Sweden's investments on solar and wind energy in 2015. In Scotland, 97% of the household electricity was generated from wind energy in 2015, and Portugal has delivered more electricity from renewable energy than it has used in March 2018. Moreover, according to World Energy Council, the amount of fossil fuel use for energy generation is only 1% in Switzerland, while Norway produces 98% of its energy from renewable energy resources. China, USA, Germany, India and Spain are the leading countries in the field of energy generation from wind.

Because of the increasing energy demand due to rapid industrialisation process, as well raise in the fossil fuel prices, Turkey is a country inevitably facing both environmental and economic problems. Besides, the energy policy has ended up with dependency on foreign resources. This reveals the necessity of the efficient use of renewable energy resources. Within this context, many organisations and institutions have started projects aimed at productive use of wind and solar energy resources. General Directorate of Renewable Energy (GDRE), Ministry of Energy and Natural Resources, has produced atlases of wind, solar and biomass energy potential of Turkey.

Solar energy, which is reported be used since 7th century BC, is one of the most important renewable and clean energy resources. The most efficient and feasible regions in terms of solar energy are located between the latitudes of 45º North and45º South. From this point, Turkey has an important potential for renewable energy resources. This potential for solar energy is approximately 110 days per year. According to GDRE data, total sunshine duration is 2737 hours, and total annual solar energy is 1527 kWh/m2, in Turkey.

Within this context, the main target of this paper is to highlight the solar energy potential and opportunities to use this potential instead of fossil fuel resources. To fulfil this aim, appropriate lands for solar power plants (SPP) within Han district of Eskişehir province, which is one of the

regions with a high solar potential according to Solar Energy Atlas of GDRE, were determined. As a result of the studies and analyses realized with Geographical Information System (GIS) capabilities, the suitable areas for SPP installation in terms of topographical data were located, and proposals were presented in accordance with the annual electricity consumption of the study area. The results showed that 2.57% of the Han district were suitable for SPPs, and it was possible to install 53 licenced 1MW SPPs. The amount of generable energy from 1MW SPP delivers the annual electricity consumption of the district.

**Key Words:** Renewable Energy, Solar Energy, Electricity Generation, Geographical Information Systems

# The Carbon Emissions as a Global Impasse and Social Cost of Carbon (SCC)

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**ABSTRACT**

It was in 1972, through the Stockholm Conference, that limited natural resources and environmental problems were officially recognized by governments. The conference, developed and undeveloped countries without distinction, served the purpose of spreading global awareness in recognition of the fact that national environmental problems would affect at a global level. In 1988, with the efforts of the United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) the Intergovernmental Panel on Climate Change (IPCC) was established. The IPCC aims to develop countermeasures to human-caused global warming and global climate change. In this direction, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted by many countries in 1992 to bring together governments envisaged to contribute to the process and the Kyoto Protocol (KP) was presented to the public as an annex of the UNFCCC. Thus, climate change and control of greenhouse gases harming atmosphere composition, was on the agenda for the first time. The protocol, which was established in 1997 as a framework, was opened for signature in 1998 and detailed obligations were adopted in 2001. Turkey became a party to the UNFCCC and the KP in 2009.

The critical relationship between ecosystem dynamics and human needs has revealed that not only ecological but also economic measures must be taken. In 1977 Herman Daly advocated the use of an appropriate economic scale depending on the capacity of the natural environment with the theory of "Steady State Economics". According to this view, which is defined as the stationary state economy, the unpredictable increase in the pressure on natural resources will lead to the depletion of natural resources. This has led to the view that the economy will be determined not by prices but by ecological limits.

The economic and ecological systems are formed by the shifts between processes, flows and stocks that are important in terms of natural capital. In this context, the economic system works as a subcomponent of the ecological system. Production and consumption processes within the economic system produce waste and emissions that threaten the ecosystem. The deformation of

the environment and the increasing emissions affect the current and future generations substantially as a result of economic growth. Economic growth is defined increase in total production level due to the increases in the Gross Domestic Product (GDP).There are pessimistic views about the future situation of the ecosystem, especially because of economic development and growth factors. When this is taken into account in terms of global climate change, the argument is that it is inevitable that the radiation reflected outside will be kept in a larger amount in the Earth's atmosphere than today due to the expansion in the spread of the greenhouse gases in the future and that the upward tendency of global warming is fated. Here, on this path with economic growth and development goals, the primary question is what level of current and future cost or economic damage will be as a consequence of the global climate change caused by greenhouse gas emissions ? In the past, debates were about the economic benefits of growth and natural resource use, however today the concerns related to economic loss of global climate change is being discussed. At this point, the discount rate and the social cost of carbon, which can be used to calculate the present value of future global warming costs, have been developed to reduce the global warming threat. In this study, it was aimed to evaluate the social cost of carbon (SCC) framework, the models developed within this framework and the driving forces in SCC.

**Keywords:** Global Climate Change, Greenhouse Gases, Social Cost of Carbon (SCC)

# A Research on Renewable Energy Resources: Evaluation of Solar Energy Potential of Eskişehir – Han District

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Today, the population of the Earth increases continuously, significance advancements in technology are achieved and cities turn into intensely populated spaces. This rapid cycle results in unplanned constructions and expansions. Expansion increases the energy need, which is mostly provided from fossil fuels. One of the most important consequences of fossil fuel use is the global climate changes and the resulting global disasters. These disasters threaten not only the cities but also the rural areas. Because of these negative environmental effects, especially developed countries have started to focus on new resources to meet their energy demands. Considering this, the most important agenda of the century has become the renewable energy resources. Amongst the significant examples of this case is Germany's innovative energy policies assured by national legislation in 2010 and its target to generate national energy demand from renewable energy resources until the end of 2030, and Sweden's investments on solar and wind energy in 2015. In Scotland, 97% of the household electricity was generated from wind energy in 2015, and Portugal has delivered more electricity from renewable energy than it has used in March 2018. Moreover, according to World Energy Council, the amount of fossil fuel use for energy generation is only 1% in Switzerland, while Norway produces 98% of its energy from renewable energy resources. China, USA, Germany, India and Spain are the leading countries in the field of energy generation from wind.

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**Key Words:** Renewable Energy, Solar Energy, Electricity Generation, Geographical Information Systems

# The Evaluation of Niğde Historical City Centre in the Frame of Ecological Design

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## ABSTRACT

Mankind imitated nature while interfering nature in their physical surroundings throughout history and they used basic natural and local building materials that was supplied easily from their near environs. The most important reason why the settlements belonging to the historical period reached today is the utilization of the technology and natural building materials of the period and constructions that use local sustainable materials and environmental resources effectively (Erdoğan and Yıldız 2017). However, cities with natural and cultural values and unique characteristics have been shaped in the process to the extent permitted by natural environmental conditions, and the pressure on the traditional character and ecological environmental factors of the cities that have evolved as a result of human activities, technological developments and changes with population increase has increased. The decline in urban quality of life due to changes in the natural and physical environment has also affected the social, cultural and economic lifestyles of individuals. In this context, the greatest oppression is on the historical city centers, in other words traditional residences.

As a result of global climate change and depleting natural resources or becoming unusuable, new ecological design approaches to improve urban ecology and increase the quality of urban life are on the agenda. In this context, it is possible to direct the ecological structure and landscape design studies by combining the present technology with the ecological design approaches existing in the traditional urban texture but facing the danger of extinction today.

In ecological design, the characteristics of structures in the city, topography, local climatic conditions, geological structure, underground and surface water resources are taken into consideration. Historical city centers are sustainable settlement areas that are designed considering the criteria such as open and closed space constructions, mass-space balance in the city, land use, local climate conditions, constructions taking into consideration factors such as sun and wind. Therefore, it is necessary to provide sustainable urban development in the historical urban centers in terms of ecological, spatial and socio-cultural aspects, to transfer the cultural heritage to future generations, and to meet today's needs.

In this kontext, Nigde historical city centre with open-green areas, traditional building and life culture is a settlement that can be evaluated within the frame of ecological design. The purpose of this research is to develop the proposals on the planning and design scale for the first degree urban conservation area considering the natural/cultural landscape features already protecting for

centuries in the design of traditional residential areas and conservation development plan as well as being able to maintain the existence of Nigde traditional urban fabric as an ecological settlement.

National and international books, theses, articles, papers, maps and reports were evaluated by conducting researches on theoretical bases and methods related to the Niğde historical city center and ecological design; land-study studies were carried out. The level of consciousness and socio-cultural structure of the local people as well as the physical environment conditions of the first degree urban conservation area in Niğde Historical City Center were examined and the current situation was evaluated according to the European Union Urban Sustainability Indicators design recommendations have been developed. Within the scope of the research, it is aimed to preserve and develop natural and cultural landscape properties of Niğde, to increase the amount of urban open green space per capita, preseve urban biodiversity, to provide mass-space balance in indoor and outdoor spaces, to fulfill the demands and needs of local resident. Besides, it is planned that this research will be guided in Niğde city as a whole and applications to be realized by local administrators, planners, designers and local people and contribute to Niğde City.

**Keywords:** Historical city center, ecological design, Niğde

# Use of Ecological Performance Criteria under the Scope of Green Certificate Assessment and Process Model For Settlements

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## ABSTRACT

Green Certificate Regulation for Buildings and Settlements (2018) gives the definition of green settlement as follows *"settlements with buildings that inflict minimum damage on environment throughout its lifecycle ranging from selection of location, design, construction, operation, maintenance, repair, demolition and disposal of waste, which are also energy efficient, environmentally friendly, as well as the infrastructure and superstructure"*. Spatial designs which take ecological success criteria into account contribute greatly to the protection of natural and cultural resources, energy savings, increasing awareness about ecology and environmental protection, providing a habitat for wildlife, storage of carbon, cleanliness of surface water, groundwater and air. This study provides suggestions of methods and techniques for measuring ecological success as well as a model for certification process within the assessment of green certificate for settlements within the framework of mentioned regulation. To that end, some indicators are examined notably the SITES v2 Rating System for Sustainable Land Design and Development and Singapore Biyodiveristy Index as well as others (Indicators for Environmental Success, Ocean Health Index, Human Development Index, World Health Organization Index of Urban Green Spaces, etc).

Use of environmental monitoring indicators for sustainable development is nothing new and has been used successfully in environmental policies. Indicators measuring ecological success also focus on sustainable development. Highest success value of each indicator points out the target value for spatial planning and design. Integrated value of all indicators will be helpful in understanding the interaction of indicators among each other within the system approach.

In Turkey, we face ever-increasing environmental problems in the metropolitan cities where the population is rapidly multiplying. The foundation of this issue lies in not including human-nature interaction in planning and design practises especially in the stage of establishing urban spaces. As long as this does not change, natural spaces will be damaged as the habitat and quality expands negatively, and the landscape will be transferred to next generations in a degraded way. Measuring ecological success of urban design and landscape design under the scope of landscape architecture can present criteria that may be useful in establishing a balance between the interaction of nature.

**Keywords:** Ecological Success, Green Certificate, Green Space, Urban Design, Landscape Design

# Assessment of Mogan Park in terms of Ecological Criteria

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## ABSTRACT

Open and green spaces have a great impact for having a breathing space for urban communities under the pressure of intensive urban life in terms of psychology, and engaging in recreational activities.

Urban parks that have an important place for the greening of the urban areas are indispensable for the polluted and noisy urban life of today. Parks are important for providing the feelings of nature, serenity for the urban people, quite place and returning the nature, even for a short time, as well as that fact that it is the area for natural life, provides the sustainability for the natural life and contributes artificial ecosystem of the urban by means of ecology. Having an ecological understanding of urban green spaces is essential for sustainable management.

Main purpose of landscape planning activities should be ensuring continuity of the ecosystem, rehabilitation it if it is degraded and provision of balance between protection and use.

Wetlands are used recreationally in many parts of the world, and they are the ideal places for informing communities, especially children about nature and ecology. Benefiting that opportunity of Mogan Lake would be also suitable for increasing awareness among urban population of Ankara Province which has a continental climate. This study has been conducted for analysing what criteria considered for the design of Mogan Park, which is situated near the Mogan Lake, and the contribution of the applied methods to the ecosystem both in water and near the water.

Main material of the study is Mogan Lake and Mogan Park established in its vicinity located in Ankara Province which has a national and international importance.

Stephen Venn's (2001) study of Development of Urban Green Spaces to Improve the Quality of Life in Cities and Urban Regions Ecological Criteria was utilized for an objective assessment of and comparison of green urban spaces on the basis of Europe in the selection of the method for our study. Venn examines green urban spaces under the main headings of; fragmentation, biodiversity, naturality, air quality, protection, hydrology and drainage. An assessment is carried out to investigate the current situation of Mogan Park, and to see whether the use is appropriate, correct and adequate in ecological terms.

Mogan Lake is a delicate ecological system in which there is a complex unity of water resources, geomorphology, structure of ground and soil, climatic characteristics and biological diversity.
Mogan Lake and its vicinity has an international importance for numerous rare bird and plant species. Therefore this area meets scientific criteria to identify Significant Bird Areas, Significant Natural Areas and Wetlands of International Importance. The area of study is within the boundaries of Gölbaşı Special Environment Protection Zone. Mogan Lake is a Natural Habitat according to the provisions of Bern Convention.

Valley where the lake is situated is an air corridor; and thus is vital for Ankara Province for the stabilization of climate.

Within the study, the importance of green area situated near the natural water reservoir to the urban ecosystem, the contribution of such an application to the urban ecosystem have been determined and they has been analysed in terms of the ecological principles. Moreover, the importance of protecting natural areas in and near cities has been explained and some recommendations have been made for the ecological sustainability.

**Keywords:** Urban ecology, wetland ecosystem, Mogan Lake, Mogan Park

# ENVIRONMENT - ENERGY - CHANGE 2

# The Role of Green Buildings in Future Cities and the Example of Aksaray City Center

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## ABSTRACT

The phenomenon of globalization that is happening in the world today affects developing countries and third world countries and tries to shape economic, social and cultural life of societies in the direction of economic goals of developed countries. In high-density urban life, people live an isolated life from the natural world. Urban infrastructure development, traffic management, residential solutions and active green space requirements are the primary problem for planners and designers. The first solution that comes to mind in order to offer a higher quality of life with more intelligent solutions is the sustainable cities.

In recent years, as much as in many countries of the World, Turkey's planning / architectural environment has also held several discussions on urban change. The green infrastructure, which is an important part of these discussions, and the green buildings which are part of it, can constitute a notable infrastructure system in the urban transformation due to the contribution made to the active green space system in the city. Green buildings are one of the measures designed to alleviate the environmental impacts of building stocks and their economic impact. In recent years, a rapid development process of green building has been seen and investigated.

In this paper, a critical evaluation was carried out by taking the knowledge of the research related to the green building on the world scale. Assessments of the most used green building evaluation systems, category criteria in the US, UK, Germany, Finland, Australia and Japan, the results achieved in comparison with their certification of weights and building processes Energy Performance Directive in Buildings in Turkey is the unique aspect of this study.

**Keywords:** Green building, urban green spaces, sustainable cities

# Responsible Tourism in the Context of Sustainable Use of Natural and Cultural Resources

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## ABSTRACT

Today, tourism accounts for 10% of the world's gross domestic product, 7% of total exports, and every 10 people are employed in the tourism sector. Due to the diversity of tour packages, cruisers, adventure experiences and freely chosen destinations, a large number of people travel around the world. All of the people's visits and activities lead to the change of local communities. However, the effects of tourism are not always positive. When not properly managed, demographic characteristics, social structure and relations, economic activity structure and sectoral dynamics, social values and behaviours, culture, structural environment and use of space, natural and cultural heritage, environmental resources can have important negative effects. For this reason, it is very important to adopt the concept of sustainability in a place where tourism development is the issue.

Sustainable tourism, according to the World Tourism Organization, is the simplest definition of "tourism" that fully takes into account the current and future economic, social and environmental impacts while responding to the needs of visitors, industry, circles and host communities. Recently, tourists are becoming increasingly aware of the importance of sustainability in tourism. Investigations made in 2015 show that tourists who are conscious about sustainable tourism and spend their expenditures in line with environmentally friendly preferences have increased by one third in particular in the last decade. In general, tourists are adopting a lifestyle with a "green consumer" approach and tend to activities that provide less consumption, rather than over consumption activities. In this sense, they also pay attention to the preservation of the natural and cultural resource values of the destinations they visit.

The concept of responsible tourism and responsible travel, which is a very contemporary concept all over the world today, has become a matter that both tourists and stakeholders who offer tourism services, or even local people, have been emphasized in terms of conservation of ecological systems. The WWF defined sustainable tourism as a type of tourism that meets the expectations of tourists, protects the elements of the destination, increases its value, and benefits the local people. It is seen that tourists with responsible tourism approach are frequently traveling individuals, and they become responsible tourists as a new way of carrying out their tourism activities. This group of tourists act in accordance with the behaviours, habits, traditions and customs of the communities that live in the region they visited during the touristic experience, considering the positive and negative effects on the environment, considering the place they visited as their own house, and behaving accordingly. Responsible tourism is therefore very important in terms of ensuring the sustainability of the natural and cultural values that contribute to tourism.

Ecotourism is an important subset of responsible tourism and the importance is increasing day by day. The International Ecotourism Society defines ecotourism in 2015, as “Ecotourism is a responsible travel to natural areas that conserves the environment, sustains the well-being of local

people and involves interpretation and education". In recent years, community-based ecotourism has come to the forefront in the development of ecotourism. Here, tourism is a tool that strengthens the ability of rural communities to manage tourism resources while ensuring participation of the local community in tourism development.

In this paper, moving from all these points it will be emphasized the importance of resource conservation for areas where tourism development is concerned; it should be stated that all types of tourism should be managed within the concept of sustainable tourism; sustainable tourism principles will be listed; responsible tourism for sustainability of tourism will be revealed and principles will be announced; ecotourism, which is considered as an important subset of responsible tourism, and community-based ecotourism which has become increasingly important in recent years will be explained; and suggestions will be made emphasizing the importance of responsible tourism in developing tourism destinations in terms of resource conservation.

**Anahtar Kelimeler:** Resource Conservation, Sustainable Tourism, Responsible Tourism, Ecotourism, Community-based Ecotourism.

# Assessment of Environmental Damage Generated by Hydroelectric Power Plants (HEPPs): Case Study of Araç Stream

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## ABSTRACT

The population in our developing country and therefore the need for energy is constantly increasing. Hydroelectric power plants (HEPP), one of the clean energy sources, are also used in our country as it is in the whole world depending on the increasing energy demand. However, besides the advantages of HEPPs in energy production, its effects on nature have also been a subject of constant debate.

Hydroelectric energy is a type of energy that is obtained by converting the potential energy of water into kinetic energy. Electric energy is produced by turning the turbines of the energy obtained by lowering the water from a certain height. The hydroelectric potential of our country is expressed as 433 billion kWh theoretically, while technically usable hydroelectric potential is 216 billion kWh. According to the Annual Report of the Ministry of Environment and Urbanization available hydropower potential is 158 billion kWh / year considering the existing investments with the aspects of economical, social and environmental issues. It is anticipated that this potential will be 180 billion kWh by means of the projects and plans to be developed. At the end of 2016, 12,380 MW of the 26,819 MW energy produced by hydroelectric power plants, which is at 46,2% rate, is the energy produced by hydroelectric power plants built and developed by State Hydraulic Works. While the first hydroelectric power plant was established in 1956; the potential has reached up to 567 HEPPs by 2018. This corresponds to an amount of 43.992 billion kWh of annual average hydroelectric potential production (Yaman and Haşıl, 2018). It is estimated that the number of large and small scale HEPP projects, which started to increase rapidly, will be 1,700 by 2023.

The share of HEPPs in electricity generation is 34.9% and hydraulic energy, which is a fast method lasting in short term, have been encouraged in recent years due to the fact that it is a cleaner and

renewable resource compared to resources such as natural gas, petroleum and coal in order to combat climate change and meet increasing energy demand. It is not possible to speak of sustainability, which is a balanced planning in case the environmental and socioeconomic impacts of hydroelectric investments go beyond the benefit of energy production.

Since forests are the areas that reserve the majority of productive water resources in the world the HEPP construction in these areas is very beneficial for electricity production. One of the most significant impacts of HEPPs during construction and operation is the spatial damage. HEPP construction in forested areas is planned on steep slopes. Along with transportation routes and tunnel construction for HEPP facilities planned a certain area in the forest ecosystem gets affected. This may cause the forest cover to be adversely affected and cause fragmentation in the habitats. As a result of spatial damage, the diversity of plants and animals will be affected, the water usage condition and quality will be changed, air quality will be affected, the risk of landslide and erosion will increase and visual disturbances will arise.

In this study, the spatial extent of environmental damage that was caused by the Zala River Type HEPP, which was established in Kastamonu City, Araç District, Araç stream, has been researched. The area where the HEPP is built consists of Black Pine and Oak tree species. Apart from the forest areas, the Z (Agricultural Area) stand type is also seen in the project area. 77.3% of the field in Araç district where the Zala HEPP is planned to be established is shallow and very shallow in depth and 84.9% is steeply sloped. The area where the HEPP is planned is also in the shallow soil depth class and is located within the steeply sloping land class. The area damaged by HES project is calculated as 17 hectares. A total of 1867 trees including 340 Oak and 1527 Black Pine were cut from the area. So the problems that may arise in the ecosystem as a result of spatial damage will be discussed in the scope of this study.

**Key Words:** HEPP, Environmental Damage, Araç Stream

# Pollution Problems Created by Disorganized Solid Waste Storage Areas: Bandırma City Example

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## ABSTRACT

Solid wastes are all kinds of materials that have been used, cause harm to the environment, and must be removed from living spaces. Throughout the existence of the humankind, especially the number of the population living in urban settlements has rapidly increased, urbanization movements have accelerated and the cities have rapidly changed and transformed. As a result, every substance produced and consumed by people has begun to return to the environment as waste. The desire to increase current technology and living standards day by day and ambition increase the waste accumulation even more. Considering environmental effects, non-disposed and non-recycled wastes pose great threats to nature. Solid wastes include household wastes, domestic commercial wastes, packaging waste, waste tires, batteries and accumulators, construction waste, medical waste, hazardous waste, market wastes. While the amount of solid waste per capita is 1.4 kg per day in the US, this value for Istanbul is 0.67 kg/person per day. According to TUIK 2012 data, solid waste generation in Bandırma, Balıkesir was determined as 1,49 kg/person day. Bandırma is a coastal city located in the Marmara region. Bandirma District is surrounded by the Erdek in the north, Manyas in the south, Gönen in the west and Karacabey (Bursa) in the east. Its surface area is 690 km² and its altitude ranges from 1 to 764 meters. The population of Bandırma is reported as 152,480, according to 2017 data. This study was performed to evaluate the environmental effects caused by disorganized solid waste storage, in other words, wild storage, in Bandırma city, and to propose solutions. As a result of the investigations and the obtained data, it has been observed that the disorganized storage area is in the urban settlement and have negative effects on the

environment. The disorganized solid waste storage area of Bandırma is located in Plot No. 1036, Parcel No. 66 and Sheet No. 112, 113, 114, 115 as dirt area. The solid waste storage area was determined as 252.088.66 m² according to data. The research method consists of observation, examination, photo-shooting, interviews with city-dwellers and statistical data obtained from institutions. As a result of the research in Bandırma city disorganized solid waste storage area and surroundings, it has been observed that it has excessive negative effects. Within these environmental effects, many factors have been identified that directly affect health and living spaces. Local authorities are responsible for the disposal and recycling of solid waste, and it has been regulated by law. As the cities develop and transform rapidly, it has become a necessity for this subject to take place in holistic planning. In order to reduce or even eliminate the effects of solid wastes on the environment, some precautions must be taken and all members of the urban community should be aware of this issue. Primarily, the waste production should be reduced. Wastes should be collected and separated as much as possible. Solid wastes should be decomposed by recycling or disposal. It has been observed that no infrastructure work has been done in Bandırma city and no precautions have been taken. In accordance with the solid waste regulation, an organized storage should be brought into use and recycling centers should be established. The environment is the most precious asset of humanity, and it is the duty of people to preserve, sustain, and hand down it to future generations. For this reason, the humankind has a great responsibility. With this responsibility, local governments and the people should take action in accordance with the study results and criteria determined to minimize the damage to the environment and nature.

**Keywords:** Bandırma, environment, disorganized storage, solid waste, urbanization

# Sustainable Development Scenarios for Cittaslow Uzundere (Erzurum): Tourism Master Plan And Biological Diversity Strategy Action Plan

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## ABSTRACT

Cittaslow concept emerges as a long-term approach based on ecological planning and sustainable management, which will include the traditional civic architecture, handicrafts, folklore, local cuisine and life rituals of the city's past, everyday traditional identities. A city's membership to the International Cittaslow Union is possible with 7 main-categories (Environmental Policies, Support and Protection of Local Production, Infrastructure Policies, Technolo- gies and Facilities for Urban Quality, Hospitality, Slow Food Cooperation and Awareness), 59 sub-titles and expected that they will meet the basic requirements, support the slow food movement and develop the actions for it, use the Slow City amblem in official correspondence, and place the sections that contain the quiet city philosophy in web and social media applications. In order to be a Cittaslow membership, cities are under 50.000 population and a rating system is applied to the criteria mentioned above. In this context, the city of Uzundere has been accepted as a member of the International Cittaslow Union in Portugal in 2016, since the population is below 50,000 and at least 50% of the expressed main and sub criteria have been fulfilled.

The aim of this study is to evaluate and present the process of local government's physical and social planning in relation to the projects carried out, the local strategic plans prepared and the process of participation in the regional plan and tourism strategy plans carried out at the regional level before the Uzundere district was accepted as a cittaslow membership. The study also Erzurum Uzundere Municipality and Uzundere District Governor's especially developed by Ataturk University's consultancy support and a long-term that context, continued in the 1990s Development Foundation of Turkey (TKV) beginning with 2005, the United Nations Development Program (UNDP), commencing in 2012 and the results of rural development initiatives implemented with the Eastern Anatolia Development Program (DAKAP) implemented up.
The method of working is based on the SWOT Analysis as it is used in the preparation process of the Uzundere Tourism Master Plan and also the Uzundere Biological Diversity Strategy and Action Plan. The SWOT Analysis in both action plans focuses on what the mission, vision and strategies of the strategy plans are conducted by local governments, public, universities and NGOs in Uzundere in seven main categories determined for the cittaslows.

As a result of the evaluations, in order to be in harmony with the financial support of Northeast Anatolia Development Agency (KUDAKA) and the Uzundere Tourism Master Plan prepared in 2011 by the Municipality of Uzundere and TRA1 Level 2 Region Regional Plan in 2010 and to benefit from its unique values in a sustainable manner, "Tourism Development Operational Program (UTGOP)". UTGOP is proposing 5 priority measures to support the 8 strategies emerged in the Uzundere Tourism Strategy (2023) document on the development of tourism sector in Uzundere region. These are: (1) Development of human capital and institutional capacity for tourism, (2)

Development of infrastructure based on AR-GE, Information and Technology for tourism, (3) Promotion of tourism and marketing activities, (4) Improvement of physical infrastructure for tourism and supporting directly investment and (5) Natural and cultural environment protection for Tourism.

The Uzundere Biodiversity Strategy and Action Plan, prepared for the conservation and sustainable use of the sources of biodiversity of the Çoruh valley in Uzundere district and on a wider scale in similar and complementary nature, (2) To ensure the preservation and development of the cultural landscape that is developing in harmony with the natural environment and the natural environment; (3) To determine strategies for the utilization of Uzundere valley's resources of biological diversity in line with sustainable development objectives; (4) Identifying strategies and actions aimed at the potential of nature and sustainable tourism based on biological resources; and (5) Identifying strategies and actions to sustain sustainable use of the Uzundere valley by agricultural biological diversity sources.

On the other hand, examples of the projects and activities supported by the United Nations Development Program (UNDP), the EU Programmes, Development Agencies, Estaern Anatolia Regional Development Administration and other ministries, which support the cittaslow approach, are given in the scope of this study. Some of these are expressed in the form of Eastern Anatolia Tourism Development Project, Uzundere Florist, Let Tortum Flow Let Nature Live, DAPGençfest (Eastern Anatolia Youth Festival), Life Festival with Cycling Choruh Valley, Cittaslow Uzundere Book Cafe, Tortum Lake Fyord Park Project, Tortum Waterfall Landscape Design Project examples.
As a result, Uzundere district last compatible with 25 years in regional and national planning and development plans and in a way that is complementary developed local action plans, which implemented the project and the leadership of the district Uzundere Municipality 2016 for International Cittaslow Union as Turkey's 11th member.

**Key Words:** Cittaslow, Rural Development, Rural Landscape Planning, Tourism Master Plan, Biological Diversity Strategy,Uzundere

# Ecovillages and a Recommended Model in the Context of Reflective Thinking

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**ABSTRACT**

In the first quarter of 20th century, technological developments and the setting new requirements for pace of development has led to emergence of purport such as “global transformation”. This situation leads people to look for new structures, contents and solutions.

Especially since the 20th century, implementations and approaches have had an impact on the ecological balance and as a result the pressure on resources and resource consumption have increased. In addition to that, the climate change, which has become more and more perceived by the results, has brought many problems. The excessive use and depletion of non-renewable energy resources has also accelerated the global climate change. Fossil fuels consumed with the thought that more energy will be produced in a short time cause great harm to the nature compared to the energy produced when they are thought in the long term.

Consumption of and dependence on fossil fuels has led to the accumulation of greenhouse gases in the atmosphere, as well as creating an economic burden. This change in the atmosphere has set the stage for unexpected new events for the global climate. Increase in the frequency and effect of extreme weather events such as drought, floods, severe hurricanes, increase in temperature, increase in number and effect of forest fires, rise in ocean and sea water levels, increase in acid ratios of the oceans, and melting of glaciers; affect plants, animals and ecosystems, as well as human communities. All these

experiences oblige man to adopt new environment-friendly approaches for a sustainable future.

Ecovillages are self-sufficient, refrain from urban life and its pollution, competition, intense consumption; living spaces created by individuals who want to live in harmony with each other and with nature.

Ecovillages try to combine a simple life style with a social environment based on solidarity principle. They support a sustainable, collective and productive life, as well as a solution to economic dependence. Ecovillages have inhabitants from urban or rural communities; ecological design, efficient use of energy, green production and permaculture. The ecological ecovillage approach depends on respecting to nature while meeting their vital needs. The concept of ecovillage started to be used for the first time with the establishment Solheimar Eco-village in Iceland in the 1930s.

Despite of the advancements in science and technology, man has yet not been totally able to produce accurate solutions to problems such as hunger, energy, and social issues, despite such opportunities. The solutions obtained and the way they are used are not sustainable either. The biggest proof of this is human-induced climate change.

Man's attack on nature has already been impossible to ignore. This attack has some dangerous consequences for the future and has to be stopped at some point. For this reason, human have to work in harmony with nature and at the same time maintain a proper life style.

These problems have been investigated in terms of and experiences of certain ecovillages / eco placements and expectations from them that can be regarded as promising developments against the ever increasing environmental and urbanization problems.

Findhorn, Damanhur, Auroville, Kibbutz, Cyrstal Waters ecovillages which have their own characteristics; will be examined in terms of their own social and administrative structures, regulations, perspectives, structural and environmental planning and design concepts.

Today, for a sustainable life, the generations need to be raised in a clean atmosphere and healthy environment, in harmony with nature, individually and socially. With this approach, a "living" eco-village project is targeted.

As a result, in this paper a model proposal for establishing settlements where environmental threats are minimized will be set out from these examples.

**Keywords**: Global warming, ecovillage, sustainability, renewable energy

# Concept of Civil Society Organization, Civil Society Organizations Working for the Environment and Their Situations

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## Abstract

Behind the global environmental problems that threaten Earth's existence is the effect of people using nature as a resource that is never exhausted. Human needs are endless, resources are limited. Human is destroying natural resources mercilessly and causing destruction of nature-human balance. The decline of forests, the pollution of water resources, farmland, and the disappearing fauna - flora species can be listed as harmful consequences of people to nature for rent. Rapid population growth has a major impact on the negative consequences.
Another very important environmental problem nowadays is the climate change that occurs with global warming, which is a serious threat to the lives of all living beings present and is rapidly increasing due to human factors. Every unconscious behavior that people make to nature is growing and returning to itself.The greatest good that we will do to future generations is to make plans for them this day. Uncontaminated water and air, an uninhabited ozone layer, unimprecipitated biodiversity, a climate that will leave an unspoiled world. Within this, environmental awareness should be increased in society. At the point of this consciousness, there are great duties and responsibilities to non-governmental organizations(NGOs). Criteria of Civil Society Organizations; being outside the state is a democratic process in itself. Significant environment-related NGOs in the world and Turkey is located. GREENPEACE (Green Peace), which deals with all environmental problems in the world, WWF (World Wildlife Protection Foundation), which aims to stop the deterioration of the natural environment in the world and to create a future where human beings live in harmony with nature, protecting the integrity and diversity of nature, such as the International Union for the Conservation of Nature (IUCN), which aims to inspire, encourage and assist all communities living in the world to ensure that.

Similar NGOs working on the same issues and focusing on solutions have been established in our country. These are the main examples of Turkey desertification and erosion

control, land along the water, forest, biodiversity, like all natural data protection tasks acquired TEMA (Turkey Combating Soil Erosion, for Reforestation and the Protection of Natural Resources Foundation), Turkey's be left with the flora and fauna in the unique richness DHKD (Nature Conservation Society), which works in order to protect these values, aims to develop ÇEKÜL (Environment and Culture Values) which develops projects in city-basin-region-country scale in order to protect natural resources, cultural heritage and human as a whole and protect natural and cultural environment. (Nature and Environment Foundation) established with the principle of creating environmental awareness in people living in the society, establishing a recycling system for packaging waste in our country and contributing to consumer education k established to CEVKO (Environment Protection and Greening), about the environment and nature conservation, promote politics over environmental policy, respect for diversity, democratic, participatory TÜRÇEK, an organization with understanding (Turkey Environment Protection and Greening Institution), our seas to our economy, our health and well-being providing fault, sea and TURMEPA with the aim to prevent damage that could occur in the coast (Turkey marine Environment Protection Association) example NGOs located between.

These organizations have some weaknesses; the lack of sufficient communication between the institutions and lack of cooperation, the lack of trust in the civil society organizations, the inability of the state-civil society associations to reach a sufficient level, the lack of competence of the NGOs on the administration.

The strengthening of ties with society, the environment and ensuring the continuity of NGOs in this study will explain the importance, the creation of environmental awareness in Turkey and intends to expand NGOs of his activities will be discussed.

**Keywords:** Environmental problems, Environmental awareness, Environment and Civil Society, NGOs, Civil society and Turkey

# Citizen Science Concept and Examples from Turkey

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## ABSTRACT

Citizen Science is a concept that has emerged in order to ensure the participation of scientists or volunteers who are not professionals or non-scientists in any field profession in the scientific research process. Thanks to citizen science applications, both community education and data collection are provided. However, future decisions can be made in the analysis of the collected data and in the light of the actual data obtained from the wide sources. Citizen science studies; while contributing to the development of the environmental consciousness of the volunteers, at the same time enabling cooperation with the public. With the topics discussed at the local, regional, national and global scale, it is possible to obtain more data by reaching more people in the field and on the scale. In addition, citizen science helps create policies for the development of community-science relationship.

Nowadays, citizen science studies have applied in many fields in the world is a very new concept for Turkey yet. In addition to this, many studies on the subject include citizen science applications. The rapid development of communication technologies in recent years has made mobile and internet access, which can be considered as luxurious yet 20 years ago, to be among today's essential comfort criteria. Those who use technology, knowingly or unknowingly, have come to be part of citizen science studies / practitioners. In addition, mobile and web-based geographic information systems (GIS) applications are particularly helpful in data entry, display, storage and spatial analysis of collected data from different sources.

Civil society applications in Turkey are made through both state and private institutions. Government agencies such as the State Hydraulic Works (DSİ) and the General Directorate of Meteorology (MGM) encourage the public to participate in citizen science through various applications. State Hydraulic Works (DSİ) has developed mobile application of "Flood, Malfunction and Intervention Spatial Information System (TAMBIS)" using developing mobile technologies. The project aims to provide support to amateur observers in monitoring the meteorological events in the country by reporting the meteorological events in their environment to the General Directorate via a web address. Also, thanks to the large number of private and / or volunteer practitioners and participants, many field citizen science applications are striking. Founded in 2011, "Kar Sevdalıları" a snowy weather forecast for Istanbul, a forum site, continues to attract the attention of users. The "Ya Yakarsa" web page is a citizen science practice that studies the territories, numbers and characteristics of jellyfishes in Turkey. E-applications such as The Atlas of Birds of Turkey, Turkey's Nature Observers, Trakuş, Kuşbank conducting studies on the biological diversity of Turkey at the

same time contributes to citizen science. All of these cases are based on ensuring citizen participation in scientific processes.

The aim of this study is to provide the explanations of the concept of citizen science and to summarize the work done in Turkey. As a result, the participation of civil society in scientific processes is undoubtedly very important. Increasing the use of these practices should be ensured by making people conscious. Because technology is now in a position that is easily accessible to everyone. This will bring a more pluralistic approach to today's complex problems and will contribute to raising awareness of the society in the face of these problems.

**Keywords**: Citizen Science, public, web-based geographic information system, Turkey.

# CITY - URBAN LANDSCAPE - CHANGE 1

# Change of Landscape in the Vicinity of Van City Center and its Vicinity from the Green Infrastructure Framework

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## ABSTRACT

Although land use trends and planning strategies vary according to geography, processes such as increasing daily population, urban land use, urban expansion, inauguration of agricultural areas, settlement on the coast, filling wetlands and waterfalls, green spaces within and around the city, ecosystems and habitats they increase the oppressions they face and result in damage or even loss of these areas. Today, one of the most important reasons for the change and fragmentation of habitat is urbanization and urban expansion. These destructions in and around the city result in the damage of the life support systems of the cities, the destruction of habitats in the city and its surroundings and the isolation of living species. All of these processes result in the loss of living and quality of life for the people in the cities and the damage to the natural life and ecological processes in and around the city from the other side. In this context, today, various planning approaches have been developed in order to make cities and surrounding areas more livable and to prevent the loss of habitat resulting from fragmentation of natural landscapes and to ensure the continuity of the functions of ecosystems. Especially since the middle of the 20th century, spatial planning approaches and strategies such as ecological networks, green corridors and green infrastructure have been developed, in particular to prevent habitat loss resulting from the breakdown of natural landscapes, to prevent damage to ecosystem functions and to prevent loss of biodiversity. Green infrastructure planning and design process; is an approach that targets natural and human-focused solutions based on ecosystem services reaching people from nature and observing conservation-use balance of natural resources. Green infrastructure is, according to some, an approach to some people or a tool for others. Green infrastructure; It includes natural and cultural areas of different characteristics and different dimensions such as parks, gardens, agricultural areas, wetlands, forests, road trees, rivers, natural reserve areas, historic areas, lakes.

Despite the almost untouched natural landscape in its surroundings, the natural and rural landscapes of Van City and its vicinity; urbanization, unplanned urbanization, urban sprawl and settlement, the filling of the roads passing through the city or taking them along the canals, the filling of the shores of the Van Lake, the opening of wetlands as an agricultural area, or the use as a waste area. Particularly in the coastal waters of Van Lake and coastal wetlands, there are problems such as being used as a solid and liquid waste area, filling of reeds, incineration and drying. Urbanization rate is decreasing as urbanization goes to rural areas but unplanned formation is observed. It is also observed that the open and green areas of Van city center and its immediate vicinity are quite small and the existing areas are quite fragmented. In this context, it can be said that the natural and rural areas of Van City and its immediate surroundings are facing unsustainable change. In order to prevent this negative change process, it is necessary to increase green areas, protect natural habitats, improve ecological connections and processes in Van city center and its vicinity. In this context approaches such as green infrastructure planning to prevent

and even reverse the negative change of the natural and rural landscapes in the city and the periphery of the city come to the forefront.

The purpose of this report is; Van Noting the problems such as unplanned urbanization in the center and vicinity of the city, the failure of the users to observe the conservation and utilization of natural resources and the local governments' protection of natural resources and the use of sustainable land uses, the change and breakdowns in the green infrastructural components in the city, the development of open green space applications.

In this context, satellite images from 1990 and 2016 belonging to Van Province show the changes in the use of space in Van city center and nearby area, the change in area usage through ARCGIS 10.2 with controlled classification and NDVI analysis. Thus, the breakdowns and changes between the green infrastructure components in and around the center of Van City have been determined. For changes in the disruptions and fields that occur between green infrastructure components;

1. Performing rehabilitation work in wetlands and taking precautions to prevent burning and drying of reeds,
2. Ecological passages such as green bridge, green road and refuge should be made to eliminate the breaks that occur between the green infrastructure components of the transportation networks and to pass the living beings,
3. Because of this, the city is under the pressure of urbanization; city parks, neighborhood parks, sports grounds, therapy gardens, children's playground,
4. The users of the area should be aware of the issues such as protection and use balance of natural resources,
5. Local governments need to take precautions for problems such as throwing garbage and debris into wetlands and shedding of wastewater. In addition, urban development strategies should be developed based on the sustainability of natural resources,
6. In order to serve as a fresh air corridor for the rivers in the city, open green field applications should be developed in the vicinity,

the above suggestions have been developed.

**Key words**: Open-green areas, habitat fragmentation, field use change, urbanization.

# Investigation of Green Area in University Campus: A case study of Nigde Omer Halisdemir Campus

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## ABSTRACT

The university campuses that are included in urban areas are not only places providing educational activities, but also contributing to an urban identity through social-cultural activities. However, there are many constructions in order to meet the demands of developing universities, especially in central campuses. In this case, a good campus green area planning is very important both campus employees and quality and reliable life of students. In this study, the change of land use with respect to years of Nigde Omer Halisdemir University Central Campus has been examined using Geographic Information Systems (GIS) and Remote Sensing (UA) techniques. The satellite images of the campus and its surroundings for 2009-2011-2013-2014-2016 years was used. These satellite images have been transferred to ArcGIS 10.4.1 software and the existing green areas of the campus area have been digitized and mapped. As a result, a loss of green area has been detected total of 37.20 % between 2009 and 2016. In addition, the ratio in the total area of open areas within the campus, the ratio to the campus population of the open area and some evaluations related to the green areas such as existing and created later forest areas on the campus were made and recommendations were made about the subject.

**Keywords:** Open Green Area Management, GIS, Nigde University Campus, Remote Sensing

# Usage of Natural Plants in Urban Design and Economic Importance

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## ABSTRACT

Planting materials have effective usage with their aesthetic features as well as functions in urban design. This situation makes plant producers dependent on the outside and restricts the employment area. The aim of this work, which is done by going out of this problematic point, is: Determination of the contribution of plant species selection to the economy in urban design as well as ecology. Plant selection suits the urban economy positively because it can provide a sustainable green space. Plant materials are used with different functions in various qualified areas ranging from housing garden scale to to public green areas such as urban parks in cities. In housing gardens, the socio-economic status of the users, tradition-customs, habits and other cultural characteristics are the determining factors. In the public sphere, it is essential to use the most appropriate species in terms of maintenance and irrigation according to the ecological needs of the region. Thus, the most efficient and economical results will be obtained and will be spread to the city.

It has been determined that there is a positive relationship between plant diversity and economic wealth according to the work done (Nelson et al., 1998). In addition, the age and cultural characteristics of the city can influence diversity. According to Tarie, species introduced into an area where human activity is present are starting to reproduce themselves in urban areas. These changes in urban flora and vegetation result in the disappearance of natural species and the tendency to naturalize unnatural species. Both tendencies have been accelerated since the mid-19th century (Sukopp 2004). Plants are the basic building blocks of landscaping architecture. They have an important place in both urban and rural planning and design (Eroğlu et al., 2005). As a landscape worker, plants are non-static, dynamic entities that are constantly evolving. Plants with functional and aesthetic benefits have a distinct place in our lives (Güçlü 1994). Besides, plants have visual and functional effects on urban ecology. The open and green spaces between the massive and concreted masses of the cities and the trees which are their dominant elements; visual and functional effects and the ongoing interaction between the human and environmental systems (Booth 1990). Especially in urban environments, the establishment of this balance gains even more importance.
The hause units and nearby areas have rich species composition due to their preference for landscape usage (Turner et al., 2005). Functional and ecological characteristics of plants, especially visual and aesthetic properties, are determinant in this issue. In addition to these, a city's socio-cultural (Hope et al., 2003) and regional characteristics are also influential in the choice of plant

species. All these studies and findings showed that; the diversity of plant species in residential and residential areas is very important. Research on plant species diversity needs to focus on urban areas and urban ecosystems. In the study conducted by Acar and Sarı (2010), they stated that each city can find its own species richness and natural species that can adapt to these regions. Designs with these plants should be developed in the cities. It is known that in our country urban landscape designs are not sufficiently utilized from natural vegetation cover. However, our country has a rich floristic structure with its geographical location (Cengiz vd., 2013b). This situation arises from the lack of inventory of natural plant species, the lack of standard of production, the lack of adaptation, and not being sold in nurseries. Therefore, it is preferred to use exotic species in landscape applications (Cengiz et al., 2013a, Erduran Nemutlu, 2013, Yazici and Gülgün, 2016).

The use of natural plant species in landscape design application areas should be increased because of its low cost and ease of maintenance, high adaptability ability, plant diversity in urban landscape applications, its contribution to urban ecology and its importance as a city identity item (Cengiz et al., 2013a; Erduran Nemutlu, 2013, PAD, 2014). These plants should be easy to obtain without importing. Efforts need to focus on education and natural plants (Gagliardi and Brand, 2007). Effective use of natural plant species will provide significant contribution to the landscape economy, and hence the national economy, on the basis of sustainable urban landscape, urban ecology and sector.

The method of work done, literature review and observations as secondary data are based on an examination of data obtained from interviews with local authorities. It has been determined that the use of natural plant species in urban landscape is more economical and sustainable and that the natural vegetation of the region is easier to adapt to the surrounding environment. It is important for these species to spread their use in order to protect plants and transfer them to future generations. These plants gain urban image while strengthening the urban economy.

**Keywords:** Native plants, urban economy, urban image, urban landscape

# Re-thinking Expo Sites as Urban Landscape Legacies

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## ABSTRACT

This paper aims to discuss the problems faced in post-use of the Expo sites, with special attention to the Expo 2016 Antalya (classified as a horticultural expo), and design strategies to promote environmental and economic sustainability.

"EXPO" is a widely used abbreviation of an international exhibition which is defined as "a display which, whatever its title, has as its principal purpose the education of the public: it may exhibit the means at man's disposal for meeting the needs of civilisation, or demonstrate the progress achieved in one or more branches of human endeavour, or show prospects for the future" in 1928 Paris Convention relating to international exhibitions. The convention led to establishment of the International Exhibitions Bureau (Bureau International des Expositions - BIE) which is an intergovernmental organisation responsible for regulating non-commercial international exhibitions. Currently, there are four types of Expos, in different fields, regulated by BIE; (i) world expos, (ii) specialised expos, (iii) horticultural expos and (iv) Triennale di Milano. Except Triennale di Milano, expos take place in different countries that are members of BIE.

Hosting expos can be considered as a prestigious activity for countries in terms of nation-branding. On the other hand, a large capital investment and a well-organised physical infrastructure are needed in order to achieve the Expo standards required. Similar to other mega-events such as Olympic games, organising an expo also requires building relatively large-scale and complex facilities within the urban environment. However, since these events are temporary, post-use of the event sites becomes an important subject for both environmental and economic management aspects. Today, urban areas are faced with various environmental challenges caused by huge amounts of built-environment. A built-environment alters natural ecosystems and landscapes, often with negative and irreversible consequences. Therefore, every piece of land in an urban landscape should be assessed and evaluated in detail to provide sustainability in physical planning

and design processes. Although the first examples of World Expos were located within or close to city centres, regeneration and transformation of deteriorated areas in urban periphery through such an investment has been preferred in recent Expo examples. Furthermore, BIE adopted a resolution which emphasizes the importance of "the reuse of the site and its infrastructures after the exhibition" in 1994, with regard to exhibitions' improvement of quality of life. On the other hand, sustainable use of the expo sites throughout the world is still on debate.

In 2016, Turkey hosted the Horticultural Expo with the theme "Flowers and Children", in Aksu, Antalya. The Expo, constructed on an area of 122 ha, was opened in April 2016 and gathered more than 4,5 million visitors during its six-month run. Although the sub-themes of history, biodiversity, sustainability and green cities were developed under the motto of "a green life for future generations", the site selection for the Expo was criticised by many NGOs, researchers and locals due to the fact that the site is surrounded by fertile agricultural land and is within the watershed of Aksu river. Moreover, today, after two years of the opening of the Expo, the debates on how to use and manage the site afterwards is still unclear. According to BIE, the Declaration, that was made on the closing day of the Expo, states that the site is "*to be used as an international and training centre to promote international cooperation, to share knowledge in tackling agricultural problems and to raise awareness of key environmental issues*". On the other hand, the management of the site has been entrusted to the "Prime Ministry Privatization Administration" and since 2017 meetings and workshops have been held to decide "how to use and privatize the Expo site". One of the scenarios includes transformation of the site into a botanical garden. Although a botanical garden sounds an appropriate choice for post-use of a Horticultural Expo, the design of the site seems to have some drawbacks, due mainly to the large amounts of hardscapes, built structures and the general design concept.

The paper will highlight the issues behind the post-use of Expo sites through the case of Expo 2016 Antalya and will address possibilities for effective and sustainable use of the Expo sites by developing design strategies.

**Keywords:** urban landscape, Expo sites, post-use, landscape design

# Determining the Use Qualities of Open Green Areas in Training Areas and Creating New Models

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## ABSTRACT

The urbanization that develops due to the increasing population density in the cities causes the green areas to disappear unconsciously. The education areas located in the central regions where the city population is active and where the city is actively used are located in narrow spaces lacking green spaces. These open green spaces created in the educational arenas for children to meet their recreational needs and contribute to their education constitute potential open breathing points for cities, although they are inadequate. The design of these educational areas, which constitute important open green areas of the city, needs to be re-examined. Children who spent most of their time in school spend their remaining time indoors, playing their games in virtual environments, and limited in relation to the environment. The importance of open spiritual and physical development of children in open green spaces within the educational process is indisputable. It is an important part of education to provide open green areas that will enhance both educational and physical and spiritual development of children by using nature effectively. Light green spaces are the areas where children can develop their skills and have a variety of activities according to the child's fiction. The nature of the landscape and landscape for recreational use also diversifies playgrounds. Natural playgrounds offer more space usage options due to lack of material boundaries. In this context, the topography of the area can be used as a game surface and children can organize games sensually and visually in these areas. At the same time, it offers a variety of uses in large lawn areas that are laid out within playgrounds. If these clear green areas belonging to the education areas are well planned and managed, the user volume is not limited to the school users but also the recreational area for active and passive use of green areas can be presented to the user in the neighborhood scale. These areas should be well-constructed from vegetal and structural aspects and should be easy to use spatially. At the same time, by using design principles and items, people should be directed to their field use and the attractiveness of the areas should be increased.
Work located in the eastern Black Sea region of Turkey was held in the city of Rize. Rize is a coastal area with rich biodiversity and generally characterized by steep, uneven terrain. Doğuş Çay Elementary School, Şevket Assistant Secondary School and Mehmet Akif Ersoy Elementary School located in the city center of Rize were selected as study areas. The aim of the study is to identify the current situation of the open green areas in these identified schools and to introduce new model designs that will meet the needs of both the school users and the users in the neighborhood

where they are potential green areas. Observations were made in order to determine the nature of the use of the open green areas of the designated schools, and the existing physical data in the area were removed. Both physical and plant materials are included in the physical data, and the intensity and fitness of use of these data are evaluated as observational. The use of school gardens is categorized and the school's capacities are kept in view along with the current data, and the amount of green space and playground per capita for each school is calculated. A new healthy, comfortable, open green area proposal has been developed that will contribute to the education process of the children and enhance their creativity. For this purpose, questionnaires were applied to students and trainees, 50 of them from each school. In the questionnaire, the satisfaction ratings, needs and needs of the school garden were questioned. According to the results of this survey, spatial landscape design recommendations for school gardens have been developed. While these designs are being made, the examples in the modern landscape have been studied by going beyond the standard game elements and attention has been paid to creating designs that are close to nature and nature. With this study, it will be ensured that the education areas give a light to the landscape design and that the contributions of the students to the landscape design are spread.

**Key Words:** Open- green spaces, children playground, landscape, school gardens

# Conceptualization of Interdisciplinary Landscape Project Over 'Resilient Coastal Community' Phenomenon

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## ABSTRACT

Urban communities have increasingly been posed by complex socio-ecological challenges of this century, call for some innovative and state-of-art tools, media and methods in planning and design domains particularly. Today's urban communities should fundamentally position themselves against some catastrophic effects resulting from climate change, depleting natural resources, lack of community health and well-being and social inequalities. These all push forward interdisciplinary project media to operate in new and exclusive circumstances in which tools, process, strategies and methods alike should be re-introduced to privilege community participation, life quality, social and ecological justice.

This paper concentrates upon landscape-based interdisciplinary project practice and conceptualization of this practice over coastal community's resiliency -withstanding + flexible + adaptive + recovery).

Expanding its epistemological knowledge, landscape can act as a tool, material and approach to comprehend our physical world in order to shape and unite (un)built environments in planning and design domain, and expand its purview overwhelmingly in interdisciplinary settings. So landscape incorporates natural and cultural dynamics, and thus increases the mobility of interdisciplinary project setting. Embedding landscape context (including a set of regional, urban/rural and local agenda) within interdisciplinary ambience acknowledges innovative, mobile and adaptive approach in dealing with 21$^{st}$ century's socio-ecological challenges. This surely conveys new meaning and mode of intervention to urban fabric while increasing considerably the efficacy of interdisciplinary project media.

Interdisciplinary landscape project associates urban infrastructure with public space and life, and this incorporation basically synthesizes planning, design, management and engineering as a new formulation of urban intervention / design. This paradigm shift consequently involves some landscape-based approaches (i.e. blue-green infrastructure, landscape infrastructure, landscape urbanism, ecological urbanism, planetary urbanism, regional landscape design, ecological / sustainable urban design …) around urban resiliency, sustainability, ecological succession, mitigation and adaptation to form the underlying structure of multi-functional and interdisciplinary landscape projects.

As a new way of thinking about the planning and design of coastal communities and regions, coastal resiliency, according to 'National Oceanic and Atmosphere Administration', is the ability to adapt to changing conditions and withstand -and rapidly recover from- disruption due to emergencies.

In the face of climate change effects (sea level rise, flooding from storm surge …), new strategies for creative and collaborative approaches to resilient urban community incorporate flexible natural systems into traditional infrastructure while recognizing a suite of urban growth, community needs and ecological processes/systems within the landscape context.

Interdisciplinary landscape project addresses almost all aspects of coastal landscape(s) in landscape context, in which coastal infrastructure along with urban fabrics are committed to cultivating an appreciation of sustainable urban structures against sea-borne effects. Hereby ecological processes, engineering/urban/landscape infrastructure, social solidarity, prospective economic outlook and aesthetic concern should be scrutinized to questioning the resilient coastal community. Coastal resiliency across the world has recently gained new momentum in research, project delivery and practice. Some coastal cities including Boston, Miami, and İzmir have been investigated in terms of coastal resiliency and its relevance with some project pursuits. İzmir would then be evaluated through a suite of coastal design projects and green infrastructure planning project, and these works are supposed to conceptualize interdisciplinary landscape project.

In conclusion, this paper has, in both concept and operation, aimed to evidence the relevance of climate change effects (as the source of matter) and resilient coastal community (in the form of strategies and objectives against these effects) with interdisciplinary landscape project (landscape-based urban intervention).

**Keywords:** Landscape, coastal resiliency, urban Project

# CITY - URBAN LANDSCAPE - CHANGE 2

# Evaluation of Pasabahce Promenade Area (Sivas) in terms of Rural Landscape Principles

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## ABSTRACT

Urban population is under rapid increase globally. This inrease in the city populations pushes the urban areas to a trend of being more crowded, of more stressful conditions and having a low quality of life. Getting away from the cities, leisue time activities in rural and natural environments has become compulsory and recreational. Rural areas are the lebensraum (life space) that help humankind to meet their intrinsic needs of being intimate with the nature, that reflect the original lifestyle, sociocultural values, traditional myths and architecture of the local people, that cover the recreative and social life aspects. Rural areas are sometimes the connecting bridges between the urban areas and natural areas, and sometimes are employed as the buffer zones between the said areas, too. Recreative components such as village landscapes, highway landscapes, camping areas, aquatic and littoral landscapes, agricultural landscapes are among the most distinct examples of rural recreation. Taking into consideration the factors such as developing technologies, urbanization, modern life and life satisfaction, rural recreation areas bear great importance in terms of human-human and human-nature interaction, and economical, ecological, sociocultural and cultural benefits. Immigration from rural to urban areas is taking place due to the fact that rural areas are under urban standards in basic elements such as education, health, infrastructure, transportation and living standards. For this reason, it is very important that rural areas are supported in terms of general landscape as well as basic elements such as infrastructure, socio-cultural structure, living standards, health and education. In particular, the rural landscape characters in the close vicinity of the city are very important in order to prevent urbanization, to preserve the basic principles of rural landscape and to convey the values to future generations.

Rural landscape areas differ from both urban and natural landscapes. These differences show themselves in architecture, land use, socio-cultural life, and landscape. These differences in rural landscapes are very attractive for people who get bored from urban spaces and want to get away from them. For this reason, in the design works done in rural areas; should be considered the general characteristics of rural areas and different designs should be applied from urban areas.

Within the scope of this study, conformity of Sivas/Paşabahçe Promenade Area in terms of the principles of rural landscape design is evaluated following the observations and investigations. The

study, which evaluates the constituents such as vegetation, equipments, aquatic landscapes, transportation, security, suitability to different age groups, recreational diversity, development opportunities, balance of preservation-utilization, mobilization of local people and energy issues, benefited from the opinions of the experts of the subject matter and the stuides conducted in this field. As a result of the study, it is seen that the appropriateness in terms of the furniture and floor materials selected in the landscape designs made is sufficient but mistakes are made in the selection of the suitable plants for the rural areas. When the study is assessed holistically, the result have been it is an model design for rural areas.The study envisioned to be a leading one for the criteria in the phases of design and application for the landscape areas to be designed in rural recreation areas.

**Keywords:** Rural recreation, Rural Landscape, Paşabahçe Promenade Area, Critical of Rural Landscape.

# Examination of Landscape Equipment Elements in Terms of Ergonomic and Anthropometric: Bulent Ecevit University Farabi Campus Example

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**ABSTRACT**

Anthropometry that is a scientific discipline assesses the appropriateness of the physical spaces in which human activities and ıt needs are realized by determining human body measurements. In every kind of equipment design that human will use, the measurements of the people, the area of activity and the measurements of all kinds of equipment elements (machine, vehicle, furniture, etc.) in that area should be evaluated together in a common function. Ergonomics is taking into account the physical capacities and tolerances of humans, the system is a research and development tool seeking to establish the basic laws of human-machine-environment compatibility.

The campuses express the areas where social-cultural activities are carried out and at the same time the visual and functional features of outdoor designs are used together. In this context; it is important to design of landscape equipment elements that are provided with education and training in these mass living areas to be suitable for anthropometric measurements.

Within the scope of the research, the urban equipment elements in the Farabi Campus of Bulent Ecevit University and their suitability in terms of ergonomic and anthropometric aspects as well as visual qualities were examined.

The research material is constituted by outdoor landscape equipment elements in Farabi Campus of Bülent Ecevit University in Zonguldak province. During the study, on-site observations on the use of various urban landscape equipment elements within the research area and photographs of the existing landscape equipment elements were taken in the campus area.

By comparing the anthropometric data in the light of the literature information, it can be seen that the outdoor landscape equipment elements with ergonomic standards. The anthropometric data were compared in the light of the literature and it has been researched whether the outdoor landscape equipment elements located in the campus area comply with ergonomic standards. In the light of obtained data and evaluations,

positive and negative aspects were identified and solutions for a more contemporary, more useful, more livable campus were presented.

**Keywords:** B.E.U.Farabi Campus, Landscape equipment elements, Ergonomics, Anthropometry

# Urban Green Area System Assessment of Düzce Province Akçakoca Settlement

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## ABSTRACT

Urban green areas are areas where natural or semi-natural ecosystems are transformed into urban areas with human impact. Urban green spaces provide the link between urban and nature. In this context, green areas reflect areas close to natural or natural areas surrounding cities. Green areas are often the continuation of landscapes around the city. In addition, urban green space systems provide many benefits that meet the needs of urban people in particular. As the urban green areas are vital for our quality of life and the majority of the population will settle in urban areas, the open green spaces of the city, the city's breathing places are at the center of the discussions on urban planning and sustainable development.

When the city is considered as a whole, the residents of the city need the quality of life for the areas with green infrastructural systems as much as they need the architectural structure and transportation route. These green infrastructural systems, which have all kinds of recreational potential, providing urban integrity such as city parks, urban parks, neighborhood parks, pocket parks, sports fields, picnic areas, refugees, playgrounds and other open and green areas as well as controlling erosion and surface flows, reducing environmental pollution, ecological, economic, physical, social and aesthetic functions such as micro-climate regulation, providing living spaces for wildlife, and sustainable environmental assets. To this end, these qualifying areas need to incorporate planning and design and functionality together. Urban light green area components can fulfill functionality with multi-purpose, spatial and temporal systematic planning and design.

The basic ideas of landscape ecology are essential when creating multi-functional green infrastructure systems that contribute to the natural and structured environment. As human intervention increases, fragmentation occurs in the landscape ecology and connectivity is reduced. The mosaic model of Ahern (2007), which has been adopted in applied landscape ecology, is to define and understand this shaping structure. The mosaic model uses three basic landscaping elements to describe the landscape structure: stains, corridors and matrix. According to this model, landscaping elements are defined and mapped for Düzce İli Akçakoca settlement. The main purpose of creating these landscaping elements is to carry out a study in which the concepts of green infrastructure within the settlement of Düzce İli Akçakoca can be examined together and a holistic landscape providing the connection between man and city is revealed. Urban green area components in existing and development areas are classified according to their spatial dimensions

according to the field observation, field studies, office and analysis works, master building plan and current development plan, and the distribution of green areas in the residential areas are examined according to this purpose and the amounts of green areas per capita It has been identified. The needs and accessibility distances were calculated on the basis of the population density and the "neighborhood park" area based on the neighborhood unit in particular. For the Akçakoca settlement, the green system road types were evaluated in two groups. The "green nets in urban scale" aimed at establishing a link between 'green nets at the neighborhood scale' and the green areas in the settlement have been determined as the proposed transportation routes aiming to establish a link between the green areas within the neighborhood borders. In addition to the pedestrianized but non-pedestrian road system, designed for pedestrian safety and comfort, with non-motorized road types targeted for streets and streets with controlled vehicle traffic, a bicycle path suitability analysis was conducted for Akçakoca Placement in terms of creating a proposal. As a result, Akçakoca has been introduced as a product that can provide a base for a project for green area components, needs and transportation for settlement.

**Keywords:** Urban open and green areas, connectivity, green area components, green infrastructure, access to urban green areas.

# Analysis of Plant Cover Change with NDVI Values: A Case of Karaburun Peninsula, İzmir

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## ABSTRACT

It is important to observe and evaluate changes in plant cover to reveal the relationship between human activities and natural processes in the decisions to be made within the framework of sustainable environmental and natural resource management. In biophysically similar areas, the effects of anthropogenic and natural effects on plants can alter the spatial and temporal distribution of natural habitat within that area and alter ecosystem composition and productivity.

It is very difficult to define the change that takes place in an area, with only one point of view.. GIS and Remote sensing technologies have made it very easy and cost-effective to carry out such analyzes.

In this study, GIS and Remote Sensing technologies were used to determine the characteristics of plant cover. In addition, human impacts, natural processes and vegetation changes have been tried to be determined both spatially and temporaryly. On the other hand, in terms of vegetation and ecosystem dynamics, application of plant overlay detection techniques has been carried out and the strengths and weaknesses of the methods have been discussed.

The study covers the Karaburun peninsula. The transformations that biological and anthropogenic processes brought about in the field of study were investigated by taking advantage of the change of plant index values. For this purpose, the Normalized Difference Vegetation Map (NDVI) index generated from Landsat satellite images was used. To determine the NDVI variations that are the ratio of the near infrared band (NIR) and the red band (R) difference and sum; Image Retrieval technique was used as a pixel-based change analysis method and the difference image of NDVI maps was taken. The result of extracting the NDVI images of two time periods from each other together, the image obtained contains the areas with and without change. Pixels bearing 0 values, positive and negative values are obtained as the image output result. Theoretically, there is no change in the pixel with a value of 0, the pixel with a negative value is positive, and the pixel with a positive value is a positive change. However, negative and positive values in the obtained image may not always give the real change. Therefore, it is necessary to determine a confidence interval in order to reach the correct result in the obtained image. The method of thresholding, which is

one of the most used methods to distinguish between the areas with and without change, is used. Classification is grouped into 3 classes, negative changing, positive changing and non-changing areas as a result of classification. As a result of these processes, it was found appropriate to evaluate the change maps obtained biophysically based on the watershed showing similar characteristics in itself.

Analyzes made on the basis of the delineiated basins have been found that the change is mazimum 30% of in the Karaburun Peninsula. The negative and positive changes occur in the agricultural areas. Changes in the agricultural landscape may vary depending on whether or not the agricultural area is cultivated at the time that the satellite image is taken, in relation to the type of plant cultivated and the growth period of the crop.

Negative and positive changes in the areas where settlements are located throughout the study area are observed in small pixels. In addition to this, changes taking place in larger masses are noteworthy. Changes in settlement locations and in the vicinity of relatively small fractional pixel sizes; The vineyard around the settlement is due to the variability of the plant species in the gardens and fields and the increase in their structure. It is observed that the massive changes that are noticeable with larger pixels are usually caused by the increase of the setlement areas such as the paths opening in green tissue. Forest fires coming to the peninsula can be observed as a negative change. In addition, the recent negative trends of wind power plants on the peninsula attract attention.

**Keywords:** NDVI, Karaburun Peninsula, Vegetation Change

# Analysing the Visual Landscape Quality of Çankırı Eldivan District By Analytic Hierarchy Process (AHP) and Fuzzy Set Technique

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## ABSTRACT

Visual landscape quality is the whole of relative evaluations from the aesthetic point of view, as well as, perceived landscape characteristics that are shaped by the observer's psychological, perceptual, cognitive or emotional processes. These perceived landscape features can be both natural factors such as landform, vegetation cover, water existence and cultural factors such as neighboring landscape, rarity, cultural changes. This study includes the analysing of the visual landscape characteristics of the Çankırı Eldivan region in terms of three types (natural, semi-natural and rural) of land use. In the study, the questions such as "Is the visual quality of the region adequate?", "In which type of use can visual quality values be higher?" and “Which one(s) of protection (1), protection-usage (2) and usage (3) alternatives is/are more or less effective than the others on these types of land use in point of visual landscape quality?" were searched.

In the district centers around Çankırı, although there are high visual landscape quality areas that may be suitable for recreational usage, these areas are not interesting enough in terms of recreation. In addition, clay content of the province-wide soils and gypsiferous rock structure of the soil lead to erosion in the region and poverty in vegetation cover. Thereby, these eroded and uncovered areas lead to a decrease of the visual landscape perception-liking in parallel with the visual landscape quality throughout the province. This tendency reduces visiting capacity of the areas. Natural, semi-natural and rural recreation areas around the Eldivan district center also have problems. The aim of the study is to show which one of the protection, usage and protection-usage alternatives is more superior than others by assessing the visual quality of the areas. In other words, the most appropriate alternative for the visual quality of the natural, semi-natural and rural recreation areas within the Eldivan district boundaries is determined by the AHP process and the Fuzzy Set technique.

The Analytical Hierarchy Process (AHP) is a numerical method that enumerates decision options and selects one from among multiple measures. In this multi-criteria decision making method, the best alternative is determined by giving numerical scores to each decision option. The method makes easier the solution by evaluating the elements via making a binary comparison between

them in order to make the problematic elements understandable by segmenting them and to develop priorities among them. The Fuzzy Set is a technique in which the properties of these elements are classified according to a certain rule and some elements are determined to be different or stronger than others in a set. In other words, Fuzzy Set is a technique developed through AHP and besed on determining whether an element belongs to the set or the membership level on that set.

The study was conducted in Çankırı Eldivan district center and the surrounding areas. Within the context of visual landscape quality assessment; natural, semi-natural and rural areas within the boundaries of the district have been researched for protection, usage and protection-usage purposes. Expert evaluation was carried out according to these 3 land use types (natural areas, semi-natural areas, rural areas) determined within the scope of the research via on-site observation. The assessments made in the areas were processed in total of 35 observation forms. The evaluation was carried out by obtaining total scores ("High visual landscaping value = 5 points", "medium visual landscaping value = 3 points" and "low visual landscaping value = 1 points") of 3 land use types according to 7 visual landscape quality factors (land form, vegetation cover, color, water existence, neighboring landscape, rarity, cultural changes). These points also demonstrate that the weight ratings of the areas in terms of visual landscape quality.

The purposes of recreational usage (protection, usage, protection-usage) are the alternatives of the study. However, the selected alternatives have the values of "protection purpose = 5", "protection-usage purpose = 3" and "usage purpose = 1" in order to affect the visual landscape quality. The relationship between three land use types in which visual landscape quality scores were determined and these alternatives were analyzed by Fuzzy Set technique. The "Expert Choice v11.0" program was used for the analysis.

As a result of the findings and analyzes made during the study, the visual landscape quality of the recreation areas in the province has been put forward and alternatives have been developed. Suggestions have been made about alternatives for land use types and recreational purposes in the direction of the results.

**Key Words:** Analytic Hierarchy Process, Fuzzy Set, Visual Landscape Quality, Çankırı

# Biocomfort in Urban Planning Studies: Case Study of Manisa

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## ABSTRACT

**Aim:** Rapid and unplanned urbanization, which has emerged due to the economic developments that have been taking place all over the world, has brought a dysfunctional and aesthetic city structure with it. However, in the process, concepts such as ecological balance, clean environment and comfort conditions gained importance due to the increase of the income levels and awareness of the people living in the city centers, and these concepts have begun to come out as important factors in selecting the cities to live in. Biocomfort, one of the prominent concepts in this process, can be defined as the limit values at which people feel comfortable with the environmental conditions such as temperature, precipitation, humidity and wind. Biocomfort is an important concept that has begun to be considered in urban planning studies in recent years.

**Method:** The purpose of this study was to determine the appropriate areas of Manisa province for biocomfort based on the meteorological data of the city. In the study, data were obtained from the meteorological stations of Manisa province. The average temperature, relative humidity and wind

values for these stations have been transferred to the Geographic Information Systems (GIS) using ArcView GIS ™ 10 software.

**Findings:** Climate maps were created from the data transferred to the GIS and appropriate areas for biocomfort were determined. These maps have been obtained with the help of the map of bioclimatic comfort conditions, taking into account the annual sensed temperature and bioclimatic comfort zone for the region. Manisa's classified zones have been identified on the maps.

**Conclusion:** The resulting maps of the study can be the basis for sustainable urban planning studies for Manisa city. In conclusion, Manisa's residential areas, where many of the terms of bioclimatic comfort in the more remote areas of the central region, have been shown to be suitable if there are suitable areas. The region shown to be most comfortable is located Manisa. As a result of Manisa is a suitable climatic comfort area.

**Keywords:** Biocomfort; Urban Planning; Geographic Information System (GIS); Manisa

# Examination of Çimenlik Castle which is Important for Çanakkale Urban Development as a Historical Landscape Element

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## ABSTRACT

Çimenlik Castle was named as 'Kala-i Sultaniye', 'Boğaz Hisarı', 'Çanakçılar Castle' during historical periods. According to Sevgen (1959), Çanakkale province and its throat were named with the name of Kala-i Sultaniye in the official records of the Ottoman era. Later on, the name of the city became the "Çanakçılar Castle" due to the fact that it was difficult to say, because of the earthworks and pottery produced in the surrounding towns of the city and eventually it became “Çanakkale” (Hatip, 2009). It is also understood that the castle plays a very important role in city history and development because of giving name to the city. The castle was established for defensive purposes in the narrowest part of the Çanakkale strait with the aim of preventing the vessels coming from the throat during the reign of Sultan Mehmet the Conqueror to reach Istanbul. The city also was formed around the castle after that period. At that time, a settlement development in the form of a cultural mosaic, where different nations lived, is seen in every neighborhood.

Canakkale, the scene of many civilization in the historical process, because of earned victory in the First World War has a very important place in terms of Turkey. While there are alot of traces belonging to that exist in many regions of the city, Çimenlik Castle carried the heart of front line of Çanakkale in winning this victory. For this reason, the castle is now a historic site in the city center. However, the conservation approach is mostly oriented towards tourism use, and it is disconnected from urban development. Çimenlik Castle carries the traces of the city history with its entire environment today and is a cultural heritage. Therefore, the castle is very important in Çanakkale's historical city design, its use and management. In its current use, closed and open museum and war period events are revived. However, the area does not have a design suitable for its nature and functions in terms of landscape architecture. The castle is not integrated with the urban texture and is surrounded by a narrow area and also does not have a design concept that will reflect its historical identity around it. In this study which is done by going out from these problems, the castle and the whole region were examined in terms of spatial, functional and aesthetic requirements. Sennett (1999) emphasizes that cities are transformed into consumption-based or tourism-restricted physical spaces in the modernization process. This makes the physical environment nonsensical, the city neutralized and limits social communication. These words also reveals the source of the problem, which is taking place today in Canakkale .

The aim of the study is to examine "Çimenlik Castle" which is the most important focal point of the Çanakkale urban area as a historical landscape element throughout the urban texture. In this direction, proposals have been developed so that the castle and its immediate surroundings can convey the traces of life that it carries from the past to the future. In the first step of the method, there were compiled.official information, publications and literature information about the subject. There are obtained Oral and written documents related to the use and history of Çimenlik Castle

from the past to the present day from the relevant institutions. The Area was examined by means of the information obtained, observation of the users, field observations and detailed photographs were taken. At the last stage, the area has been evaluated in terms of landscape architecture according to in the direction of the examinations carried out and suggestions have been made in line with today's conditions and needs. Çimenlik Castle has been proved in the historical and cultural aspects of urban development. The role of the castle in the urban texture has been examined from the past to the present, both physically and functionally.

As a result of the study, we have visualized and documented how the settlement in the near vicinity of the castle and the transformation stage within the time dimension. From a socio-cultural point of view, the castle and the surrounding settlement can .not be part of everyday life. This clearly demonstrates the role of the physical space in gaining identity and character in the city. In the work, the problems and needs of the area were determined in terms of urban design and suggestions were produced for the future. In this direction, the importance of transferring the traces of time as sustainable to future generations has been put forward.

**Keywords:** Çanakkale, Kale-i Sultaniye, historical landscape, urban design

# Climate Simulation Of Residential Gardens in Different Sizes with Envi-Met Software

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## ABSTRACT

A number of factors can be effective in improving outdoor thermal comfort. The quantitative and qualitative characteristics of the items forming the urban environment such as buildings, roads, green spaces etc. can affect the urban climate and thus the comfort of people's life. The effects of these items indirectly trigger global warming. Global warming, seen as one of the world's biggest problems in recent years, will threaten human life and the world more if measures are not taken. Climate-balanced urban design has many contributions, including reducing global warming, ensuring environmental sustainability, increasing energy conservation, preventing the occurrence of urban heat island, and increasing urban life quality within this framework. For this reason, the concept of climate-balanced design emerges as one of the most important study areas. So the purpose of study is to determine the effect of the size of residential gardens on thermal comfort in Gaziantep province.

This study has been carried out especially in the province of Gaziantep, where rapid and irregular urbanization has increased due to the rise of immigration in recent years. Firstly, a building that exemplify common construction style in Karataş neighborhood where is located within the borders of Şahinbey district in the province of Gaziantep, one of the regions where housing is dense has been selected. After analyzing the current situation of the building, the garden of the building has been expanded at certain rates and alternative plans have been prepared for each situation. At the next stage, these plans have been analyzed. Analyzes in this study have been made through ENVI-met simulation software. In the analyzes, grids in 1x1m dimensions have been used. In order to determine the effect of residential garden on thermal comfort, homogeneous and one type plant has been used. Only the data of trottoir have been entered as hardscapes. Except this, there aren't any different uses.

In the study, temperature, relative humidity, mean radiant temperature (MRT) and wind speed which are the most important variables in measuring outdoor thermal comfort have been evaluated. In the simulations, long term climate data of Gaziantep province have been used. Simulations have been conducted during 24 hours cycle on 21 June, the day of maximum sun exposure, and on 21 December, the day of minimal sun exposure.

After doing the simulations with ENVI-met software, they have been visualized using Leonardo which is an extension pack of ENVI-met software. For each alternative residential garden, four maps as temperature, relative humidity, mean radiant temperature (MRT) and wind speed maps. have been created for each alternative plan.

In the conclusion of study, results have been obtained for determining the importance of residential gardens in urban design. As the size of the residential garden expands, the thermal comfort level also increases in direct proportion. This is most clearly seen in the mean radiant temperature maps.

It is believed that the study will offer solutions to climate-balanced design at the level of residential garden. It has also been confirmed in this study that large-scale green areas such as neighborhood gardens, neighborhood parks, city and regional parks, also contribute positively to cities in enhancing thermal comfort. With the regulations related to the issue made by local administrations at the city level and ministries at the country level in order to increase the importance of residential gardens in respect to the climate-balanced urban design perspective, the thermal comfort level in the cities can be increased and thus the quality of urban life can be increased.

**Key words:** ENVI-met, climate simulation, climate-balanced urban design, Gaziantep

# CITY - URBAN LANDSCAPE - CHANGE 3

# A GIS-Based Green Infrastructure Planning

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## ABSTRACT

One of the most important agenda of the 21st century is the global climate change and the resulting disasters. These disasters such as floods, inundations and droughts negatively affect the urban life. Besides being one of the critical factors for creating healthy and duly planned cities, open and green areas are significant in terms of urban infrastructure, as they collect and recycle the rain and run-off water, and thus help minimise the mentioned disaster risks. In urban environments, especially green areas play an important role in the formation of high quality environments that have ecological, economical, physical, social and aesthetic functions.

Urban infrastructure is one of the key factors for developing healthy urban plans, which has balanced ecological, economical and physical structures and relations. In other words, urban infrastructure is of great significance for healthy urbanisation. Nowadays, the concept of infrastructure is usually linked either with the grey infrastructure, such as roads, sewerage networks and power lines, or with the social infrastructure, in other words the built infrastructure, such as hospitals, schools and penitentiaries. However, the other important infrastructure type for the sustainability and the healthy development of the societies is the green infrastructure systems. Besides, the environmental problems originating from the consequences of the global climate changes highlight the necessity of the green infrastructures.

Green infrastructure systems are the systems that holistically comprise sustainable ecological, economical, physical functions and cultural values. Green infrastructure systems are based on two

basic components, namely the core areas and the green corridors. Core areas refer to the historical and cultural areas, plazas, urban forests and open green fields in the city, while green corridor is a network system connecting the core areas.

Geographical Information System (GIS) capabilities are frequently utilised for the production, analyses and association of the data during the integration process of the core area and green corridor network systems into the city. GIS is a unique system through which spatial and non-spatial data are captured, stored, managed, manipulated and presented to the users.

Within this context, the main goal of this study is to design an infrastructure system using GIS capabilities, where green corridors connect the natural and other open areas, and thus, help protect and manage the ecological systems in the city. Accordingly, using ArcGIS software, existing green areas have been determined within the borders of Eskişehir province to form a basis for further projects to create a healthy and functioning green infrastructure system in the city. To fulfil the needs of the study, digital elevation model, school, infrastructure, road, soil data, as well as satellite images were gathered, and also a questionnaire was applied. Surface run-off analysis results and road networks were classified in accordance with the categories given in the literature. The weight assignments for the criteria was performed with Analytical Hierarchy Process (AHP), and then a green infrastructure system comprising corridor and core areas was determined. Finally, recommendations for a proper construction of the green infrastructure were presented.

**Keywords:** Green Infrastructure, AHP, Core Area, Corridor, Green Road

# Seeking Solution For Urbanization and Enviromental Problems: Vertical Gardens

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## ABSTRACT

Urban population growth has caused by immigration from rural to urban areas posing many problems. The increasing pace of construction due to urbanization causes a lot of environmental problems and also it makes the city gray color. Green areas' contributions to the ecosystem and effects on people are very important. In recent years, many studies have been carried out in order to determine the amounts of urban green areas. These studies show that the amount of public green space (parks and gardens) has been decreasing. Therefore, necessity for green areas has recently been increasing. The decline of urban green spaces and environmental problems paved the way for the development of the concept of vertical garden. The vertical gardens are defined as gardens that cover façade walls with using various plant species by systems.

The vertical gardens not only increase urban green areas but also have some functions such as increasing biological diversity and creating a natural habitat, sound and heat isolation, energy productivity, ecological cycling of rainwater, air quality improvement, heat island reduction, aesthetics occurrence, and positive contribution to human psychology. In recent years, the number of vertical garden applications, which is a method applied by occupational disciplines (architects, landscape architects, engineers, etc.), which are in search of solutions to urbanization and environmental problems in the direction of these positive effects, is gradually increasing. However, it is important to ensure that the vertical gardens are constructed in accordance with the design and application criteria so that they can display their positive functions. These design and application principles are; proper selection of structural components, ground and plant species, irrigation and drainage system, plant growth media. It is also necessary to take care of timely maintenance, application purposes and landscape design principles. However, it is seen that vertical garden applications in our country are far away from these design and application criteria. Applications in our country are used more aesthetically and in advertising places where road traffic is concentrated. In the examples abroad, it is seen that the vertical gardens are used functionally in areas where intensely structured. Aesthetically, vertical gardens are preferred on unpleasant facades. It is also apparent that vertical gardens are being applied with the aim of providing energy efficiency. In this context, it would be more appropriate to choose the application areas of vertical gardens, which have high prices when considering the regular maintenance costs after the application and afterwards, from areas that would benefit from the maximum benefits of these systems.

One of the most important factors that will directly affect the long-term success of vertical garden applications is plant material. The plant material to be used in the systems should be preferred to the natural plant species that will best suit the environmental conditions of the application area. Due to its geographical position and different climate types, our country is very rich in natural plant

diversity. In spite of this richness, applications on imported plant species that have not been observed in accordance with local conditions increase the possibility of failure to applications. Another benefit of choosing natural species is economic benefit.

This study was carried out with the aim of determining the benefits that vertical gardens will have against adverse effects of urbanization and environmental problems. In this context, literature review was conducted and the design and application criteria of vertical gardens, varieties and the advantages and possible problems of vertical gardens were examined. As a result of the study, it has been revealed that the examples of vertical gardens, which are carried out according to the design and application criteria, are an important method against the adverse effects of urbanization and environmental problems.

**Keywords:** Vertical garden, urbanization, environmental problems

# Examination of the Landscape Plants at Çanakkale Onsekiz Mart University Campus within the Context of Geographic Information Systems

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## ABSTRACT

Landscape plants are extremely important elements allowing the human beings and all other creatures to breathe and become peaceful in the urban life that is remote from the nature. They provide a natural habitat for many living organisms. They also play a significant role in controlling air pollution, especially in urban areas. They diminish the adverse effect of urbanization, which causes the retention and increase of heat. In other words, landscape plants prevent the formation of heat islands and climatic comfort. In areas with extreme winds, they undertake the role of a windbreak, preventing the decrease of the sensible temperature, especially in winter. In this respect, landscape plants have a significant role in the provision of bio-climatic comfort. Furthermore, they minimize the financial losses that might occur because of the wind. Due to the structural components, crowd and vehicle traffic they host, urban areas are a source of noise, which is extremely harmful for human health. High noise leads to stress and hearing problems in human beings. Since landscape plants absorb sounds, they are extremely useful for the reduction of noise. Landscape plants have numerous benefits for the urban life, leading to the facilitation of a comfortable and improved urban life. Thanks to the beauty they offer, they ensure that the structures do not fall apart from the nature. Besides, they facilitate the need for aesthetic concerns, beauty and nature and contribute to the formation of societies with a taste. Landscape plants are also significant with respect to the formation of a city's identity. With a properly, extensively and functionally designed landscape planning, a city can attract both domestic and international tourists. Geographic Information Systems (GIS) are often used in landscape planning and designing processes. CBS is a decision support mechanism where the data collected from different resources are stored and used together, enabling inquiries in parallel with the expected result. Parameters and topics such as climate, soil, topography, population (age, distribution etc.) and disasters, are very important determinants in landscape planning and design. In this respect, GIS is an important

tool used for the determination of the best place in landscape architecture projects. GIS is also very useful in the investigation of the most appropriate and durable building materials and even, landscape plant species to be used in landscape architecture projects. GIS facilitates fast decision-making, particularly in large field works. Universities are living areas used at all hours of the day. These are dynamic spaces hosting people from all ages, particularly including the young. A university shall offer natural beauties and a peaceful environment. A university campus is like a city itself and its landscape forms its own identity. The recreational landscape areas available in the university campus can provide relaxation and rehabilitation for people in all seasons, if they are properly designed. Members of the university are always in need of such places while relaxing or working. These landscape areas reveal out the general context and identity of the university. In this regard, effective and proper management of landscape areas and landscape plants is vital. In this research; the landscape plants available within the borders of Çanakkale Onsekiz Mart University Terzioğlu Campus were studied by on-site observation, data collection, analysis and evaluation methods. Locations of all landscape plants were detected with the global positioning system (GPS). The data collected were transferred to the GIS environment by forming charts of features. Current landscape plants map of Çanakkale Onsekiz Mart University Terzioğlu Campus, was formed. In this way, a GIS that could be easily used and updated for the management of sustainable landscape areas, was created.

**Keywords:** Çanakkale, Geographic Information Systems, Landscape Plants, Landscape Planning and Design, Terzioğlu Campus

# Landscape Design and Planning within the context of Energy Transition

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## ABSTRACT

Industrial revolution and urbanization are important factors that increase the urban population in the world. Unconscious and overuse of resources along with population growth, and global warming of carbon-based industrial life have been revealed by many researches that cause adverse environmental conditions such as ozone layer perforation, desertification and air pollution. In this sense, threats to the environment have raised awareness of environmental protection among people and have led to practices to take measures to conserve natural resources.

Population growth, urban development and industrialization as well as energy consumption are increasing. In this context, transformation has begun for energy, a strategic sector. Renewable energy sources, which have an important place in economic development, in terms of sustainability play a key role in this transformation.

The use of renewable energy sources in an environmentally friendly, sustainable manner, due to the end of non-renewable energy sources and the threat to the environment, is constantly taking place in countries' energy policies.

The United Nations identified four areas related to sustainable energy: (1) support for energy change; (2) increase in energy efficiency; (3) support for renewable energy sources; and (4) sustainable transport systems.

The Kyoto Protocol stated that "the exploration, development and use of new and renewable energy forms should be increased" in 1998. It is aimed to reduce carbon emissions on the international agenda. Countries are focusing on the development of renewable energy technologies to enable the transition of energy generation from fossil fuel sources to renewable energy resources.

In order to support sustainable development, change must be directed towards renewable energy sources. In this sense, energy transition, which has a significant impact on society, quality of life and economy, is inevitable and necessary.

The energy transition is one of the most relevant drivers in the landscape change. The sustainability of renewable energy sources is not only important in terms of carbon emissions, but also a result of changes in the landscape and the supply of ecosystem services.
In recent years, landscape architects have started to deal with renewable energy technologies such as planning of wind farms, plantation of energy crops, creation of potential energy maps, development of design strategies, aesthetic and identity evaluation and creation of scenarios, energy efficiency, lighting, heating and their visual design.

In terms of landscape architects, sustainable energy transition is evolving based on locally available renewable energy sources without compromising the physical environment's landscape quality, biological diversity and other life supportive ecosystem services. n landscape architecture, "energy resource change" is more important.

The task and social function of landscape architects; to maintain balance and to reduce the critical trade-off between renewable energy and ecosystem service provision, and to guide all uncertainties in designing future landscapes for communities.

The main material of this study is landscape architecture planning and design examples and publications on energy transition. References and examples have been evaluated and interpreted from a critical point of view. In the scope of the study, the potential of landscape architecture discipline on energy transition, its level of potential use and methods, landscape design and planning approaches and principles were assessed.

In this study, a summary of the energy transition will be given and the works and studies of landscape architects about the energy transition and in the light of this data, the role of landscape architecture which is a design and planning profession, in energy transition and the landscape architecture approaches in this subject will be mentioned.

The purpose of this study is to analyse how landscape architecture is involved in energy transition at different scales and why and how it should be involved in decision making, designing and implementation.

**Keywords:** energy transition, landscape architecture, renewable energy resources

# Edible Landscapes for Sustainable Cities

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## ABSTRACT

The number of people around the world who live in and around cities is increasing steadily. By the year 2050, human population will increase by about 3 billion and nearly 80% of the earth's population will reside in urban centers. If traditional farming practices continue as they are practiced today, in the future, agricultural areas will be insufficient for human population. For this, the first step should be to get in urban agriculture.

Urban agriculture (UA) is defined as the production of crop and livestock goods within cities and towns ,generally integrated into the local urban economic and ecological system. Urban agricultural (UA) systems appear in many forms and can be productive features of cities and provide important environmental services.

Edible landscaping is a form of urban agriculture and It combines edible plants into aesthetically pleasing designs. It oftentimes called foodscaping that encourages people to produce local food in their homes, public spaces, workplaces. Generally it does not include food items produced for sale.

Edible landscape can enhance and transform a city by providing a unique ornamental component with additional health, aesthetic, social and economic benefits. It improves the environment (conserving energy, enhancing wildlife habitat, preventing soil erosion, controlling pests, protecting air and water quality etc.), promotes healthy living, nurtures the relationship between humans and nature, saves money on food and supports food security.

The design strategies for edible landscapes are about re-inviting food back into the city and re-connecting people with their local food system to promote a healthier lifestyle.

In this study; edible landscapes, which is a different form of urban agriculture, was evaluated in terms of environmental, social, economic and health benefits to city/community and how cities can

be adapted to transformation processes. In tis context, regardless with scale, type or location and with an emphasis on urban environments we suggested strategies for designing edible landscapes that promote ecological biodiversity, social sustainability and healthier community.

**Keywords:** Urban Agriculture, Edible Landscapes, Sustainability, Design

# Evaluation of Urban Parks in terms of Ecological Design Criteria: The Case Study of EYOF Park (Trabzon/Turkey)

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## ABSTRACT

Mankind has wanted to reflect his social, cultural and economic development to nature since his exists. With the sense of belonging, he adopted a sedentary life and has survived in different regions under the name of different civilizations. With his development over time he met with the concept of city and urbanization. Cities are economically developed areas that host public spaces. Initially, in urban planning natural balance and ecology need to be taken into account, the development of technology, rapid population growth, industrialization, economic development and modern living necessities have not allowed this. As a result, a number of ecologically based problems have arisen. Some of these effects are environmental problems, reduction of resource values, deterioration of ecological balance, change of water cycle and climatic conditions, global warming due to increased greenhouse gas emissions.

A number of ecological approach models have begun to be emphasized in the late 19th century and later, when these effects began to be visibly evident. Actually, the basis of these approaches is the Brundtland Report that prepared in 1987 and the United Nations World Summit held in Rio de Janeiro in 1992. Because at that years the concept of sustainability has been put forward and debated how to establish a balance between protection and utilization. This concept which expresses continuity makes it possible for future generations to benefit from providing high efficiency without affecting resource utilization of economic, ecological, aesthetic and social functions that constitute a city.

Over time, awareness of the benefits and possibilities of the natural environment has led to the necessity of ecological-based planning and design for a sustainable life. Ecological design is the approach of interpreting environmental data in the best way, improving energy efficiency, maintaining natural balance by creating sustainable habitats. Ecological design on a global scale is based on criteria of land efficient design, energy efficient design, water efficient design and efficient resource use. In recent years, ecologically based designs have been used by many professional disciplines such as landscape architecture, architecture, urban design, agriculture, engineering and tourism, which take social, cultural, economic and technological processes into consideration.

Particularly with this approach, urban parks play an important role in increasing the quality of urban life and influencing the physical and psychological development of the individuals in terms of positively. At the present time it is very important that this mission which urban parks have is shaped by ecological based design criteria. For this reason, it is necessary that these areas created in urban areas should be preserved in harmony with the natural environment, ecological, aesthetic, socio-economic and local characteristics.

From this point the EYOF Park, located in the city center of Trabzon (Turkey), was chosen as a study field. It was built in memory of European Youth Olympics which has an area of approximately 30.000 m2. Inside the park there are eating and drinking areas, social facilities, artificial ponds, play grounds, hiking trails, pergolas and green fields that allows passive recreational activities. In this study the EYOF Park which is an important social area for Trabzon and citizen was evaluated through ecological design criteria (land efficient design, energy efficient design, water efficient design and efficient resource use). For this, an assessment form was created and the impact levels on the existing criteria were scored. In the direction of the obtained data, the ecological design suitability value of the park was determined, the ecological based misapplications in the park were put forward and suggestions have been developed.

**Keywords:** Ecological Design Criteria, Urbanization, Urban Park, EYOF Park, Trabzon

# Producing of the Forest Biomass Carbon Storage with Geographic Information System and Remote Sensing: Upper Seyhan Basin

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**ABSTRACT**

From a global perspective forest ecosystems account for 80% of biomass carbon of terrestrial vegetation and play an important role in carbon cycling in terrestrial ecosystems. But forest biomass carbon is significantly affected by timber harvesting, land use, climate change and other natural and human-induced disturbances.

Aim of study, above ground carbon and below ground carbon capacity which are stocked at forest level in study area were estimated. Additionally, above ground carbon and below ground carbon stock maps was generated by using remote sensing(RS) and geographic information system (GIS) technologies. Biomass has been observed that estimates of conventional biomass calculated according to the unit area method, within the scope of LULUCF (Land Use Land, Land Use Change and Foresty-IPCC) application. The benefit of ArcGIS 10.3.1 in this study, biomass has been determined by (i) stand types map, (ii) the amount of space covered by stand types, (iii) tree volume data, (iv) BEF(Biomass Expansion Factor), WD (Wood Density) and R (Root/Shoot Ratio) coefficients. Additionaly, benefit from percent tree cover data which produced by remote sensing data. According to the result, above ground carbon stocks and below ground carbon stock are predicted 5,126 Tg and 1,737 Tg respectively at forest level.

**Keywords:** Terrestrial Carbon Stock, Biomass, Forest Carbon, Remote Sensing, Geographic Information System

# Ecological Approach in Urban Planning; Landscape Urbanism

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## ABSTRACT

After the industrial revolution, environmental disasters caused by massive factories, the rise of populations resulting from the establishment of unhealthy settlements have led to new quests. Rapid and unplanned urbanization has resulted in a significant decline in the quality of life and in the need for open-green spaces in the city. Today, there are a number of environmental problems and disasters due to the unprotected natural resources. As a result, the search for a new urban planning approach has begun.

Ian McHarg is, without a doubt, one of the most important people who struck the stamp of return that these searches are. The idea that we have created has now become the foundation of the idea of geotransformation. Steiner (2011) also notes that McHarg and his students have been the first to show the importance of nature in the planning process. Landscape urbanism is the invention of Charles Waldheim, who was the first to use the term in large measure. Waldheim created a common ground by integrating McHarg's ecological advocacy with urban design vision. Landscape urbanism presents a potential strategy that synthesizes ideas from landscape urbanism and urban ecology to create new regions that reflect cultural and natural processes. Charles Waldheim is an agenda advocating a kind of historical architectural urbanization, which is a rather post-modern kind of cultural conservative, oriented towards European urban planning, in fact the new urbanization movement that started in the 1980s; emphasizes that polemical response to the new urbanization and all traditional urban forms in landscape urbanism emerges as criticism. Christopher Gray has created a methodology that references the theory of landscape by examining a number of realized and unrealized projects that are designed with a "landscape urbanist" approach, which is a reference to landscape urbanism. Gray is the key words of landscape urbanism; uncertainty, open-end, flexibility, complex systems. According to him, water, water treatment, storage and filtration, water improvement, urban infrastructure, consideration of water supply, wastewater and ground water, utility services and transportation systems constitute a large part of the urban infrastructure which is the most important subjects of landscape urbanism. Education, entertainment, law and order, public administrations are also included. The main purpose is to integrate these functions within an open area that is used. Biodiversity and ecological systems, landscape ecology, geomorphology, hydrology, climate and vegetation, identification of existing ecological resources and presentation of new resources are essential. With the support and formation of wild life, it is aimed to create a self-sustaining landscape. Projects related to an in-depth ecological system concern; the interconnection of programs, product and energy, human and biotic flow.

There are three basic elements in the practice of landscape urbanism. These are water system, green space system and infrastructure systems. These can be defined as the regulatory mechanisms of urban areas. Contrary to the existing approaches in the planning of cities, natural areas and systems should not be put on the second plan and should take place in the core of the city. Urban agriculture is the realization of soil rehabilitation with certain programmed agricultural systems in industrialized areas. With these methods, nutrient content is predicted among the people in the vicinity. Alternative energy use, such as the use of renewable energy sources, is inherent in projects. Wind, water, photovoltaic floors are used. Insulation is provided by using plants. The energy is consumed in the recycle cycle. Even cultural elements should be integrated to be compatible with this natural system. Urban planning should be carried out to ensure the continuity of the water system, green space system and infrastructure systems, which are the three basic elements, and to enable the continuous operation of these systems. In addition, the open design principle, which adopts the long-term change in urban design, should be applied. Projects created in the context of Landscape Urbanism should include designs that are evolving, transforming, open to continuity, and possessing cultural authenticity.

In this study, suggestions will be made about what to do in order to integrate landscape designing principles into urban planning. In urban planning, water, green, methods that can be applied to provide the cycle of infrastructure systems and building materials that can be used will be mentioned. As a method, the existing ecological systems of the city with ArcGis will be mapped and analysis will be made by using the method of overlapping and proposals will be made for the continuity of the system.

**Keywords:** Landscape urbanism, ecology, ecological material

# ENVIRONMENT - CLIMATE - TRANSFORMATION

# Bingöl Province Case for Determining the Characteristics of Human Biochemistry Comfort in Urban Fabric

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**ABSTRACT**

Our country has various topographical structure because of its geographical position.The variability of the topographic structure causes inlands and high areas. This causes the occurrence of severe continental climate conditions. The continental climate conditions affect the bioclimatic comfort parameters that affect human beings.

Bioclimatic comfort is people's physical activity made by spending minimal energy on appropriate climate factors. People usually live in need of physical environment. So, this causes people to shape the environment. The environment shaped by human beings creates pressure with their own elements and restricts human recreational activities with this pressure, People-restricted activities cause people to perform their activities in more comfortable intervals. On the other hand, climate elements are the factors that affect human physical activity. Air temperature, relative humidity, wind speed and air cloudiness are the leading factors of these climate elements.

The material of this study is the Bingol Provincial City Center is a bridge between Eastern Anatolia and Southeastern Anatolia Region with a surface area of 1790 km2. According to Turkey Statistical Institute, the population has increased in the last 10 years and reached 267 184 people in Bingol. Also its various topographic structure caused the height differences between 850 m and 2967 m in Bingöl. The city center is located on 1151 m high.

Other factors taken as material are climate parameters. Data for hourly temperature, humidity, wind speed and cloudiness between 2017 and 2018 obtained from the Bingöl Branch of State Meteorology General Directorate were used.

In the method part of the study, the data obtained from the Bingöl Branch of State Meteorology General Directorate was analyzed in the Rayman Pro 12 software and The bioclimatic comfort index of Matzarakis and Mayer (1996) was used. PET values deduced from this index are as follows;

≤4 Extreme cold stres, 4.1–8 Strong cold stress 8.1–13 Moderate cold stres, 13.1–18 Slight cold stress 18.1–23, No thermal stress–neutral 23.1–29 Slight heat stress 29.1–35, Moderate heat stress 35.1–41, Strong heat stress >41 Extreme heat

Stress range values were used to evaluate the daily time between 2017 and 2018 and the comfortable time of day. The evaluations were converted to graphical form with office software and an understandable add-in was obtained.

As a result of the study, comfort analysis about Bingöl city center was obtained. According to the results, it is found that Bingöl city center has a thermal stres with PET average of 19 ° C and is a livable city.According to the detailed results, Bingöl city center has Extreme cold stres with PET avarage of 2-8°C between 17:00 and 05:00 and cold stres with PET avarage of 6-14°C between 05:00 and 17:00 in winter. In the same way, at the results of the analysis of the spring months is indicated that there is no thermal stress during the day and nights are exposed to light cold stres. In the summer months, during the day when people are exposed to hot strase, thermal comfort interval values at night time are caught.

The purpose of this study is to find out that the developing Bingöl city center has the livable climate conditions.

**Keywords:** Climate, Bioclimatic Comfort, Rayman

# Effect on Thermal Comfort of The Distance Between The Building and the Trees: Erzurum City Sample

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## ABSTRACT

Outdoor thermal comfort in urban areas is an important indicator of the quality of life in the surrounding area. Thermal comfort contributes positively to the quality of life while also helping to saving energy. Making the most of solar energy to save energy, looking for solutions to reduce air pollution, and creating scenarios to reduce heating or cooling costs are the focus of recent years. Although the cooling effects of trees are mostly concerned, the heating effects of trees in cold climatic regions should not be neglected.

For Erzurum, the winter months are preferred because of the widespread energy consumption and environmental problems caused by heating in the winter months. Purpose of the study; cold climatic regions should also be analyzed to determine where thermal climates are more advantageous in terms of their proximity to the building. To investigate the effect of different distances between trees and building on thermal comfort.

The study area was built on a site consisting of 16 villages in the Yıldızkent district in the south of Erzurum city with extreme conditions in terms of altitude and climate in 39 ° 54'11.77 "K-41 ° 15'59.80" D coordinates. Two separate devices were installed on the first floor of a villa with vegetation in the site and on the south and north facades. Recorded data from two separate points, one of which is placed inside the building and the other outside the building. WS300 precision

thermometer is used for measurements. At the same time, the humidity of the environment was measured and recorded. 24-hour climate data measured in December 2017. Both the current situation and alternative scenarios have been analyzed with ENVI-met. In this scenario, the thermal comfort of different distances between the building and the trees is examined. The distance of the trees to the building; In the adjoining case, 2 and 4 m were specified, and the case where it was more comfortable was analyzed with ENVI-met. According to the results of the analysis, when the plants were planted at a distance of 2 m, the hottest environment appeared.

Developed by (Bruse and Fleer, 1998) the ENVI-met model, which allows the use of climate data in planning, it has been widely used abroad in recent years. Although different versions are used in this model, the underlying logic is the same; The defined program consists of grids with x-y-z coordinates. Mikro-iklim ölçeğinde 3B modelleme olarak kullanılan ENVI-met'in yatay çözünürlüğü 0.5-10 m'dir. And it is advantageous in terms of giving chance to produce scenarios with different approaches. In this model, the data must be used on an hourly basis. The data to be entered in 24 hours can be entered daily or can be entered by getting average value. At a height of 1.5 m from the study area, images are obtained from the computer by recording the temperature (° C) and humidity (%) data obtained from the meter at least once every 24 hours. Wind data are also provided from the General Directorate of State Meteorology.

This analysis offers the opportunity to anticipate the difficulties that may arise later on. 4 different scenarios were created by evaluating parameters collected in ENVI-met 4.3 package program.

The average of the climate values taken on an hourly basis is taken as 24 hours data input. ENVI-met model has been implemented by applying the same data to the four prepared scenarios. The results obtained for each scenario are given below.

**Scenario 1: Available vegetation in the gardens of the building:**

As a result of the analyzes made, the present situation temperature of the area is 11,5-16,7 C degree. The temperature of the houses in the area is between 14.6-16.4 ° C. The temperature of the gardens between the buildings is between 11,8 - 12,8 degrees Celsius.

**Scenario 2: Plants adjacent to buildings in the garden of the building:**

According to the analysis made, the temperature range of the area is found between 11,7-16,3 C °. The temperature of the houses in the area is between 15.6-16.1 ° C. The garden temperature between buildings was found between 11,9-12,9 ° C.

**Scenario 3: Plants in the garden of buildings are 2 m away from the building:**

According to the analysis made, the temperature range of the area is found between 14.6 - 28.4 ° C. The temperature of the houses in the area is between 15.3 - 18.7 ° C. The garden temperature between buildings was found between 15.3-27.7 ° C.

**Scenario 4: Plants in the gardens of the building are 4 m from the building:**

According to the analysis made, the temperature range of the area is found between 10,5- 19,7 ° C. The temperature of the houses in the area is between 12,8 and 13,7 degrees Celsius. Garden temperatures between buildings are found between 10.9 and 19.3 degrees Celsius.

**Key Words:** *Thermal Comfort, Envi-met, Wearing Effect, Tree, Erzurum*

# Energy Efficient Planning Scenerios for Landscape Design Areas with Thermal Comfort Defined By Envi-Met

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## ABSTRACT

In response to the increasing urbanization problems, planners and local governments have sought new ways of making cities more livable for people. This has increased the importance of their efforts to provide thermal comfort in urban space designs.
In the study, the effect of different landscape designs in urban spaces on outdoor thermal comfort was investigated. For this purpose, a selected at building in the city center, roof garden, water surface and trees growing in the city, scenarios produced with ENVI-met are discussed. The study was conducted using the summer and winter meteorological data of 2017 to determine which scenario thermal comfort is better. Using the hourly climate data obtained from the field, analyzes were made with ENVI-met for each different material. At the same time, Sky Visibility Ratio (SVF) values were used in the field. In the summer months when the temperature of the air increases, the use of water and natural plants has contributed positively to the thermal comfort of the environment and the ambient temperature has become cooler than the places with concrete surfaces.
Gunes Girls High School in Erzurum was select as pilot area. 2017 July and January, humidity, temperature, wind, cloudiness and SVF is based on measurements. The measured meteorological data were taken on an hourly basis in the "Vantage Pro2 Meteorological station, EU version, receiver quality". Fish-eye lens from the same area, between 12:00 noon and 13:00 were have made for shooting SVF value. The data were taken from a height of 1,5 m. Obtained measurement values were entered in ENVI-met program and examined with different scenarios. The ENVI-met program is a computer software model that uses hourly data.
When the results of the study are evaluates, the amount of green space in the environment increases and the summer environment becomes even cooler. In winter, it increases the thermal comfort by heating the environment. The fact that the plants used in the summer are natural species have added more refreshing effect properties by to exotic plants. The use of water surfaces

also provides a cooling effect in summer. When the roofs are in the form of roof gardens, it reduces the reflection and absorbs the sun's rays and keeps the environment cool; in winter, it warms the environment more. The reduction of hard floors in urban areas also contributes to the city both ecologically and aesthetically. According to the SVF measurements taken in the field, the low SVF ratio in the summer provides a cooling effect; and the low rate of SVF in winter increases the heating effect in the city. The types of trees used here have an important place here. The use of the right plant in the right place is important to increase thermal comfort. In areas with very hot summers, the use of very deciduous trees from the evergreen trees increases the thermal comfort. Excessive use of evergreen trees will prevent the airflow in the area at this time and cause the ambient to get warmer. Where winter is more much, the use of deciduous trees will not provide enough heating effect when leaves are cast. Therefore, vegetative design varies according to the region where winter or summer season lasts long. The use of natural plants is also important in terms of adaptation to the there. It is important in terms of the ability of plants to adapt more easily to an area and the benefits it provides. In the winter cities where winter is hard and long, it has an important place in terms of survival and strength of the plant. The area conditions should be considered in this respect while planning the plants design in the cities.
As a result of the study, it was emphasized that natural plants should be preferred in landscape plans in order to increase thermal comfort in urban areas. The use of natural plants for energy-focused design of urban spaces in winter provides better results for all seasons. In the planned urban transformation areas, the consideration of landscape plans and designs and climate data is emphasized.

**Keyword:** Landscape design, Thermal comfort, Energy, Envimet

# Sustainable Landscape Design in Arid Climates with Xeriscape Approach: Sample of Ege University Bayındır Vocational Training School Garden

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**ABSTRACT**

The green spaces required by water usage in large quantities, which is the result of the traditional landscaping approach, is a contradiction as an approach that is not suitable for today's conditions. In today's conditions where effective use of water is required, the use of plants that require high levels of aquatic plant species such as exotic plant species, grass fields, and flower buds in landscaping causes the plants not to develop or even sustain their existence if the water constraint is concerned. The end result is the landscaping that have to be renovated in the short run, or the high water consumption. Therefore, it is reported that the financial damage as well as the ecological damage brought by these results are in great dimensions.
Scientific researches show that drought conditions will continue in the coming years. In this direction, traditional landscaping approaches that are not suitable for today's conditions need to be transformed into landscaping approaches that are capable of creating long-lived charming gardens with effective use of water.

At this point, the xeriscape approach, which is known for its effective use of water, is appears. "Drought- tolerant Landscaping " or "Xeriscape", which is known all over the world, can be defined as a special landscaping which adopts the principle of protecting the water resources and environment with minimum use of water in general. Selection of suitable plant species with minimum water requirement minimizing the grass field and minimum tolerance to soil and effective irrigation system based on xeriscape is the basis for the appropriate planning. With this approach, when both the environmental conditions and the ecological requirements of plants are taken into consideration, the intersections of these two clusters allow us to make landscaping with plants that require less water and do not require high maintenance costs. In addition, stone garden landscaping is also an ecologically friendly alternative to the use of lawns. Aesthetic and ecological approaches can be formed by using stone in landscaping. The differences in the color, size and form of the stones provide a great resource for the design of landscape architects.

Considering today's conditions and the drought scenarios that are expected to be caused by climate change in the future, it is necessary that the projects to be formed in landscaping should be parallel to xeriscape approach with ecologically appropriate plant species and stone garden use.

In this context, a landscape design project has been prepared with a suggestion for a sample area considering the ecological concerns with the Xeriscape approach. A suitable land is set as an example area in the garden of "Ege University Bayındır Vocational Training School" located in the Bayındır district of Izmir province. Prior to the landscape design project prepared true this aim, Xeriscape approach was studied theoretically through the literature researches and the principles on which it is based are mentioned. Because of the fact that the sample area is located in the Aegean Region, an effective irrigation system was selected from plant types suitable for the ecology of the Aegean Region and resistant to drought, and stone garden was preferred instead of using large lawn spaces. After the environmental analysis and data collection processes, the landscape design project was prepared with xeriscape approach as a result of the process.
During the preparation of the project, a suitable area was determined in the garden of "Ege University Bayındır Vocational Training School" for landscape design project, and the area was surveyed. The current status of the area being surveyed has been transferred to the computer with the help of AutoCAD 2018 software. The plan view of the design created in accordance with the previously mentioned criteria is also processed in the same program. With the aid of Adobe Photoshop CS6 software, landscape formatting of the landscape elements has been made ready for visual presentation.

**Keyword:** Landscaping, xeriscape, stone garden, effective water use, drought

# Assessment of Air Pollution Resistance of Plant Species in Some Sample Areas in the Context of Planting Design in Antalya Conditions

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## ABSTRACT

Air pollution is at the beginning of the environmental problems in urban areas. The effects of air pollution on plants can be shown at different levels and in different forms according to the characteristics of plant species. The harmful effects of air pollutants on plants vary according to pollutant species and concentration, plant species and development period, environmental factors such as light and temperature. Pollution causes various growth parameters such as diameter development, height and leaf area to be affected in the negative direction due to the decrease of photosynthetic activity and hence the decrease in the amount of yellow and chlorophyll in the leaves. These effects cause the plant to fail to fully meet the expected aesthetic, functional and ecological benefits of design. In this study, it was aimed to determine air pollution resistance of trees and shrub species in two urban parks built in different years in Antalya conditions. It is known that air pollution in Antalya is above the national and European Union (EU) border values. In this context, in order to compare the consideration of increased air pollution over time in plant design, one of the oldest urban parks and one of the newest urban parks of Antalya were selected as the working area. These parks names are Karaalioğlu Park and Akdeniz City Park. Karaalioğlu Park, one of the oldest urban park in Antalya, was built in 1940, Akdeniz City Park is the newest urban park, was built in 2013. The trees and shrub species in Karaalioğlu and Akdeniz City Park have been identified and their resistance to air pollution has been regarded as very durable, moderately durable and sensitive species. The proportion of the number of tree and bush species resistant to air pollution was evaluated separately in tree and bush species as a percentage of the total number of tree and bush species in the parks. 35 tree species and 15 bush species were used in Karaalioğlu Park and 28 tree species and 23 bush species were used in Akdeniz City Park. When the resistance rates of trees and shrub species used in parks are examined, 24 of the 35 tree species used in Karaalioğlu Park were high and 8 were moderately resistant while 3 species of trees were sensitive. Of the 15 bush species used in the Karaalioğlu Park, 14 were found to be high and 1 were found to be moderately resistant to air pollution. As a result of the evaluation, 69 % of the trees were high, 23 % were moderately resistant and 8 % were sensitive. In the shrub species, the resistance to air pollution is 93 % higher and 7 % moderate. Of the 28 species of trees used in the Akdeniz City Park, 21 are high, 6 are moderately resistant, while 1 species is sensitive. All 23 species of bushes used in the Akdeniz City Park were found to be resistant to air pollution. As a result of the evaluation, in the trees, 75 % were high, 21 % moderately resistant and 4% sensitive. In the shrub species, the resistance to air pollution is 100 % (high). Trees and shrub species used in planting designs in old

and new urban parks have been evaluated according to whether or not the region has native plant species. In Karaalioğlu Park, 11 native trees (31%) were found and 8 of them were high, 2 were moderately resistant while 1 was sensitive to air pollution. In Karaalioğlu Park, there are 4 native shrubs (27%) and all of them are resistant to air pollution. In the Akdeniz City Park, 9 native trees (32%) were found and 7 of them were high and 2 of them were moderate air pollution resistant species. There are 1 native shrub (4%) species in the Akdeniz City Park and it is resistant to air pollution. Possessing of durability species of the two old and new urban parks with 73 years time difference between their construction year were evaluated by calculating the percentage of air pollution resistant species in total tree and shrub species. The more recent park, the Akdeniz City Park, has a higher percentage of having an air pollution resistant species. Considering all these facts in the last stage of the work, the emphasis was on the reduction of air pollution and the healthy life of plants in planting design works to be done in areas where air pollution is effective in Mediterranean conditions.

**Keywords:** Air Pollution, Planting Design, Plant Species, Antalya, City Park

# Struggle aganist Climate Change with Green Roofs

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## ABSTRACT

Human-induced activities in cities create pressure on natural environment and lead to changes on ecological system of the world. One of the most important of these changes is climate change and it caused concept of global warming to become one of the mostly debated subjects. Climate change started with the industrial revolution and its' influence has become more apparent as time passed by. With the industrial revolution green areas degressively left their place to impermeable surfaces in rapidly-devoloping cities. As this caused to disruptions on the structure of natural environment, several negative changes took place on climate. Both the cities are triggering the climate change that occurs on a global scale and cities become that are most affected by this change. Urban-heat island effect and flood disasters which caused by extreme heat, arid climates, heavy rainfall and storms as a result of climate change have started to happen more recently and their results reach up to consequences such as disasters. It is foreseen that by the second half of the 21st century excessive rainfall will give its' place to drought with the increase in temperature and significance of the water will be understood better. Based on the declining concept of green areas as a result of dense housing in cities and problem of discovering new lands while trying to create green areas, green roofs that make cities more sustainable are used to minimize these negative results. Alongside providing an aesthetic approach to city, green roofs have ecologic and economical benefits as stormwater management, decrease of urban-heat island effect, carbon sequestration, increase of biodiversity, reduction of both air and noise pollutions. Green roofs with all these benefits are an important source to solve enviromental problems that are life-threatening and caused by climate change in cities. The aim of this study is to analyze the pressure of global climate change on urban and urban inhabitants and develop solution suggestions, taking into account the vast majority of the world's population living in urban areas. Active role of green roofs on stormwater management is particularly emphasized in the study. Green roof implementations in cities are technically done to keep heavy rainfall and prevent sewage overflows causing floods by delaying excess surface water flow. At the same time, green roofs prevent leakage of waste water and raise the quality of surface water. In this respect, green roofs are effectively used in many countries to fight climate change and governments put into force several laws and practices to promote green roofs on stormwater management. These promotions lead to transformations on the scale of buildings in the city plan and contribute to the sustainability of cities. In this study, Chesapeake Bay and government actions in that region have been investigated on the basis of stormwater management and questions like how to implement these actions in a dense populated megacity like İstanbul, how to take lessons from it and how to be a model are sought for answers.

Chesapeake Bay is the largest river basin of America and there are six states (Maryland, New York, Pennsylvania, Virginia and West Virginia, Washington D.C, Delaware) around it. Chesapeake Bay is highly affected by intense urbanization around it and has become vulnerable to climate change effects as it hosts more than 100.000 streams. Heavy rainfall is observed in the area and there is a flood risk as the impermeable surface density is high. Besides, pollution coming from these surfaces is carried to this bay via rivers. Therefore some state authorities have taken a number of measures against these negativities. In the most urbanized regions, a rain tax (stormwater fee) is created and amount of this charge varies in direct proportion to the area covered by impermeable surfaces. With this application green roofs are promoted on the basis of structure. In the light of this promotion plan, mega complexes with the potential for green roof (shopping centers, factories, schools, hospitals etc.) are observed and suggestions are developed in various regions of İstanbul where dense housing heavily takes place.

**Keywords:** Climate change, green roof, rain tax

# Smart City Model Suggestion for Malatya City

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## ABSTRACT

Smart city term has often been used by academic researches and by companies as a marketing concept, but there is no clear definition yet. In general, the definition of the smart city term is based on three basic qualities: environmental friendliness, the use of information technology for smart management, and sustainable development goals. Smart Cities Information Systems software (AKBİS) is the whole of Smart Cities Information Systems services that are constantly being developed since 2007, within the scope of GEOSYS 'expertise and rich experience in Geographical Information Systems. AKBIS produces Geographic Information Systems solutions on mobile-web-desktop platforms in the fields of City Information Systems, Infrastructure Information Systems, Energy Information Systems, Immovable Asset Management, Geographical Data Management, Geospatial Business Processes Automation and Field Task Managements for Public Institutions and Organizations, Universities, Municipalities and firms that operates in private sector.

It is stated that smart cities will promote the proper construction based on green information concept which is sustainable, ecologically protected, environmentally friendly, disabled-accessible and also which will use renewable energy and planned transportation with the possibilities of information technology. It can be seen that the smarty city concept begins to develop in Turkey. While TUBITAK is trying to disseminate the studies related to the subject in our country, it is seen that important studies related to the subject are carried out by municipalities, universities and public institutions in the world. Vienna is one of the cities that draw attention to the way of becoming a smart city by practicing works like “The Smart City Wien. 2050 vision”, “Roadmap for 2020 and beyond”, “Action Plan for 2012-2015”. City management manifests its vision by following up the started studies. Architects of the city are cooperating with the municipality and involved in joint tasks such as reducing carbon consumption in the buildings, city planning and facilitating transportation.

It is expected that our country will adapt to this transformation in a short period of time with the prospect that smarty cities will promote the proper construction based on green information

concept which is sustainable, ecologically protected, environmentally friendly, disabled-accessible and also which will use renewable energy and planned transportation with the possibilities of information technology. Turkey also started to develop smarty city concept in the recent years as seen with smart building conceptualization. However, it is known that local managements are trying to build the infrastructure for smart solutions such as smart energy, smart building, smart transportation, smart technology, smart health services, smart infrastructure, smart governance.

The main theme of the International Smart Cities Conference held in Ankara in 2017 was "Innovation and Time of Change for the Cities". The main argument of this study is that the models to be built with smart city technology in the cities should cover the locality's own potential and priorities. Within the scope of this argument, it is aimed to develop the model fiction through the city of Malatya on the neighborhood scale. While Malatya is one of the medium-sized cities in Turkey, economic, social and cultural attractiveness of the city causes intense immigration from its vicinity and Malatya does not possess infrastructure to meet the needs of rapidly growing population. To this end, the study focuses on the development of a human-ecology based smart city model to help to solve the negative ecological and social impacts caused by rapid urbanization. An idea has been established about how a smart city model can be developed for Malatya with the experts, who are trying to create a smart city infrastructure, at the university and the local government. With the need to determine the priorities in the development of this model, the Uçbağlar neighborhood and the Zafer neighborhood at the center of Malatya's commercial, residential and social areas were selected as sample sites. Contribution of mobility, accessibility and energy management to the urban ecology were evaluated in the case of applying smart city elements in these areas. It was determined that the smart city model proposed for Malatya should be considered within the scope of sensitivity, intensity and priority, and the model was designed to allow interrogation on the parcel scale over the Uçbağlar neighborhood and Zafer neighborhood.

**Keywords:** Smart City System / Model, Geographic Information Systems, Neighborhood Planning Decision Support, Malatya, Turkey

# CITY - LANDSCAPE – TRANSFORMATION 1

# Conflict between Natural Morphology and Urban Morphology: The Case of the Imrahor Valley Urban Transformation Area in Ankara, Turkey

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## ABSTRACT

During the late 1950s the amount of land cities in Turkey allocated for housing became insufficient due to an increase in immigration from rural to urban regions. Consequently, the number of slums increased and had a negative effect on numerous cities, including Ankara. As city populations continued to increase, slums also began to form on city urban fringes. By the late 1980s, urban transformation projects became the primary concern of most city governments in Turkey. Since then, urban transformation practices in Ankara have varied according to changes in its structural, socioeconomic, administrative, and physical characteristics.

Each facet of the urban transformation process irreversibly affects the natural landscape. Imrahor Valley, just south of Ankara, is a 3500-hectare area that starts in the Gölbası District, includes the districts of Çankaya and Mamak, and is bounded by the Mamak Viaduct to the north. The Valley has been the site of intensive urban transformation since 2000, yet it remains a natural-morphological unit that maintains its natural and rural character. Imrahor Valley is hydrologically connected to Mogan and Eymir lakes, and is a wind corridor for the Ankara metropolitan region. Research shows that the entire Valley is rich in biodiversity. According to the 2023 Başkent Ankara Master Plan, Mogan and Eymir lakes are protected because of their location within the borders of the Gölbaşı Special Environmental Protection Area; however, Imrahor Valley, which is geologically, ecologically, and hydrologically connected to these lakes, is excluded from the protection area.

Among the greatest threats to the natural morphology of Imrahor Valley is the Güneypark Urban Transformation and Development Project Area, which is located on the northern slopes of the valley and encompasses approximately 60 hectares. To date, implementation of the Project resulted in the demolition of 473 slums. Many attempts have been made by the chambers to stop the Project because they claim areas designated as low-density settlement areas are being converted into high-density residential areas. Similar results have occurred via implementation of the Bosphorus Project, otherwise known as the Ankara Valley Project.

This study aimed to illustrate how natural morphology being ignored and ecological losses should be taken into greater consideration during the process of urban transformation occurring in Ankara's Imrahor Valley. Accordingly, herein an overview of the history and contemporary picture of the Valley are presented, based on the literature and the urban transformation projects currently being implemented. In addition, since 2010 fieldwork has been regularly performed and changes to the landscape visually recorded, as Imrahor Valley and its surroundings were selected as a study area for the Source Inventory and Analysis course for third semester students of Ankara University, Department of Landscape Architecture.

Moreover, in 2014 Imrahor Valley and its surroundings were chosen as the study area for a workshop offered by the Ankara University Department of Landscape Architecture entitled, A New Approach in Landscape Planning: Geodesign, and this study also presents the workshop's findings related to morphological change in the Valley. Furthermore, the conflict between natural morphology and urban morphology, as shaped by urban transformation practices, is considered in the context of the lack of consideration of other natural processes (water processes, soil processes, and vegetation process) directly related to the Valley's natural morphology. Lastly, a framework for the use and conservation of natural morphology during the process of shaping urban morphology is presented.

**Keywords:** Natural morphology, Urban morphology, Urban transformation, Natural landscape, Imrahor Valley

# Optimization of Residiantial and Recreational Areas In Transforming Cities

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## ABSTRACT

Urban areas, which are the most affected areas by human activities, are in a constant transformation in interaction with communities throughout history. In our country, the natural and cultural resources of the cities are consumed unconsciously and effective conservation approaches can not be exhibited in transferring these values to future generations. Especially in today's cities where the applications of urban transformation are increasing, the transformation projects produced on the basis of a single area can not be get further than being political decisions; as the resources potential of the cities are not being used effectively and the existing resources are also facing the danger of extinction. Unplanned land use causes problems such as air, water and soil pollution in cities, misusage of agriculture and forest areas, and wrong and fast urbanization. The only way of urban plans to acquire the qualifications that would contribute the sustainability of urban ecosystem is to integrate the issues of the protection of urban landscape and urban landscape management within the planning process. Optimal land use decisions, which aim to protect key landscapes and consider effective landscape management in urban areas, are an important application tool for preventing or minimizing problems.

In this study, the city center of Kastamonu, which is a middle-sized city with rich natural and cultural values, and is open to physical development, rapidly changing and developed. Within the scope of the study, it is aimed to determine the areas with high landscape values, to evaluate the existing planning decisions of the city which is open to development and to reveal the use of the new suggestion areas where the conservation-utilization balance to be taken into consideration during the urban transformation process is observed. The Geographical Information System (GIS) was used to generate data of the study area. Suitability maps for settlement and recreation areas of the study area have been prepared.
Also using the previous studies on the subject, the compatibility values were given through 1 to 4 (4 - very suitable, 3 - suitable, 2 - less suitable, 1 - not appropriate) varying scores for field use for these two land use types. In establishing suitability maps of settlement area use; land use skills classes, slope, elevation, vegetation and hydrological structure data were used. For the recreational suitability maps data of proximity to transportation, historical and cultural values, elevation, vegetation, hydrological structure, erosion, precipitation and temperature were used. According to this, for the settlement area, 18% of the city center is very suitable, 34% is suitable, 33% is less suitable and 15% is not appropriate. For recreation areas, 21% were found to be very suitable, 37% suitable, 31% less suitable and 11% unsuitable. In the direction of ecological planning principles,

the optimal area utilization plan has been prepared by taking the sustainable use of resources, current and potential problems and the socio-economic and cultural situation of the city into account. Differences between the current plan and the proposal plan have been identified. Accordingly, the proposed use of the area requires to decrease the existing 60% residential area to 35% and increase the recreation area to %7, which is 1%. In the study, it was determined that the city could not make good use of its potential due to improper use of space and planning errors, and suggestions for optimal land use for new urban plans and projects to be prepared during the urban transformation process were developed.

**Keywords:** Urban transformation, optimal land use, settlemen, recreation.

# The Transformation of Old City Centers and Urban Design Vision: Malatya Battalgazi Suriçi Example

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## ABSTRACT

The old town centers are important places that can carry traditional architectural texture to these days. Despite these attempts to bring in conservation status and to provide traditional sustainability with various techniques (street renovation), the expected protection is not achieved.
Because the applied techniques are aimed at improving the visual structure rather than the social structure. The loss of the economic attractiveness of the old urban centers causes the dynamic structure of these areas to be lost and rapidly turn into places that are conceptualized as the "depression area". At this point, the urban design studies in which the economic, ecological and socio-cultural processes are handled together in the renovation of the old city centers is essential for the preservation of the core memory and the texture of these areas.

The subject of this study, the Malatya Battalgazi Suriçi region, is known as the former Malatya and constitutes one of the examples mentioned above. This city, which is enclosed in the city walls to ensure the security of its citizens, is in the process of evolving into a structure that can be defined as a "depression area" which refers to the emphasis on insecurity today. Aslantepe Höyüğü is a region where refugees, seasonal workers and elderly people of Malatya population reside, despite the Roman, Seljuk and Ottoman periods in terms of temporal depth of historic layering. For this reason, traditional social life practices in the old city center are being dragged towards the invisible with a new construction process, just like the architectural texture. While the identity and memory are superficially created through the city form context; the relationship between the city and the global one is tried to be provided through tourism only within the scope of visible structures. Dynamic social structure and neighborhood culture of the area are rapidly becoming invisible due to the efforts to market the area to the global one through tourism and the studies made within this scope. In response to these problems, the idea of how ecological landscape planning / design approaches of the change and transformation process mentioned in the Suriçi region can be integrated into the urban design has been developed. Idea development studies are concerned

with determining the framework of the urban design vision in old city centers with conservation status and studies have been carried out by the senior students of the Landscape Architecture Department of the Faculty of Fine Arts and Design of Inonu University. Field studies developed through urban identity/memory, ecological landscape design, succession and urban design with the intention to develop urban design codes in accordance with the spirit of the area. For this reason, the first field study has been directed towards the establishment of an individual mind map for the determination of urban image. In the mind maps of the students, the singular structures have come to the forefront, the urban form has not been perceived and the insufficiency of the street renovation work has been emphasized. In the following periodical field studies, the concepts of sociality, gender elements have been remarkably become a current issue. Communication problem caused by the male-dominant participation in social life, and the cultural differences between permanent residence (locals) and new migrators (permanent seasonal workers and refugees) leave its place to “insecurity”. Despite the fact that there was no particular problem between them, the disagreement was regarded as a cultural conflict between the old and the new. Students developed the change and transformation in the city through themes such as boundlessness, trust, seed, social street, lost city. These themes emphasize the succession of the field while at the same time involve attempts to recall its deficiencies and its memory. The role the conservation development planning in the protection of the urban identity/memory, bearing social life practices, reflecting its historical and ecological knowledge of the place, and adequacy of this role have been the subject of debate by creating an alternative landscape plan for the conservation development plan, which is the important planning output of the city. Furthermore, the fact that the integration of the old city centers into the global tourism sector, which is built on the traces, brings the risk of transforming the urban design into a tourism object.

**Keywords:** Old Cities, Urban Memory, Urban Design, Malatya, Turkey

# Investigation of Change / Conversion / Uniqueness Situations of Spatial and Ecological Processes of Arnavutköy (İstanbul) District

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## ABSTRACT

Arnavutköy, determined as the study area, is the fourth largest district of Istanbul on the European side. The surface area is 506.52 km2. Eyüp Sultan District in the east, Sazlıdere Dam in the south, Başakşehir, Esenyurt and Büyükçekmece Districts, the Çatalca District in the west and the Black Sea in the north. Arnavutkoy is located on the Catalan peninsula, which is physically torn by rivers, and has high hills that show plateaus in some places. The water collection basin of Buyukcekmece Lake, Kucukcekmece Lake and Alibeyköyü Dam, as well as Terkos gölü and Sazlıdere dam from the important water sources of Istanbul European Side are partly in the district borders.

The Arnavutköy district, which has various ecological characteristics as of its geographical position, has become a center of attraction in the process and the population has increased rapidly so that there have been five major changes in the population of Arnavutköy and its surroundings over the last century. These are migrations made during the balkan wars, the second is the population exchange agreement signed in 1923. Thirdly, it is a migrant after the town. Other important factors affecting the population growth are the applications of mega projects such as Kanal Istanbul and 3rd Airport. Rapid population growth, which was brought about by the consequences of these changes, resulted in unplanned urbanization.

Unplanned development, rapid urbanization and increasingly populated population brought environmental problems together. Unplanned and rapid urbanization is a form of land conversion that is the most profoundly biological effect on human life. It is important to determine the landscape design and change so that the urbanization can be monitored and evaluated. These changes and transformations are carried out through analysis of what the landscape of the past is and how it is being changed. As a result of these analyzes, changes can be identified in the parameters that make up the ecosystem between different years (changes in forest area, agricultural areas, surface area of wetlands, etc.).

The literature on the field of material to be used in this research is the results obtained from the search of data, maps, satellite images and photographs. The changes between 1950 and 2018 satellite images of the Arnavutköy district, which we have designated as a research area in the research, will be determined by means of Remote Sensing (UA) and Geographic Information

Systems (GIS). As a result of these analyzes, the stains, corridors and matrices which constitute the landscape ecology bases will be determined on the maps.
The resulting data will form the basis for creating landscape analysis / landscape development strategies and scenarios for change, transformation and specificity situations, as well as for the differences in area over which lands have been exhibited over the years by stains, corridors and matrices.

**Keywords:** Arnavutköy, Spatial Change, Ecological Process

# Sustainability of Urban Renewal in Urban Identity

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**ABSTRACT**

Cities with their natural, historical, cultural values and architectural features; natural processes, population growth, changes in socioeconomic structure, technological developments and various political decisions. For this reason, urban transformation studies aimed at making cities more healthier and livable, ensuring social integration, and stabilizing the environment and ecological balance in areas where it is deteriorated have become a necessity today. Urban transformation affects the whole city with its natural and cultural structure, social and economic life, urban identity. Urban identity Urban identity is the whole of the qualities that influence the image and help to distinguish one city from the other. These identities of cities are shaped by the physical, social, cultural and historical elements that each city carries to the future from the past. At the beginning of the most obvious problems that the urban transformation that has taken place in the present day, the changes that the urban identity brings to the city are taking place. In this study aiming to investigate the effects of urban transformations on urban identities, urban regeneration, urban identity and sustainability concepts, urban transformation methods, urban transformation and urban identity interaction are explained in the light of existing literature. As a result, sustainable solutions have been proposed for the urban identity problem emerging together with urban transformation.

**Key words:** Urban transformation, urban identity, sustainability

# An Investigation Regarding Evaluation of Changes in Tekirdağ Urban Archeological Site in Terms of Landscape Architecture and Tourism Potential from Past to Present

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## ABSTRACT

Urban sites; according to the Law No. 419 dated 19/4/1996 Concerning the Protection and Utilization Conditions of the Ministry of Culture and Tourism, Law No. 5226 on the Protection of Cultural and Natural Assets and Amendments in Various Laws; are defined as "areas where cultural and natural elements (structures, gardens, plant coverings, settlement textures, walls) together with architectural, local, historical, aesthetic and artistic characteristics and more valuable than the value they carry with each other due to coexistence". Having an important point in the physical and social structure of the city; historical places shaped by cultural, aesthetic and economic judgments in the process are composed of traditional settlement areas that have come to the present from past to present. Historical cities, especially shaped by the physical, cultural, social and economic structure of their societies, gave information about their lifestyles and characters and lifestyles, cultures and social structures to future generations. Today, urban conservation sites, however, have been transformed into depressed areas, which are not suitable for use by the local population, and which are not suitable for use with various influences. In this context, the surrounding outdoor spaces and urban preservation areas constitute important urban parts which must be preserved, kept alive and developed and transferred to future generations.

In planning for tourism, historical environments have turned into places of great interest for people. The history, settlement texture, life culture and traditional values of the civilizations of different periods are not only interesting to people but also arouse curiosity. However, the fact that the tourism activities carried out cause deterioration of the natural and cultural resources and the destruction of the traditional settlement doctrine show the advantages and disadvantages.

In this context, the study is focused on Tekirdağ urban conservation area, which is important for cultural resource values and social structure; it is aimed to protect the present situation of the area, to meet today's needs and to be transferred to future generations, as well as to be evaluated together with tourism potential. Research area; over time, unprotected development by various reasons, and thus faced with the threat of losing traditional institutional fabric, historical and cultural identity. In this direction, the change of the Tekirdağ site area declared as the 1st Degree Archaeological Site Area according to the principle decision of the Edirne Cultural Heritage

Protection Board dated 05.11.1999 and numbered 658 is examined and the site can be revived and the historical touch can be reinstated to Tekirdağ and what needs to be done to ensure sustainability has been examined and proposals and recommendations have been developed to be passed on to future generations.

In the framework of the method of study; the examination of the physical structure of the city in the historical and spatial development process, emphasizing the importance of historical buildings and urban texture, and the conditions that adversely affect the texture in the historical environment have been identified. As a result of the research carried out in the site area of Tekirdağ; plan decisions have been developed which will enable the identification of the necessity of preservation of historical environments with natural and culturally prescriptive features, integration with contemporary living conditions, cultural identity and livable spaces.

**Keywords:** Urban protected area, cultural heritage, historical environment, historical environmental protection, Tekirdağ

**Note:** This study was prepared by using the Seda AKLIMAN Master's Thesis study and the "NKUBAP.00.24.YL.12.07" Nolu Masters Project.

# CITY - LANDSCAPE – TRANSFORMATION 2

# The Effects of TOKI on Urban Landscape: Kayseri City

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## ABSTRACT

In today's world where the vast majority of the world's population lives in cities, urban design is one of the important issues. The urban design steers and determines ecological, aesthetic etc. structure of the city through the approaches it has followed. Thus, urban landscape is formed.
Urban landscape is expressed as a whole of natural landscaping elements (soil, geology, water resources, vegetation cover, etc.) and cultural landscaping elements (population, current land use, architectural structure, etc.) of the city. In addition, each city's landscape is unique. The sustainability of the urban landscape is an important issue in any plan, design and management decision of the city.In this regard, each city has different character; in other words, each city has specific landscape. In this study, effects of the Housing Development Administration of Turkey (TOKİ) were evaluated. TOKI is one of the key institutions that shape urban design in Turkey. TOKI conducts plan, project, application studies of housing, infrastructure and social facilities. The study was carried out in Kayseri city center and the projects conducted by TOKI in the city were evaluated. Evaluation was done with the Opportunities-Advantages-Threats-Weaknesses Analysis (FÜTZ-SWOT). FÜTZ analysis is an effective tool in determining and assessing the current situation of the institution's internal structure and external environment in the process of strategic thinking and management. As a result of the evaluation, TOKİ has proved to be an important influence on Kayseri city landscape. Proposals have been developed for these effects to contribute to the sustainability of urban landscape.

**Key words:** Urban, plan, urban landscape, TOKİ.

# The Effect of Cultural Compellers on Green Areas during the Urban Development Process: Istanbul-Çekmeköy Case

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## ABSTRACT

Changes may take place in cities and urban landscapes due to natural conditions and human interventions in the course of time. Compelling powers as to landscape change include the following: Socio-economic compellers (urbanization, industry, and industrial activities), Political compellers: Technological compellers (vehicle roads, infrastructure facilities), Natural compellers (climate) and Cultural compellers (accessibility, human intervention) (Farina, 2000; Bürgi et al., 2004; Antrop, 2005; Gökyar, 2012). According to Antrop (2005), Cultural compellers are the most important among these forces. It is an undeniable fact, as many researchers have stated, that landscapes change in the course of time and these changes lead to occurrence of positive or negative consequences depending on the human effect.

Migrations throughout history have caused population pressure to numerous city centers. It has been observed that the urban citizens with economic power who have to live in crowded cities have created their own living areas in the periphery of cities with the desire to live away from the city and in nature. The population density created by those migrating to cities after industrialization has especially increased the desire of living outside the city. Big population movements, changing preferences, urbanization and concerns of obtaining economic profits have caused the emergence of various housing areas and types. The embroiled situation of the city centers has made idea of living in nature more attractive. And this has led to the preference of satellite towns or suburban type settlements which are located far away from urban centers more and more (Chaney, 1999) and led to the spreading of the urban areas as well as the urbanization of areas with rural nature in the periphery of cities.

The population increasing each and every day due to migration from the city centers, attractiveness of natural life and increase in quality of life and the dense housing along with it, lead to urbanization of natural areas as well as the transformation of landscapes. Çekmeköy district of Istanbul is one of the best examples for these types of areas. Çekmeköy is a very important part of Istanbul because it hosts water basins and forest areas which are vital for Istanbul. This area, approximately 42% of which is forest area and 7% of which is agricultural area and where the Ömerli basin is located is under big danger.

Çekmeköy, which is selected as the study area, was a summer resort 16 km away from Üsküdar until 1987 and its population was 420 in the 1960s and 381 in the 1970 general population census. Çekmeköy reached a population of 248.859 in 2017 following the rapid population increase which started in 1970s and continued in 2008 after its becoming a district. Thus, landscape of Çekmeköy underwent great changes due to effects such as housing and transportation along with intense population increase and it still undergoes great changes.

The objective of this study is to detect the pressure of cultural compellers and especially urbanization on the area and examine the landscape changes. Change analysis was performed through utilization of Corine land cover classification, landsat satellite images in addition to global forest change/google crisis map images in the study. Green area changes were determined changes of green line by virtue of change analyses made with certain intervals from 1999 until present.

Consequently, a fast decrease in the land use change and serious increase green areas have been determined in Çekmeköy, especially along with the fast housing process which started after its being district in 2008. Particularly, diversification of transportation (such as Şile highway, TEM (Europe Transit Highway), bridge connection roads and etc.) and the district became a center of attraction after various construction companies building constructions intensively in addition to building compounds with safe and social facilities. Because Çekmeköy, consisting of forest areas in majority area could not extend at the beginning, began to extend after these areas were considered as 2B forest land (land which have lost their forest quality) and constructions started in these areas and moved dangerously towards the forest areas. Therefore, a sustainable urban development model has to be provided urgently for Çekmeköy which is the study area. Importance of approaches such as minimization of consumption of space and natural resources, management of urban migration in an effective manner, provision of equal access to resources and etc. have been mentioned within the purview of the study.

**Keywords:** Landscape Changes, urban development, Cekmekoy, cultural compellers

# Ecological Responsive Approach in Urban Transformation

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## ABSTRACT

Urban transformation is all the work that affects the city as a whole, with spatial transformation applied to the renewal or improvement of the existing urban structure in general. It is based on reconsideration and evaluation of old, worn, or depressed urban parts. In urban transformation, it is mainly aimed to solve the problems in the environment where the urban transformation is implemented and to improve the region. As the primary targets in urban transformation applications, increasing the quality of life in unhealthy and unplanned urbanized areas, converting the unfunctional city parts into functional areas, bringing the historical values to light and such similar topics are included. However, in urban transformation approaches to the issues including a sustainable balance between natural and cultural landscapes, efficient use of natural resources by utilizing natural landscape features, building in safe areas, and so on are not sufficiently taken into consideration. In urban transformation, the transformation depends on the basis of ecological planning, therefore, determining the most healthy uses by making analyzes for the systems that create the natural landscape is important in terms of reaching the purpose of transformation. From this point of view, the proposals on how to improve the quality of life in the conservation-use balance of natural resources by emphasizing the importance of ecological planning/design approaches in the process of urban transformation are presented in this report.

Urban transformation projects in developed countries are carried out in a parallel and integrated approach to urban development strategies. The urban identity and the modern architectural approaches that support the urban image are designed together with the surrounding environment and the public spaces that live at 24 hours of a day are created. In planning and design processes, there are increases in problems related to skewed and unhealthy urbanization in countries that are insensitive to the systems that create the landscape. Turkey is one of the countries that are experiencing these problems. Urban transformation projects in Turkey are taken up in the building scale without an integrated planning approach in general. Therefore, in these applications; topographical structure and elements forming this structure, natural processes, thresholds and the whole of the city are ignored. As a result, transformation is carried out with an understanding far from ecological sensitivity. On the other hand, identity and image are ignored, green areas are used out of purpose and the use of public space is also inadequate in urban transformation applications. This situation has negative effects on social, economic and social dynamics.

Environmentally sensitive ecological planning approach is the planning concept that must be taken into consideration in the prevention of environmental problems and conservation of natural resources. According to this understanding; the basic approach should be adopted to carry out landscape analysis taking into consideration the natural landscape elements. According to this understanding, the basic approach of performing landscape analysis by considering the natural landscape elements should be adopted primarily in the planning of human settlements. It should be taken into account that whether the selected sites of the city have the proper characteristics or not to settle and the unique biological layout of these sites in order to establish a sustainable balance between natural and cultural landscapes. It is also important that the transformation is carried out step by step within a prepared master plan for the urban transformation to be achived in the whole city. The master also has importance to plan all types of green trenches forming open and green areas on the whole city, water surfaces, protected areas, ecological priority areas, agricultural areas, etc. with an understanding of a system connected to each other. Urban transformation applications that emphasize the city's characteristic, features that will strengthen its national and international image scales should be done by keeping historical and cultural values of the city on the front line. Microclimatic data affecting human comfort (daylight, wind, temperature, etc.) should be utilized at the level of urban space and in the design of buildings to improve physical quality and to save energy. For this purpose, the natural environment and climatic housing designs produced in traditional settlements should be taken as an example. Strategies should be developed for efficient use of water, reducing water consumption in residential and environmental designs. Water collection, storage and distribution systems should be installed in order to prevent water floods in the city, and to reduce the sewage burden. Impervious grounds should not be allowed except in unavoidable circumstances. Annual landfill plants and plant materials, suitable for local conditions and requiring minimum water and maintenance, should be preferred in herbal design works for public areas and in private gardens instead of lawns, exotic plants and seasonal flowers which have high cost and maintenance costs. Sun, wind and bioenergy, unexploited energy sources according to the characteristics of the region which do not cause environmental pollution, should be utilized. In this way, heating, lighting and similar needs can be met without causing environmental pollution. On the other hand, the use of local materials is an important issue in terms of ensuring raw material conservation in urban transformation applications, as well as the use of durable materials and elements that are recycled, sustainable, easy to transform and maintain.

Urban transformation should be considered as an opportunity to create healthy, livable cities in the solution of urban problems. It is important that the studies within the scope of urban transformation, in which main objective is to bring solution to enviromental problems, are carried out within the master plan in terms of preparing the transformation with a holistic viewpoint. In line with Turkey's 2023 target, the prospect that " future cities will be human-centered, self-sufficient, livable eco-cities that manage water, energy and waste" with urban transformation and housing, urban infrastructure, conservation of the environment, management of soil and water resources and so on issues were examined and various policies were determined in the Tenth Development Plan. Based on this approach, ecologically sensitive practices that take into account the public interest, ecological and natural processes in urban transformation must be made compulsory.

**Key words:** Urban Transformation, Ecological Planning, Ecology, Energy Efficient Design

# Transformation of Urban Public Spaces: The Case of Turkey

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## ABSTRACT

Urban public spaces are spaces in the city with different functions, provided by economic, social and cultural development of the community. It is considered to be the remaining space only from the built-up areas. On the contrary, urban public spaces play a key role in the transformation of cities. These public spaces, which are an important part of the cities, add value to the city and gain the identity of the city.

In recent years, the city's public spaces have risen to the top of the agenda of city authorities, private sector developers, and built-up professions. Rapid increases in both public and private sector interventions have resulted in rapid transformations in the urban public spaces. The transformation of urban public spaces is the result of a long period of time. In order to understand the transformation of urban public spaces, it is necessary to investigate the changes in the city through its dynamic and multidimensional perspective. Contemporary cities are undergoing radical change. Because the majority of the world's population live in cities, cities have become the main places for exchange of ideas, goods and services. Two centuries ago, cities became the source of the industrial revolution; functions, people and built spaces have changed to accommodate this fundamental change. At the end of this period, Western cities witnessed a new phase of basic change. Industrial activities have been restructured, new areas of the world have become industrialized, old industrial countries have taken the place of management centers and global change has taken place. The decline of old industries and the significant rise of the service sector have once again changed the nature and function of cities. As Western cities passed through a transition period: some of them recede, others became places of innovation and control that are the key points of a network of urban worlds. This constant transformation in the role of the cities has led to inevitable consequences for the inhabitants of the city and their built environment. As institutions and functions change, urban spaces and urban life are transformed accordingly. Like any other fundamental change, this change has created serious threats and challenges in almost all aspects of the contemporary city. The threats that lead to the transformation of cities are consumption, privatization, transportation, individualization, rise in privacy, crime, insecurity,

prohibitions, advances in communication technology and controlled through design. It can be said that the most important reason of the transformation is the production-consumption relations. Urban public spaces are one of the areas where most of these threats and challenges are most prominent. With the transformation of urban public spaces, the function and meaning of the space also changes.

For the cities in transition, the public space is getting more and more important. In particular, the old industrial cities have been renewed and large-scale new urban public spaces have been created. The threats to urban public spaces are multidimensional, and the approaches adopted to eliminate these threats and the challenges they face are also multifaceted. Partly due to the campaigns of urban designers and, in part, the pressures and needs of revitalized cities; the improvement of public spaces is at the center of the agenda of the professions concerned with the built environment, public authorities, private sector developers as far as researchers and related citizens are concerned. Partly due to the campaigns of urban designers and, in part, the pressures and needs of revitalized cities; the improvement of public spaces is at the center of the agenda of the professions, public authorities, private sector developers concerned with the built environment as far as researchers and related citizens are concerned. Each group has different expectations about the improvement of the public space. These expectations sometimes lead to contradictions, tensions and controversial consequences.

One of the main reasons behind the new interest in improving public spaces is the introduction of cities in the global economy. As economies become global, resources are easily transferred from one place to another, and when it is desired to make use of these mobile resources, cities become distinctive and attractive targets.

Compared to many other urban world, cities in Turkey continues to be an integral part of the social and cultural life has fewer quality public spaces. The beauty, richness and history of architecture reveal the importance of these spaces in people's daily lives. The expansion of privatization and the decline in the quality of these public spaces shows its effect in many cities in Turkey.
In the paper; the transformation of urban public spaces such as the square, the park and the waterront in the historical process and the change of the cities have been examined. These places are important in the history of Turkey, located in different cities, have contributed significantly to the formation of identity and are symbolic of the city. Some of the important events in Turkey's history took place in these places. For this reason, these places have historical value, they imprint the identity of the cities and they have an important place in the city memory.

In the paper; behind the increased importance given to urban public spaces in Turkey causes were investigated; threats and difficulties for these spaces have been put forward; it was aimed to establish a discussion environment for the transformation of public spaces of cities and to develop suggestions for the development of these spaces.

Taksim square, Youth park and Kordon are some of the urban public spaces examined. The name Galata Beyoğlu has taken from Taksim Maksemi, where water is divided. This area with an intersection characteristic was enlarged by the destruction of the surrounding buildings. After the construction of the Atatürk Monument in 1928, Taksim area won the square identity. The area has thus started to be named with Taksim Square name.

Youth park; It is one of Ankara's historical parks. The result of the transformation of 28 acres of park swamp land has been achieved.

Youth park; It is one of Ankara's historical parks. The park was obtained by transformation of the marshy area of 28 decares. The park was built between the years 1936-1943 is one of the prestigious projects of the Republic of Turkey. It is a very important project for the capital city Ankara, that is thirsty in the middle of the steppe. With this project, the city park located in all the Western cities is wanted to be created in Ankara. It is a part of the urbanization movement which started in 1923.

Kordon is one of the places that have an important place in Turkey's liberation struggle. It is located in Alsancak which is a landmark district in the Konak province of İzmir. It is a coastal feature. Its first use is a two-lane highway. The Kordon, which is thought to be the continuation of İzmir-Çeşme highway, started to be filled in 1997. After a series of lawsuits, it was decided that Kordon should be used as a green space. Since 2000, Kordon has been serving as a green space that meets active and passive recreation requirements of the whole city.

**Keywords:** Urban open space, transformation, urban identity, urban memory, Izmir

# The Concept of Rural Gentrification in Reflection of Influence of Urban Transformation on Rural Areas

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## SUMMARY

The concept of gentrification first emerged in 1964 when the houses of the workers and poor people living in England were taken over. Planners, bureaucrats, lawyers and numerous profession groups have made various definitions as regards the concept of gentrification. Gentrification has been expressed as urban animation as a general definition. Industrial developments as well as population growth have led to changes in the economic and social status of societies in line with the emergence of globalization. The concept of middle class has been included to the concepts of poor and rich people. States have developed new planning policies in urban and rural areas for the requirements -and in particular for housing requirements- of middle-class populations, emerging as a result of globalization. Upper and lower-scale planning policies have been talked over both at national and international platforms and proceeded to application phase. The gentrification of rural areas has brought to the agenda the issue of economic, social and cultural balance between those who have migrated and settled in rural areas and the local people. Positive and negative impacts of migration to rural areas have become an issue of discussion among scientists, administrators and the public.

The population is increasing in Turkey in parallel with the population increase in the world. The population in Turkey increased by 995 thousand 654 in 2017 compared to the previous year according to data obtained from Turkish Statistical Institute. While the rate of residents located in provincial and district centers was 92.3% in 2016, it increased to 92.5% in 2017. The rate of people residing in regions and villages in rural areas has been determined to be 7.5%. Urban life affects people's quality of life negatively due to excessive population density in cities which leads to increase in real estate, decrease in amount of open and green areas, intense working conditions, air pollution in addition to numerous other reasons. Human beings long for nature and natural things increasingly each and every passing day. People who desire to get rid of the intense rhythm of the city as well as the inadequacy of present recreation and open green spaces need to migrate to rural areas. Increasing physical and mental health issues in cities have triggered the wish of people as regards migrating to rural areas at the same time. Effects of migration from urban areas to rural areas on both local people living in rural areas as well as the natural structure of rural areas, directly or indirectly emerge over time.

The effects of migration to the rural areas in recent years on the natural and cultural changes in these areas were examined within the framework of the concept of rural gentrification in sample areas in this study. Büyükhüsun, Yeşilyurt and Adatepe villages within the borders of Ayvacık district of Çanakkale province were chosen as the study area. Subsequent to conduction of required

literature research was done as a method in the study, interviews carried out with the institutions, local people and headmen to collect the necessary data incident to the villages. The obtained data were evaluated on the basis of landscape character analysis approach. The study of evaluation of the character traits of landscape areas is a technique which has recently been utilized frequently and ensures realization of effective evaluation. Settlement design analysis geomorphological features, economic structure, distribution and changes in land use, population analysis, migration rate, cultural change and changes in land ownership were determined as character traits of landscape in the realization of landscape character analysis of Büyükhüsun, Yeşilyurt and Adatepe villages in the study and analyzes according were carried out in line with these features.

As a result of the study it was determined that Büyükhüsun, Yeşilyurt and Adatepe lost their natural village features over time while gentrification can increase the prospective its harmful impacts on the ecosystem. The positive and negative aspects of migration from the cities to the villages were examined separately on those who have migrated and settled, in other words newcomers and local people. It should be taken into consideration that changes and transformations in urban areas directly or indirectly affect not only urban centers but also rural areas. Creation of conservation and use balance in urban and rural areas and the level of effect of changes on natural structure should also be taken into account.

**Keywords:** Gentrification, rural gentrifications, urban transformation, landscape character analysis, migration.

# Urban Shrinkage Typologies in Turkey

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## ABSTRACT

Urban shrinkage, which is widely seen in contemporary world cities, is one of the important urban problems that can result in long-term economic and demographic problems. In the world, the causes of urban shrinkage are generally related to falling birth rates and long-term industrial transformation processes, yet the urban shrinkage models may vary with respect to the local conditions of the city. The economic, social and political trajectories of the city should be analyzed in order to interpret the urban shrinkage typology and provide relevant solutions to a specific site. Appropriate design and planning strategies should be defined considering the local characteristics of the city to prevent possible threats of the urban shrinkage. In the worldwide, the urban shrinkage problem is defined on the basis of the city scale. On the other hand, Turkey faces the urban shrinkage in different scales and typologies such as city, district and neighborhood. In addition to this, the economic factors that create urban shrinkage in the world cities sometimes do not result in urban shrinkage in Turkey. In this context, it is significant to be formed a specific urban shrinkage description for Turkey to provide a design and planning criteria which is focused to local factors of urban shrinkage.

In this study, the typical urban shrinkage definition is identified for Turkey by analyzing existing and potential urban shrinkage typologies from different scales and characteristics. The local factors of the urban shrinkage in Turkey are analyzed to provide site-specific planning and design approaches to prevent the urban shrinkage in future.

As a method, urban shrinkage typologies in Turkey are categorized considering social, economic, geographic and politic factors and the change in scales such as neighborhood, district and city. Shrinking city examples of Turkey is studied by comparing to the urban shrinkage models in the world cities. In the context of the study, Bursa, Antalya and Samsun cities are defined as social factors- oriented shrinking cities ,since they involve commercially planned old city center losing population due to the changes in socio-cultural situations of the inhabitants migrate to the new settlement areas in the city peripheries. According to the study, another classification criteria is economic factors- oriented urban shrinkage which is mostly seen in Turkey similarly to the world cities. Economically shrinking cities generally emerge in the post- industrial transformation areas in the world. In Turkey, cities as Zonguldak, Bartın, Soma which have mono-centric industry face the economic factors-based urban shrinkage due to the shutdown of the coal mines resulting the migration of the population. In addition, cities as Uşak, Turhal, Alpullu, Afyon which are currently

in the corporatization process of the sugar factories may define as potential economic factors based urban shrinkage areas by the migration of the workers due to the fall in sugar production quotas causing layoff. In the context of the research, another local factors- oriented urban shrinkage typology in Turkey is defined as politic factors- oriented shrinking city. Sur district of Diyarbakır which is vacated due to the terrorist attacks is given as an example for the politic factors- oriented urban shrinkage. This situation is defined as urban shrinkage typology in district scale, since the shrinking process only occurs in Sur district. From this aspect, unlike the world shrinking cities ,a smaller, district scale urban shrinkage model is specified. In addition to the politic factors- oriented urban shrinkage, the border cities as Kilis and Osmaniye which face the migration of Syrian refugees are defined as potential urban shrinkage areas, since the temporary expanded city texture will be abandoned after the refugees come back to Syria.

As a conclusion, the study is site-spesifically determined existing and potential urban shrinkage typologies, identified the urban shrinkage definition and categorization in Turkey. Different aspects of the shrinking cities in Turkey are expressed by the examples of the cities considering the changes in the scale and features. Planning and design strategies are discussed to prevent the potential urban shrinkage in Turkey.

**Keywords:** Urban shrinkage, urban sprawl, change of the city centers, locality

# CITY - TRANSPORTATION - CHANGE

# The Transition And Transformation Process Of Atatürk Forest Farm

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## ABSTRACT

After the Republic was founded, Atatürk appealed to the well-known agriculturists in the spring of 1925 and gave order to buy an appropriate territory in order to establish a modern farm in the vicinity of Ankara. The Veteran thought that this modern farm that he planned to establish near Ankara would be an area for relaxation and recreation for the public of Ankara and gave great importance to the activities related to organization and reconstruction of this farm.In 1925, in the Veteran Forest Farm, 14.000 decare land was provided and crop farming was made and initially grain was grown.

One of the important field of study of the Farm was fruitgrowing which was developed at a great pace since its foundation. Furthermore, the plantation was not used only to afforest the Farm but it also fulfilled the need of sapling of Ankara to a great extent.

According to the Law, the purpose of the establishment of Atatürk Forest Farm was to establish a good sample of ranch in order to support the farmers, to provide clean and cheap food products to the public of Ankara, to establish areas of usage for relaxation, entertainment, social and cultural purposes with afforest and greening studies so that the need of recreation of the public of Ankara would be fulfilled.

The Big Savior had granted his farms to the Treasury and some parts of his real estates to Ankara Municipality with his 11 June 1937 dated request. However, at the end of conveyancing and turnover processes by enacting, by getting into a profit-partnership or by build-operate-transfer model, by renting and not based on any protocol and against laws, during the 44-year period between 1939 and 1983, 22 thousand decare land was detached from Atatürk Forest Farm. Atatürk Forest Farm which was 10200 hectare was transferred to the Treasury in 1937. However, almost %70 of this Farm was transferred to various organizations and institutions for different purposes at different periods until today.

In 2006, according to the law number 5524, Atatürk Forest Farm was brought into use of Ankara Anakent Municipality in a limited way. With this law and the Conservation Development Plan (1/10.000 scaled) prepared by Ankara Anakent Municipality, all the territories of Atatürk Forest Farm were left to the acitivities of the Municipality. In 1992, Atatürk Forest Farm was identified as “archeological site”. In 1998, it was identified as “first degree natural archeological site”. However, in 2011, its identification was changed and it was identified as “third degree natural site”. Furthermore, in 2012, with the decision taken by the Council of Ministers on 16 April 2012, the Ghazi Site which is under the use of General Directorate of Forestry which is within the borders of Atatürk Forest Farm, declared its land as “Project Site of Urban Transformation and Development” according to the law number 5393 and article 73 of the Municipality in order to build the Service Building of Prime Ministry. From this date and after the transfer and assignment processes, the size of the land of Atatürk Forest Farm fell from 102.000 decare to 33.891 decare. The article 63 of the

Constitution declares that the task of the Government is to protect the historical, cultural and natural assets and values. For this purpose, the Government should take supportive and incentive precautions. As Atatürk Forest Farm is specified as a natural asset and value, the Farm should have benefitted from the assurance provided by the Constitution. Unfortunately, Atatürk Forest Farm has been deceived gradually for different purposes at a great pace. At this abstract, from the establishment of Atatürk Forest Farm until today, its legal and physical transition and transformation process especially during the recent years will be examined.

# Environmentally Friendly Design Approach: Green Car-Parks

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## ABSTRACT

One of the problems experienced in recent years especially in big cities is parking. The car-parks, which cover quite large surfaces in urban areas, increase the effect of urban heat island and cause stormwater to run off the surface. However, it is possible to diminish this effect by use of permeable grounds. The aim of this study is to introduce green car-park systems which are frequently used in developed countries and whose usage level increases day by day, and raise the topic of their potential implementation in Turkey. An efficient, productive and sustainable urban transportation is possible with a good coordination of many transportation types integrated with each other. The transportation by private vehicles, which is the main type of transportation, also brings with itself the need for parking space for vehicles. The effects of the parking problem on urban life have reached non-negligible dimensions today. In addition to the financial costs that the problem imposes on the public and persons, it also has such aspects as the creation of an unhealthy environment.

While vehicles spend an average of 1.5-2 hours of their time in a day on the move in urban traffic, they spend about 90% of their lives parked. Even in countries which completed its public transportation, an important part of urban transportation is still provided by private vehicles. The fact that the places where the vehicles will park at their destinations are structured is a significant matter of a higher quality life.

Green car-parks are a sustainable and economic solution to manage stormwater in car-parks and in traffic areas, and to reduce the effect of urban heat island instead of using firm grounds such as concrete, asphalt.

In this line, the basic research question of the study is “What sustainable approaches which are not harmful to human health and the environment are there in the design of car-parks which cover a wide urban area?” In time, green areas and farm lands have turned into car-parks with the increase in the use of motor vehicles. Since these surfaces are in general waterproof, it causes the effect of urban heat island.

Soil structure which changes with the urban development and the decrease of green areas with the urbanization can be considered among the causes of the effect of urban heat island. The asphalted areas, the regions where plant communities are dried up, and black grounds are among the reasons of the effect of urban heat island.

The sustainable design of outdoor car-parks is an important issue, as it directly or indirectly affects people's lifestyle social life, and health. In this sense, the concept of green car-park supports sustainability. As the importance of this matter increases, the significance of water-permeable materials increase, as well. One of the commonly used solutions in urban areas within the scope of sustainable stormwater management models is permeable flooring. Its stabilization is ensured in the porous-permeable superstructures in the car-parks, walking trails and link roads created. It also prevents the natural pollution of the water by reducing the runoff of the rain water and by filtering. The implementation of green car-parks is an effective solution in management of stormwater and a sustainable approach in reducing the effect of urban heat island.

In the areas where green car-parks are used, it provides sustainable drainage in the superstructure and grass protection except for the green grass. Thanks to its permeable pores, it prevents moving soil and clogging of sewer systems. The stabilization elements made out of recycled materials can also be recycled.

Sustainable, ecologically supportive, environmentally friendly design approaches for urban car-parks should be taken into the agenda of local governments in particular by attracting the attention of a large section of the community. Within the scope of the study, it is aimed to emphasize the importance of green car-parks in the modern cities of the future in order to realize ecologically oriented designs in urban car-parks.

**Keywords:** Green car-parks, sustainability, stormwater management, urban heat island

# Parking-Lot Management, Problems and Solution Proposals: The Case of Çanakkale City Center

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## ABSTRACT

Today, due to the economic development and the rapid increase of transportation sector as a result of this development, many environmental problems have arisen in urban areas. Air pollution, noise pollution, energy consumption, inadequacy pedestrian and vehicle circulation and all the negativity that came along with it have become part of the parking problem. Parking problem in urban areas adversely affects life quality of the people living in the city, their transportation, and access activities. The problem of short and long-term parking of vehicles has arisen in the city in many areas such as recreation areas, squares, shopping malls, parks, etc. and in their surroundings. The solution of this problem, which has come to the fore in the cities due to lack of infrastructure, will be provided by transforming parking policies to be determined and to be implemented into a regular system. Supervision work must also be carried out together with the parking management policies to be determined. With the new Parking Regulation,which was published with No: 30344 and Date: 22.02.2018 and will enter into force on 01.06.2018; the requirement of one parking lot for every three apartments in the old regulation has been revised as one parking lot for each apartment. In addition, the municipalities were allowed to transfer this number according to the needs. If the decision is taken in this direction; according to the new regulation, which also allows each parking lot to be specified on the deed as an add-on to the independent section that it belongs to, it will be possible to build an outdoor parking in the front garden in the parcels with a front

garden width of at least 7 meters, provided that the distance to the building is at least 2 meters. Provided that it is under the ground, the areas, which are under all side and back gardens and under front gardens, up to the point where it is 3 meters to the road, will be made fully available for parking available. In the case of the agreement of the owners of two neighboring parcels and with the annotation added to the deed, provided that this area is arranged as a transit route, neighboring building gardens can also be used as a common parking lot by removing the wall. On the other hand, while the new regulations paved the way for the construction of mechanical parking lots on parcels, revision has been made for parcels where parking is not possible. In this context, a parking lot will be compulsory in all buildings except for historical buildings, the buildings where parking facility is not possible although mechanical and automatic parking systems are used and the constructions where minimum parking space cannot be established due to the narrowness of the facade. Another parking lot within walking distance will have to be allocated to these buildings where parking lot cannot be built and this situation will be annotated to the deed. With the new regulation, it has become absolutely imperative to build a parking lot in the parcels, where a parking fee is collected since parking lot cannot be constituted, before settlement in the building. Thus, avoidance of constructing parking lot due to paying parking fee will be prevented. On the other hand, the implementation of getting a license by paying in advance 25 percent of the parking fee, which is collected due to the inability to build a parking lot, will be abolished with the new regulation; the condition of paying the total amount has been imposed before the license is issued. With the regulation, an arrangement has also been made for parking fees. In this context, cities will be divided into regions according to criteria such as socioeconomic status and discount up to 40 percent will be applied at the parking lots in regions with low socio-economic development. The regulation has also brought the imperativeness of sparing "park-continue" parking spaces within walking distance of the main public transport and transfer stations in the urban fringe in order to prevent the vehicle traffic from being directed to the center of the city. In these parking spaces, only passenger vehicles, motorcycles and bicycles will be able to park. While the new regulation brings the possibility of building parking lot under the main arterial roads, parking lots will be able to be built under the gardens of public institutions, except schools, provided that all necessary safety conditions are provided, entrance and exit are separated from public institution entrance and permission from the relevant institution is obtained. It has become mandatory in the new regulation that the need of parking lot in industrial plants, public institutions and organizations, public shopping malls open to public use, hospitals, hotels, stadiums and indoor sports facilities, universities and wedding halls must absolutely be met in the parcel or if this is not possible, it must be met in the neighboring parcel. With the Parking Regulation, it will be possible to build parking lot underneath park and squares without damaging the top texture. However, 1 percent of all parking spaces will be organized for a bicycle, 5 percent for people with disability and 2 percent for electric vehicles. Outdoor parking lots will have water-permeable material. Thus, it will be ensured that the rainwater meets the soil. Together with the provisions of this regulation, the identification of existing parking practices has become extremely important. In this study, private and legal parking lots in the city center of Çanakkale and structural and open areas in its immediate surroundings have been examined. The existing car parking lots in the city center of Çanakkale will be examined with the study and as a result of analysis and evaluation, it is aimed to develop a solution proposal for the problems which have emerged as a result of the regulation and the works carried out. In the first part of the study, a literature review has been done and the domestic and international studies on the subject have been examined and theoretical concepts have been included. Later, legislation and regulations in force in Turkey have been examined. In the second part, the research area has been identified and the existing parking problems in the city center have been determined. The necessary information and data on urban car parking lots have been provided from the Municipality Transportation Services Directorate of Çanakkale as the relevant institution. In the third part, legal legislation and regulations related to the data obtained in the

field of research have been compared. At the last stage of the research, analysis and evaluation have been made, the problems in relation to the present situation have been determined and solutions have been proposed. The city center of Çanakkale, that is the study area, has a capacity of approximately 100 thousand vehicles. Apart from provincial police office records, many vehicles registered in different provinces have been identified. There are about 20 thousand parking lots belonging to the Çanakkale municipality and private businesses that the municipality has given permission. In order to solve the inadequacy problem of the vehicle and pedestrian line, vehicle circulation project is being considered by the municipality. Project implementations in two fields are expected as the multi-story car park arrangements that have emerged with the new regulation. As a result of the work, it has been determined that there is insufficient data on parking arrangements in the municipal inventory, however, the effort to create new parking spaces together with reserve areas and the preparation of project works have been identified. The fact that the buildings in the city center are old and some are under protection and lack of open spaces to meet the high parking needs are pushing municipalities for multi-story car parks.

**Keywords:** Çanakkale, urbanization, parking-lot management

# Biomonitoring of the Heavy Metal Accumulation in Urban Landscapes; Case Study of Acer Negundo

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**ABSTRACT**

Urbanization rate in the last century has caused population density especially in metropolitans, and the number of people living in urban areas has been increasing rapidly. It is foreseen that while less than half of the world's population were living in urban centers in 2000, this ratio can rise up to 90% in 2030. Today, more than two-thirds of the total population in European countries live in urban areas. At the same time, the migration from the village to the city is still going on and it is predicted that the population of the cities will increase further in the future.

The increasing urban population has caused many problems. Perhaps the most important one of these problems is air pollution. Air pollution can be described as the existence of one or more pollutants in the atmosphere in quantities and duration which can be harmful for human, plant and animal life, commercial or personal property and the quality of the environment. Every year thousands of people are affected by air pollution, and millions of people around the world lose their lives due to air pollution. Because of the intensification of air pollution in urban centers, it poses a great risk especially for people with various health problems. Today, air pollution has become one of the most important problems of the modern society and it is reported that about 6.5 million people lose their lives due to air pollution every year in the World. Although air pollution is not seen

as a major problem in Turkey, it has been reported that 29 thousands of people have lost their lives because of the reasons related to air pollution only in 2016. Air pollution is a bigger problem especially for children, old, pregnant and sick people who are in risk groups in terms of health.

The heavy metals in the components of air pollution have a separate significance. Heavy metals do not deteriorate in nature and do not disappear. They also tend to bioaccumulate. Therefore, the determination of the heavy metal concentration has great importance in determining the risk areas and the level of risk.

Heavy metals are usually pollutants that are released into the air by industrial or traffic sources. Besides being mostly carcinogenic, it is extremely important to monitor heavy metal pollution because some of them are toxic even at low concentrations and tend to bioaccumulate. Although micronutrients such as Mn, Zn, Cr, Cu, Fe, and Ni in heavy metals are necessary for living organisms, including plants, they can cause harmful effects at high levels. Metals such as Hg, Cd, As, and Pb have serious toxic effects in organisms even at low levels. Therefore, monitoring of heavy metal concentrations is of great importance.

The use of plants as biomonitors is one of the most effective methods for determining heavy metal pollution which has been used for a long time. However, the capacity of plants to accumulate heavy metals can vary according to many factors, especially type of heavy metals, plant organism and heavy metal concentrations in the air. Therefore, the species and organelle that are most effective in monitoring each heavy metal type need to be identified separately.

In this study, the concentrations of Cr, Pb, Ba, Cu, Na, Al, B and Ca in *Acer negundo* were determined depending on the plant organelle and traffic density. As a result of the study, it was determined that the variation of Cr, Pb, Al, B and Ca on organelle basis and Ba, Cu and Na depending on traffic intensity statistically differed at least 95% confidence level.

At the end of the study, the highest concentrations of Cr, Ba, Al and B were calculated in the leaves, Cu, Na and Ca were highest in the branches and Pb was highest in the seeds. It has been determined that between Cr and Pb, which are extremely dangerous from the health point of view, the difference between the highest values is two times more than the lowest values. According to the results of traffic density, the highest concentrations of Na, Ba and Cu were determined in the samples collected from the areas with heavy traffic; the lowest concentrations of Na and Ba were in the samples of the areas with low dense traffic and the lowest concentrations of Cu were in the samples collected from the areas with non traffic.

**Key Words:** Urban landscapes, Traffic intensity, Heavy metals, Biomonitors, *Acer negundo*.

# An Environmental Health Problem Caused by Urbanization and Traffic Intensity; Heavy Metal Accumulation

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## ABSTRACT

Air pollution, especially in urban areas, has become one of the most important problems of the modern age, threatening the health of millions of people, every year. Many pollutants emerge from urban exhaust gases, car wheels, vehicles and vehicle wear, and the pollution caused by these factors is even more pronounced in areas with heavy traffic. Among these pollution factors, heavy metals are becoming more important because of their tendency to bioaccumulate and some of them have toxic effects even at low concentrations. Therefore, monitoring of the change in heavy metal concentration is of great importance.

The most commonly used method of determining heavy metal pollution is the use of plants as biomonitors. However, each plant species can accumulate different heavy metals in different proportions and even accumulate varies according to the plant organelles. Therefore, the species and organelles that are most effective in monitoring each heavy metal species need to be identified separately. In this study, *Salix babylonica*, which is frequently used in urban landscape studies, was used as a biomonitor. For this purpose, concentrations of Ni, Cd, Zn, Fe, K, Mg, and Mn elements were determined by analyzing *Salix babylonica* leaves and branches collected from areas with heavy and non traffic. As a result of the study, it was determined that elements other than Cd, Zn and Mn are varying depending on the organelle and all elements are statistically different in terms of organelle and traffic interaction at 95% confidence level.

It has been determined that the concentration of Ni, Fe, K and Mg, in leaves which is statistically significant at least 95% confidence level, is higher than the concentrations obtained in branches. When the changes due to the traffic intensity are examined, the values obtained in the areas where the traffic is heavy both in the leaves and in the branches the elements other than Mg are higher than the values obtained in the areas where there is no traffic. In Mg, the value obtained from the samples collected from the areas with no traffic in branches is higher than the value obtained from the samples collected from the areas where the traffic is heavy. While the concentration of Ni is

3733 ppb in the leaves and 1274 ppb in the branches in areas with no traffic; this value rises up to 6760 ppb in the leaves and 2074 ppb in the branches in areas with heavy traffic. Similarly, the concentration of Cd, one of the most harmful heavy metals for health, rises up to 206 ppb in the leaves and to 242 ppb in the branches in areas with heavy traffic, while these values are as 108 ppb in the leaves and 30ppb in the branches. It was determined that there is a significant increase of other heavy metal concentrations in the samples collected from the areas with heavy traffic in both leaves and branches in a similar way.

**Key Words:** Urban landscape area, Traffic intensity, Heavy metal, Biomonitor, *Salix babylonica*.

# Functional Benefits and Design Principles of Ecological Bridges and Corridors in Transportation of Highways

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## ABSTRACT

Today, the needs and demands of people who are ending social, cultural, economic, political and technological developments have been diversified and increased due to the increasing population. Increasing and changing trends in current production and consumption have resulted in more human pressures and impacts on nature. Thus, this situation has affected the degradation of natural habitats, especially habitats of wild life and natural plants and biodiversity in the negative direction. The most important activities leading to the disintegration of natural habitats are road transport systems.

Turkey has a total of 64 thousand 746 kilometres of road network, including. 2 thousand 153 kilometres of expressways, 31 thousand 360 kilometres of state roads and 31 thousand 233 kilometres of provincial roads.

Today's increasingly complicated highway transportation system separates natural habitats from each other and can completely cut off the organic linkage. Due to the rapid development of the cities and the increasing highways around them, the ecosystem distorts the unity, prevents the spreading and development of the plants, narrows the feeding and living spaces of the wild animals and negatively affects them. However, there can be serious wild losses as a result of accidents caused by the traffic intensity of wild animals. Living in a natural environment, living beings need a certain living area to be able to sustain their lives, to provide their nutrition, to breed, to protect, to hunt, to reach water resources. For this reason, living spaces should not be covered with roads, barbed wire or walls. Particularly large carnivorous animals are greatly affected by hunting or feeding areas, resulting in the destruction of natural habitats (habitats) by motorways.

The fact that the highways are so wide that the natural vegetation cover spread and development can also be negatively affected. In highway planning / design and application studies, natural living characters and natural processes are not taken into account and the organic connection of the degraded habitats (habitats) with each other is not established.

In order to ensure the protection and continuity of the habitats and wild life, the ecological bridges make the passage or corridors compulsory. For this reason, it has become a vital necessity in the construction of the highways to provide organic connection of natural areas by making underground and aboveground ecological passages or bridges especially on wide roads such as motorways.

Today, ecological bridges and corridors have become an important part of the sustainability of transportation projects by providing aesthetic and functional services and contributions. In this context, the benefits of maintaining biodiversity include genetic variation among isolated habitats, alternative and safe transitions to species that require different habitats periodically, incorporation of different asylum and hunting areas, creation of green belt, enabling recreational activities, microclimatic effects and others. It can also provide attractive ways to help local communities gain access to larger rural areas if they are designed with precision. Ecological bridges are widely applied in Europe and North America. Especially, it has a vital prescription in terms of protecting, developing and transferring the natural life around the city to future generations.

The aim of this study is to demonstrate the functional and aesthetic significance of ecological corridors or bridges linking natural habitats on road transport and to enhance and raise public awareness of its implementation in our country. Unfortunately, there is not enough resources in our country related to this subject. For this reason, methods and sample applications related to the subject will be investigated in foreign literature. In this study, planning and design principles including ecological bridges and corridors functional and aesthetic services and contributions on the highway, site selection criteria, physical characteristics and natural vegetation arrangements will be presented in this study. However, future proposals for the integration of motorways with natural life will be introduced.

**Keywords:** Highways, Ecological Bridges and Corridors, wildlife, landscape, design.

# Kastamonu Historical Town Center's Pedestrian Zones' in terms of Transportation and Transformation: The Seventy Fifth Year and Şamlıoğlu Street Example

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**ABSTRACT**

They are designed with the aim of reducing the density of pedestrian zones, motor vehicles and pedestrian traffic in areas where they are dense. These areas are realized in trade areas covering shopping centers by closing the area to vehicle traffic at certain hours of the day, while in the residential areas the traffic is slowed and directed. Pedestrian zones, transportation services in historical city centers, and commercial efficiency and social and economic life in traditional streets are designed with the aim of making them more active, lively and productive. Rapid population growth and the result of urbanization constitute an important trend of urban transportation to revitalize destructed urban centers.

Streets and main streets are the most important landscaping objects that connect the places where urban activities are performed. The street and street elements constitute pedestrians as well as motorized and non-motorized vehicles. When these landscapes are examined extensively; it seems that the most at risk is the spread. This group includes children, elderly people and disabled people, and people traveling with non-motorized vehicles (bicycles, wheelchairs, etc.). The strongest ones are motor vehicles. Motor vehicles often compress sidewalks into sidewalks during the day, and the safety of pedestrians is endangered.

The streets and streets linking urban spaces serve as places where people can easily carry out their daily activities. While performing these activities, the number of users with the reason of functional and aesthetic inadequate pedestrian zones is gradually decreasing. As a consequence of the lack of street or street users, the social and environmental interaction between the citizens living in the city is diminished, as well as the increase in the use of motor vehicles, ecological problems such as air and noise pollution are also on the agenda. Low number of users, existing commercial areas (cafes, shopping areas, etc.). while maintaining continuity leads to a negative effect. It is known that air pollution is high in vehicle roads, crossroads and residential areas in urban areas and that polluted air has adverse effects on human health. In this context, the quality of life in cities has a great precaution of pedestrian zones in terms of design of high spaces.

It includes activities such as pedestrian zones, places of social interaction in cities, resting and sitting alone or in groups. Public institutions such as municipalities, as well as participatory local

organizations, can develop suggestions or develop them through implementation projects in order to mobilize or sustain these places.

Within the scope of the research, pedestrian zones of Kastamonu City were examined in general; The Seventy Fifth Year in the Yavuz Selim Quarter and the streets of Şamlıoğlu have been pedestrianized and a landscape design project has been prepared and suggestions have been developed. In this context, the protection of traditional settlement texture, the increase of living quality in the city, the availability of these streets at all hours of the day, the production of alternatives that do not harm traditional texture in historical surroundings, the restoration of traditional house architecture in aesthetic and functional terms, and the more livable pleasant Kastamonu houses creating new spaces different from other places in the city, creating a place far away from the adverse effects of traffic (air and noise pollution etc), providing alternative routes to traffic within the closed axle after closing to pedestrianization, creating parking spaces for residents and commercial enterprises at certain times, it is aimed to relieve the traffic intensity of the area by directing public vehicles even if it can not fully open to pedestrian traffic.

**Keywords**: Pedestrian zone, pedestrian traffic, city, historical city, Kastamonu

# Measuring Pedestrian Perception of Walkability: A Case Study of Trabzonspor Boulevard in Trabzon

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## ABSTRACT

In the environmental psychology literature, important studies have been made about how environmental attributes affect human behavior. These studies have focused on urban open spaces in recent years and aimed to reveal the environmental characteristics required by these spaces. The rapid development of cities today, the increase in the number of people living in urban centers, along with the overcrowding, noise and air pollution brought with it. This has brought about the concept of mobility, one of the issues that must be addressed first in urban open spaces. Experts in urban mobility, long ignored, have found that making our cities easier to walk is the solution to these problems. In this context, studies have been carried out to determine the environmental attributes that affect the walkability and to make the concept of walkability measurable. If we define the concept of walkability in general terms; it can be expressed as the physical characteristics of the urban environment and the pedestrian responses of the urban design parameters. We can express the behavior that occurs as a result of pedestrian reactions as walking behavior. Within the context of urban open spaces, one of the most important places that increase mobility is the boulevards. Boulevards are available to the extent that it responds to walkability, which is the opposite of movement on a human scale. The walkability approach is necessary to provide connectivity between urban open spaces. Walkable environments should be a structure that provides diversity, engaging, and allows people to meet each other, facilitating people to reach certain location freely and securely. In this context, the aim of this study is to determine what environmental factors increase the walkability and to measure the walkability perception of the users in these areas. The research was carried out at the Trabzonspor boulevard, which is bordered by the İnönü street and the Fatih street located at the borders of the Ortahisar district of Trabzon province. A questionnaire survey was conducted with a total of 80 participants between March and April in order to demonstrate the walkability perception of the users in evaluating the environmental attributes of the space. The research is limited to the Trabzonspor boulevard. For the purpose of the research, firstly the studies that were made within the scope of the walkability were examined and the criteria that the walkable environments should offer were examined and the criteria of the walkability were determined. In this direction, the data collection tool consists of two parts. The first part of the data collection tool was applied to a 5-point Likert-type scale including the evaluation of walkability criteria, and the scale consists of 30 items. In the second part, a 5-point Likert-type scale was applied to reveal the general walkability perception of the pedestrians and the scale consists of single items. Data obtained from the study were analyzed with the SPSS 24 statistical program and validity and validity were obtained. Factor analyzes were applied to the data obtained from the springs using Trabzonspor boulevard. The factors related to

the obtained walkability criteria are explained by general walkability perceptions, correlation and multiple linear regression analyzes. Findings related to the research revealed that the environmental features provided by the Trabzonspor boulevard are explained by five factors within the scope of the walkability criteria. The first factor is called "linkage", the second factor is "safety", the third factor is "fitness of walking possibilities", the third factor is "field use", and the last factor is called "aesthetics". A correlation analysis was performed primarily to determine the relevance of the factors related to users' environmental evaluations to the walkability perception. Regression analysis was then performed to determine the factors that predicted walkability perception. As a result of the research, it has been revealed that all factors are related to the walkability perception within the scope of the users' evaluations of the walkability criteria of Trabzonspor boulevard. Among the environmental factors affecting the walkability perception, all other factors besides the "aesthetic" and "field use" factors have a positive and significant effect on the walkability perception. The results of the research have focused on the criteria that affect micro-scale walking behavior. The infinite design requires the renewal and updating of the walkable urban design criteria. For this reason, it can not be argued that this work deals with all environmental measures that affect the walkability perception. This research is very important in terms of planners, administrators and users who are responsible for protecting and developing the environmental attributes of the Trabzonspor boulevard especially affecting the walkability perception within the context of human-environment interaction.

**Keywords:** Walkability, walkability measures, Trabzon

# CITY - RECREATION - CHANGE

# Evaluation of Accessibility in Physical Infrastructure Services in Cities

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## ABSTRACT

Throughout his/her life, a person might face disability at different levels for different reasons. Quality of urban life has importance for people in different age groups (particularly children and the elderly) as well as for families using baby carriage. For this purpose, the hard infrastructure of the cities needs to be transformed and developed considering the needs of these disadvantaged groups. In this direction, today, projects are being developed and implemented by decision-making and executive mechanisms. As a result of the rapidly growing industrialization movements, changing and transforming urban areas negatively impact the daily life of disabled individuals usually along with all people. The fact that incorrect urban planning, designs and implementation become restrictive also for people with no physical disability leads to positive approaches towards being more sensitive to the demands and requirements of individuals with a temporary or permanent disability. In Turkey and throughout the world, problems experienced by such disadvantaged groups and their family members bear a big importance. Nowadays, disabled people are commonly thought to be individuals in need of help, which leads to negative consequences such as disabled people being unable to join social life and thus staying away. The psychological impact that this brings about is much worse for individuals with disabilities. In order to talk about the liveability of cities, it is required that all individuals in a given city including the disadvantaged groups can gather easily and freely, reach the living spaces of the city seamlessly and get back to their homes where they reside at in a safe and healthy manner. It is a legal and administrative requirement that necessary measures are taken and implemented to give disabled people easy

access to urban spaces. This legal situation obligates all spaces belonging to public, private and corporate organizations constituting urban spaces (buildings, transport systems, open-green spaces etc.) to be transformed into a convenient structure that can be used comfortably and safely by disabled individuals. Despite all these legal obligations, it is observed that today a great number of applications are still made in the urban infrastructure works without fully considering the wants of people with disabilities. People with disabilities should be as much as possible able to leave their house on their own and go about the city without encountering any hindrance, if possible, by themselves. For this aim, first, plans to provide accessibility and environmental adjustments in the structured environments created for healthy people must be made. Today, there are serious problems for disabled individuals in the outdoor spaces in the cities where everyday life occurs such as roads, parks, transport systems and information and guidance services in these fields. These problems occur as soon as the disabled individual attempts to leave the place they live in. Non-standard disabled access ramp (if any), the absence or insufficiency of tactile surfaces, improper flooring material, signalization system errors (absence), lack of proper parking spaces for disabled people with vehicles, improper and non-standard use of urban furniture on pavements, insufficient and improper equipment in open and green spaces are among the most important challenges for disabled individuals. In our cities, regulations to facilitate the movement of disabled people have not been made except for a few small applications. Yet, ensuring that disabled people, who constitute an important part of the society, live a healthy life in a particular city and making plans and implementations to enable easy access to urban infrastructural services are among the responsibilities of local governments. To conclude, based on the relationship between disabled individuals freely and safely joining to the urban living spaces with the other individuals who constitute the society and accessibility to information, services and communication, and their ability to exercise their basic rights and liberties; it is inevitable that the requirements of disabled people must be considered while creating a healthier and more livable spaces in the urban transformation and renewal works performed to improve the urban infrastructure.

**Keywords:** Disabled, accessibility, hard infrastructure, urban transformation, urban renewal

# Aesthetic and Functional Evaluation of Urban Road Lights: The Case of Çanakkale

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## ABSTRACT

Light constitutes the fundamental factor of the concept of lighting. When sunlight does not suffice or at night, lighting becomes necessary in order to provide security and safety, find direction, provide safe environment in cities at night, carry out outdoor activities, form a city identity, develop the city aesthetics and make it attractive through different effects. Lighting elements are materials used to provide visual control and to distinguish the place in situations where sunlight cannot be benefited from. With the rapid increase in urban population, the number of spaces used also increases. And this, in return, means there will be energy shortage in the future due to overconsumption of energy and that we will be even more foreign-dependent due to our limited energy sources. The overconsumption of energy leads to light pollution while underconsumption jeopardizes the safety of pedestrians, vehicles, and places. Also from another perspective, studies conducted revealed that in spaces where road lights are lacking the rate of crime is higher

compared to spaces where they are sufficient. In line with all this, it becomes clear that in urban areas monotonous lighting modules should not be used, instead, lighting needs to be designed and implemented according to conditions of the environment, whether it is safe and to the ecological properties of the region. In this research, urban areas where people and vehicles are high in concentration and also where lighting modules are used frequently are chosen as the research subject. In this direction, places where lighting modules are frequently used are chosen to be Atatürk Street, Troya Street, Piri Reis Street, Kayseri Ahmet Paşa Street, Demircioğlu Street and İnönü Street. It was observed that although the areas of research are intensely used by vehicles and pedestrians, there is no contribution to the visual quality of the city due to the use of monotonous lighting elements that have no aesthetic or modern value. This creates a deficiency within the values symbolizing the city. The city center of Çanakkale Province constitutes the main material of the research. The observations made in the field, the photographs taken and the reports from the municipality of Çanakkale along with the interviews and opinions of relevant experts were all used as the main material. In addition, supporting material was drawn from the domestic and foreign literature regarding the subject. The research was conducted in order to determine the road lighting used in the Çanakkale city center and to evaluate them in terms of functionality and aesthetics. Within the scope of the developing technology, the use of more aesthetic, innovative, energy-saving road lighting that is also more consonant with the city values was researched. Because the roads used in the research are in the city center; the current state, sufficiency, aesthetic value, authenticity with regards to the city image, the emerging light pollution and energy consumption of lighting modules and maintenance-repair and safety of use at night for pedestrians were studied and evaluated. In the designs that will be created in this direction, the focal point must be pedestrian safety and saving energy. Deficiencies related to the requirements of use were determined by the observations and examinations made. Accordingly, monotonous lighting modules were used in all road lights although the streets have different potentials for use. Aesthetic concern and light pollution were observed. In areas with more significant historical past, the present lighting elements are not utilized fully due to plant density. However, lighting elements are placed in different places in a most fitting manner to address this problem. And while renovating these lighting elements, lighting units with renewable energy systems that can respond to the needs of our time and future were used. 20 to 25% of electric energy produced in Turkey is consumed for lighting purposes. Since this rate is at a significant level, designs and implementation need to be based on energy-saving lighting elements that take future into account and visual quality should be considered. Pedestrian and vehicle safety needs to be taken as the basic principle. Çanakkale is going through a rapid urban change and transformation with its rapid population growth in the recent years. The aim of adapting the transport system, one of the most important components of urban infrastructure, and the lighting elements that enable the use of these spaces at night to this ongoing change and transformation compels holistic planning, design, and implementation.

**Keywords;** Lighting element, Çanakkale, security, authenticity, saving

# Investigation of Street Tree Forms in Context of Aesthetic Perception: Example of Bingöl –Genç Street Case Study

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## ABSTRACT

Throughout the history, while cities cover the distance to reach the beauty of shaping the cities where the societies live, it has aesthetically distanced from time to time because of the living transformations. This situation effects human psychology negatively and cause erosion of feelings of belonging. As is known, aesthetic phenomenon is at the top of the basic needs of the humans. Throughout the history of the world, people have tried to dominate nature and they built structures for various needs. Human who is the biggest producer of aesthetic appreciation value, reflect these values with the architectural space items they build with their own hands as much as the natural space. However urbanization has increased with the industrial revolution and this reveal a lot of stress on urban ecosystems. Miss-use or destruction of plant material that is one of the most important elements of urban ecosystems caused a esthetic departure from urban areas. The visual effect of street trees is to make people feel more comfortable by reducing stress on people. The plants located in the urban texture make the places more livable thanks to their natural and aesthetic appearance.

Urban aesthetics has been the subject of many academic researches. Transportation axes that have an important function within the urban unity is a place that can not be ignored both in the aesthetic direction and in the functional direction. The aim of this research is detect that urban people what the understand from the aesthetic concept and prefer plants with which form structure in terms of visual and aesthetical circulation. This study tries to determine the aesthetic value of Genc Street that is the busiest transportation road of Bingöl Province and nearby road trees in terms of form. Photographs of plant compositions placed by photomontage method in determined axes were presented to the user by questionnaire and it was demanded that the user group evaluate

according to the visual perception criteria. In light of the obtained findings, relationship between plant forms and visual perception was detected On the determined axes on the Genç Street and gave suggestions for planting on the street.
As a result of, it has been revealed that plant forms are an important element in the perception of the environment and orientation.

**Keywords:** Plant forms, Aesthetic perception, Road plantation, Bingöl, Genç Caddesi

# Contribution of Memorial Gardens to Urban Tourism

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## ABSTRACT

Throughout history, the influence of different cultures and religions has been seen as a transition from one lifestyle to another. According to this; tombs, monuments and ornaments have been shaped within the framework of religious beliefs. The wars leading to the death of many people also play an important role in the history of the cities and have a wide impact on urban culture and urban identity. Therefore, memorial gardens are regarded as symbols of importance for the identity of the city, establishing the connection of the senses of the past to the present and the future. Memorial gardens play an important role in bringing traditions and rituals to generations by bringing together the monuments symbolizing events that have shaped the history of the city. In recent years, memorial garden designs have become more important and implementations have been widely used. The purposes of this study, the sample design will be Vietnam Veterans Memorial (Washington DC-USA), 9/11 Memorial Park (New York-USA), Princess Diana Memorial Fountain (London-ENGLAND), Canakkale Martyrs' Memorial (Çanakkale-TURKEY), Anıtkabir (Ankara-TURKEY) that cause in making events or memories, design principles and construction of processes occur by placing selected commemorative park in the urban landscape and contribute to urban tourism will be discussed. In the scope of the study, domestic and foreign articles, theses, internet sites were examined by reviewing the literature on memorial gardens. The Vietnam Veterans Memorial (Washington DC-USA) was made to remind members of the United States Armed Forces who were martyred or lost in the Vietnam War. The monument, completed in 1982, consists of three main sections: 'Three Soldiers' Statue', ' Vietnam Women's Memorial' and Maya Lin's 'Vietnam Veterans Memorial War'. The monument was inspired by Jan Scruggs, a soldier who fought in the US in Vietnam. The Vietnam Women's Memorial, another part of the Vietnam Veterans Memorial War, is a memorial dedicated to US women serving as nurses in the Vietnam War. It explains the importance of conflict between women. 9/11 Memorial Park (New York-USA) was made to remind about 3,000 people killed in the September 11, 2001 attacks and 6 people who died in 1993 bombed by the World Trade Center. Instead of the original bases of the twin towers that were destroyed during the September 11 attacks, the museum was built with two pools that symbolize the water flowing in infinity. Therefore, the other name of the park is known as the 'Monument to Infinity'. The design of the park was made by architect Michael Arad of Handel Architects and landscape

architect Peter Walker et al. The construction of the park was started in 2006 and the museum opened on 11th of September 2011 and the museum on 15th May 2014. Princess Diana Memorial Fountain (London-ENGLAND) was designed by landscape architect Kathryn Gustafson to express her love for the soul and children of the Princess Diana of Wales, who died in traffic in 1997. The monument was opened in 2004, 7 years after the death of Diana. There are three bridges reminiscent of the princess's openness, which allows you to walk around and around the center of the monument, which has large grass fields. 545 Cornish De Lank granites were used to best reflect the current sunlight. The granite creek bed oval shaped water was made rather shallow and slightly inclined to provide flow in both directions. Çanakkale Martyrs' Memorial (Çanakkale-TURKEY), in Gallipoli during World War I. Turkey was made to commemorate the soldiers who lost their lives. The monument, completed in 1960, is the proof of the symbolism, unity and co-existence of the inerrancy of the Turk. The 41,7 meter high building consists of four feet and a dome. There is a museum under the monument, Mehmetçik Monument in the close vicinity, Turkish Garden, Statue in Mustafa Kemal Canakkale, Wounded Soldier Monument, Unknown Soldier Martyrdom and Turkish Martyrdom. Anıtkabir (Ankara-TURKEY) is; Republic of Turkey's founding leader, supreme commander of the country's liberation war and Mustafa Kemal Ataturk's mausoleum where the cemetery. The monumental tomb, completed in 1953, is located in Anıttepe in Ankara, the capital city of the country. Within the Anıtkabir, Atatürk's Mausoleum there are the Peace Park, the Memorial Bloc, the Independence Tower, Female Statue Group, Freedom Tower, Male Statue Group, Mehmetçik Tower, Victory Tower, Peace Tower, 23 April Tower, Tower of Reforms, Misak-ı Milli (National Pact) Tower, Anıtkabir Atatürk Museum. The memorial gardens are an area of attraction for urbanists and tourists, creating opportunities for recreation and tourism as well as for increasing the amount of open green space in the city. Memorial gardens, where landscaping ecology can be underestimated if the city is correctly positioned, are also important for the tourism sector.

**Keywords:** Memorial Gardens, Urban Tourism, Landscape Architecture

# Landscape and Tourism Relationship in Rural Tourism Zones - Rural Tourism Awards of Local People: Bursa Villages (Cumalıkızık-Misisi-Gölyazı-Umurbey Villagers)

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## ABSTRACT

Rural tourism is a type of tourism that occurs when people go to a rural settlement in order to relax in the natural surroundings and to coexist with different cultures, to stay there and to watch or participate in activities specific to the locality. Rural tourism components constitute mainly people, rural areas, rural life, rural heritage and rural activities. Today's technological developments have made industrialization, urbanization speed, rural area-life-activities attractive, making people become places where they visit these areas for daily, weekend or annual holidays. The most preferred places for this purpose are the villagers in the walls of the big cities.

Rural tourism is one of the most important tools of development of rural areas. But it is wrong to see tourism as just a means of economic development. Because tourism is a multidimensional activity that has social, cultural and environmental influences. Touristic activities create an interaction between the tourist and the landlord (the place and the community), the result of which is a change in the natural landscape features and the concrete and intangible cultural landscape features. This change can be both positive and negative. While benefiting from tourism in well-planned rural tourism areas, cultural values unique to the region should not be destroyed by the natural environment. Otherwise, commercial purposes can cause serious damage to all these values.

When doing all kinds of tourism related activities, mostly local people 's approaches to tourism activities are neglected. In order for sustainable and organized development of tourism, which brings economic, socio-cultural and environmental influences, local people need to be involved in the planning process in rural tourism areas. For this reason, it was aimed to determine the opinions of the local people regarding the rural tourism awareness of the local people and the effects of the touristic activities on the natural and cultural landscape values in the rural tourism regions which are located in the province of Bursa and which are recognized in the regional, national and global scale.

Cumalıkızık, Gölyazı, Misi and Umurbey villagers were selected as the research area in Bursa province. Cumalıkızık village is located in Yıldırım district of Bursa city. A 700-year-old monument, which contains the most striking examples of Ottoman architecture, is a pavilion, and in 2014 it entered the UNESCO World Heritage List. Gölyazı village is located in the town of Nilüfer in Bursa city and on the bank of Lake Uluabat. It is an old Greek village in seasonal view of the island or peninsula. Misi village is bound to Bursa city Nilüfer district. It has natural and cultural landscapes and a protected area with natural sites and urban sites. Umurbey village is one of the oldest villages of the Ottoman Empire in Bursa and is located in the town of Gemlik in the province of Bursa. The village is also a rooted settlement, which also marked the Republican Period.

The purpose of choosing these villages as research area is; as a tourist destination, the present situation of development is different from each other and it is possible to compare the economic, socio-cultural and environmental effects of tourism development comparatively.

In the study; rural tourism village natural landscape values, village socio-cultural life and the effects on the environmental characteristics of the village were searched. The data collection tools of the study were field survey, literature surveys and a local population survey based on a 5-point likert scale. Arithmetic mean and standard deviation values were found in the questionnaire analyzes.
Surveys were conducted with a total of 40 people, 10 from each country who respond positively to the interview proposal.
According to some results obtained from the preliminary work done in Misi Village; local people are satisfied that the villagers are a tourist destination. They are aware of the social, economic, cultural and environmental impacts of tourist activities. The development of tourism in rural areas brings with it environmental, economic and socio-cultural changes. The development of tourism in the village has created a change in the direction of finishing the village life. Some traditions and customs are maintained as part of rural tourism. The development of tourism in the village has affected the transportation facilities positively. State support and restorations made it possible to preserve original touch. Parallel to the development of tourism, the number of foreigners in the villages increased, which caused inconsistencies between the local and foreign population. Local people can not benefit from rural tourism economically enough.
**Keywords:** Rural tourism, Landscape values, Local people, Awareness, Bursa

# Determination of The Recreational Tourism Potential of Cıldır Lake

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## ABSTRACT

Nowadays alternative tourism movements have begun to gain weight in the scope of spreading tourism with diversifying tourism all around the world. Contrary to mass tourism, sustainability and ecotourism constitute the basis of alternative tourism movements and the desire to see new places, socio-cultural experiences, local architecture, traditional life, historical texture and natural environment. In short, it is known as a kind of tourism based on staying in nature and protecting nature. In recent years, adventure tourism has been come to the forefront with alternative tourism. In adventure tourism; The main elements are based on risk and special skills.

In this study; Cildir Lake and its environs have been evaluated within the scope of adventure tourism, which has become popular especially among young people in recent years. This trend began with the Eastern Express Train via social media in Turkey. Cildir Lake is a wetland that covers the area of 39151 hectares between Ardahan and Kars. Access to the Çıldır Lake has been provided with Eastern Express Train and private vehicles from Kars and it is provided with private vehicles and services from Ardahan. Çildir Lake is in the wetland status and 74 plant species (6 endemic), 86 bird species, 9 mammal species, 15 fish species, 11 reptile species have been determined in the previous studies at the lake. With these characteristics, Çıldır Lake is on the way of becoming an attractive tourism center both in terms of transportation convenience and transportation diversity. On the other hand Çıldır Lake provide opportunity for people living in metropolitan life to get away from city life and to be able to rest and discharge. In the study, natural (location, topographical structure, climate, flora, fauna, etc.) and cultural resource values (transportation, horse javelin,

horse sleigh, ice fishing, folkloric values, tourism opportunities, etc.) of Çıldır Lake are determined and recreational and tourism potentials are put forward. The methodology of the research creates observations made on the field (to take the opinions of verbal opinions, take the opinions of the indigenous people), analysis (SWOT, SPSS etc.) and evaluations. In addition, within the scope of the 5th Crystal Lake Festival on 10 and 11 February 2018, an face to face survey was conducted within the area to determine the demand and tendencies of the users and the deficiencies in the area. Plan decisions have made in line with these trends. The area of Çildir Lake and its surroundings during the summer and winter months field use was determined by written and visual materials and on-site measurements. By determining the recreational suitability value of the area, new area usage decisions for the summer and winter months of the lake were tried to be determined by the SWOT analysis.

As a result; The current tourism potential of Çildir Lake is quite high. In this study, lack of investment related to the area is striking. Cildir Lake's ice-keeping and its ability to carry out unusual activities (to keep ice in the lake and to walk, to drive in the ice-covered lake, to break the ice and fishing, etc.) make this field a priority. The fact that the users find social facilities and public use areas inadequate for this area especially during festival days has negative consequences for Çildir Lake. Despite this, almost all of the tourists who participated in the survey in the field; it has separated from the field with exciting feelings and positive opinions. Considering all these facts, it is important to note that the development of Lake Cildir, which is protected by the wetland status of the area, is limited in this context. Proposals for these conditions and the development of local people are also included in the plan decisions.

**Keywords:** Cildir Lake, Ecotourism, Recreation, Adventure Tourism

# From the Historical Process to Today: The Adaptation of Yalı Han (Çanakkale) for Re-Use for Cultural Tourism

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## ABSTRACT

The idea of gaining the buildings that have begun to lose their originality, although it is necessary that they reflect the culture and history of the past, for re-use is widely discussed in the world and in our country. The re-evaluation of historical heritage which will stimulate cultural tourism, together with its architectural characteristics, has gained importance in recent years. Structures that have historical accumulation are able to be sustained by"*Re-functioning*" as a cultural asset through putting forward such economic reasons as loss of original functions, functional obsolescence , alterations in the urban environment and the zoning legislation they are exposed to, and/or rejuvenation of the current structure potential. Inns and caravanserais that are important monumental structures in terms of historical accumulation, are stone or wooden buildings, that are constructed on important commercial routes and in towns and are supposed to be used by the merchants and ordinary passengers to rest and stay for the night. Such trade and accommodation structures are shaped according to the social, cultural and economic characteristics of the periods they passed through and mirror the socio-cultural structure of that period. Inns, which are among important architectural works of our cultural heritage, need to be survived and used within the scope of tourism, preserved by preventing from fading away over time and passed to future generations. The term inn, when examined specifically in relation to architecture and functionality from past to present, has been used for two different architectural forms, where the most basic difference between them is free or paid usage. The former of these

are caravanserais while the latter is the inns that are located in or around city centers. Within the scope of this study, Yalı Han (inn) was examined, which according to the registry of deeds, belongs to Hasan Temel Turhanlı and is located in the Kemalpaşa neighborhood of the Central district of Çanakkale province with a 739.4 m2 surface area. The methodology of the study is based on the evaluation of the Yalı Han inn, which has been adapted to reuse, specifically with respect to socio-cultural sustainability with its new function, and historical characteristics; for this purpose, space organization patterns of the Yalı Han inn was identified through field surveys and in-situ observations. Information related to the authentic usage, current usage, structural system and materials, recommended ways of usage, and corrosion of the structure is presented at the second part. It is understood from the verbal information that the structure was built in the late 1800s. It dates back until 1903 in the register of land titles. The Yali Han inn sustains its function as an inn from its construction to the 1980s. Yalı Han inn, which has been partially used until 1994, is converted into a cafeteria. Also in this period, some parts of the inn are used as arts and culture ateliers. The Yali Han undergoes a serious fire in the 1930s, and the section in the Northern axis is ruined. This section is rebuilt as reinforced concrete in the same period. The Space: Yali Han is an inner courtyard and enclosed space. All the spaces open to the inner courtyard. While the ground floor space has been used as a barn in the north part, service rooms in the south part, sleeping wards in the western part; the upper floor space has been used as stand alone bed rooms. In the process, these functions have changed and physical interventions in relation to these new functions have been made. The southern, western and eastern parts of the courtyard are designed in the form of portico on both floors and the portico bearings are made of wood. The entrance from Fetvane street is wide and roofed. The entrance from Yalı Avenue is narrower and roofed too. The presence of both entrances and exits enables it to maintain its "passerby inn" characteristic. Architecture: The outer walls of both floors are stone walls. The inner walls are brick and half-timber walls with wooden bearings. Brick and stone walls are plastered with classic plaster while half-timbered walls are plasterboarded. The northern part of the building that underwent a fire has reinforced concrete flooring while other parts have wooden flooring. The roof is entirely wooden and sits on bearing walls. The ceiling is covered with wooden boards, roof tiles are pantiles. Windows, are woodwork with a general rate of 2 to 1. The central courtyard is stone-paved. In order to gain the structure to the cultural tourism, it is important that it serves as a complex where foreign and domestic tourists can visit and stay overnight, join in cultural activities and find opportunities to have nice conversations. With a protective approach, the structure has been emancipated from its ruined-wrecked appearance, enhanced the visual quality in the environment and brought about a potential attention in the area. The re-use has contributed to the awareness on its both new and authentic functions. Yalı Han inn is a structure with a unique character among Çanakkale civil architecture buildings. It maintains this characteristic today as well. Although the visual integrity between Yalı Han inn and its immediate surroundings can not be fully completed, it is well-known by domestic and foreign tourists together with the new functions of the building. The building has enriched the environment with its new functions. It has become the symbol of its location with its new functions. It stimulates its immediate vicinity with the visitor mobility it brings. The new functionality has gained a social and cultural space to Çanakkale. The events held in the building contribute to the promotion of the city. In conclusion, the survival of Yali Han inn with its new functions contributes to a great extend to social and cultural sustainability. The inn, which has been a haunt for several foreign and domestic tourists, has been successful within the context of adaptation to re-use through the integration of new functionality with existing spaces.

**Keywords:** Yalı Hanı, Cultural Tourism, Re-use

# Tourism and Urbanization Interaction: The Case of Ölüdeniz-Kıdrak Natural Park (Fethiye) and its Surrounding

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## ABSTRACT

The rapid population growth and the excessive and unconscious consumption that have increased due is increasing the pressure on natural resources day by day. These pressures are destructive to the natural resources according to the degree of impact; and may lead to irreversible negative outcomes. Protected areas, which are an important step in achieving the sustainable use of natural resources, must be planned on the basis of ecological characteristics and in terms of sustainability. Due to human-induced pressures, natural areas, especially in the coastal areas, are being destroyed by tourism in a fast manner.

Tourism sustainability can only be realized by protecting the natural, historical and cultural values that it uses as a resource. Protected natural and cultural landscaping tourism areas are the main capital of tourism. Landscapes used by tourism include seas, lakes, mountains, rivers, forests, protected areas, fauna, flora, historical and archaeological sites, culture and arts, art cities, historical artifacts, architectural artifacts, museums, etc.

Coastal areas are used for tourism because of the natural beauty they have. Coasts also constitute a resource that cannot be reproduced but can be sustained with planned use; however, with improper use, they are disrupted and the quality is decreased. National policies should be established for the purpose of protection or regulation of each coast; and the direction of urban development in coastal cities should be determined so as not to disturb the sustainability of the coasts and the natural values.

The intensity of construction in coastal areas should be reduced and the urban-coastal relations should be protected. In order to create a better and more livable environment, ecological data should be evaluated; and coastal areas must be planned again in a more sustainable manner. The existing identity of coastal areas should be used without being destroyed, and it should be planned taking into consideration the ecological processes of coastal and urban life cycle that can be controlled in harmony with itself and its surroundings.

As the study area, the close surroundings within the boundaries of Fethiye Ölüdeniz-Kıdrak Nature Park and Belcekız Quarter, which are exposed to intensive tourism and have a coastal area to the sea, are dealt with. In Fethiye, which has many natural beauties and areas with protection status within its boundaries, Ölüdeniz Region and Ölüdeniz Lagoon have a world-wide reputation; and many local and foreign tourists visit Babadağ as a tourist center in the tourism season. Ölüdeniz-Kıdrak Nature Park, which covers Kumburnu and Belcekız beaches, is protected due to its natural beauty. Ölüdeniz-Kıdrak Nature Park was established in 1978 as a daily Forest Recreation Site; and with the decision of the Ministry of State on 29/12/1983 and with the number MP.1/5-311, it was declared as a Nature Park to protect the flora richness and natural landscape that consisted of forest-sea-steep cliffs. In addition, the Natural Park, which is a first-degree natural site, is also within the boundaries of Fethiye-Göcek Special Environmental Protection Area. Natural resource values in the Natural Park are the lagoon of Ölüdeniz, Kıdrak beach, the extraordinary scenic beauties of the coast, interesting geological and geomorphological features, rich flora and fauna, Calabrian Pine Forest, and archaeological remains and landscapes.

This study was carried out with the aim of determining the effects of tourism and urbanization on Ölüdeniz-Kıdrak Nature Park and on the three neighboring protection parks in the vicinity in the 1st Degree Natural Site and Fethiye-Göcek Special Environmental Protection boundaries. In the study, Analysis-Synthesis and Evaluation Methods were employed. In the first step of the study, the field study and literature search were conducted. In the next step, the natural data for the study area were digitalized and mapped using the ArcGIS 9.3 Software Program and the required base maps. As a result of the analyzes made on these digital maps, the pressures due to tourism and urbanization in the nature park and its vicinity have been determined; and solution proposals have been introduced. As a result, it has been determined that the fertile plain base near the nature park in particular has been opened to construction due to the effect of tourism; and it is used intensively in the summer season. Some solutions have been proposed for problems arising from tourism and urbanization effects in the Study Area. In addition, at the end of the study, the importance of future studies in which the protection and use balance and ecological plans in which transport capacity is taken into consideration was emphasized.

**Keywords:** Ecological planning, conservation, urbanization, Oludeniz-Kıdrak Natural Park, tourism

# Protection Problems of Bozüyük Kasımpaşa Complex and Assessment Of Potentials

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## ABSTRACT

Ottoman complex which have important effects on the development of the cities, are the areas formed by the assembly of building units of different functions. When we look at the history of Anatolia, most of the city centers have ottoman complex. These are important memory points of the cities. The complexes consist not of single structure but of structures such as mosque, madrasa, imaret, inn, bath, mosque and meşruta buildings. It is a much more difficult process to maintain the various building units together altogether. Sometimes the functions of historical structures can be shorter than the life of constructions. Some functions that exist in the past can not reach the day-to-day. For this reason, while some units continue to be used according to their functions, some units are away from their current functions. As a result, it is often left to fate and become unusable. For this reason, such structures must be approached with holistic protection.

Bozüyük, which is an important transit point throughout history, is a developed and built city aimed at this purpose with the effect of being on the railway route. Due to the city-dividing railway, the city has developed in both sides. The Kasimpasa Complex, located in Bozüyük province, is one of the buildings that are active in the development of the city. In addition, the complex has an important place both in the district's history and in Turkish architecture.

The complex is composed of four mosques, a mosque, an imareti madrasa, a bazaar, a caravanserai and a bath house made by Güzelce Kasım Paşa on the return of Baghdad Campaign in 1525-1528. The Kasimpasa Complex, which has witnessed various events during the process, has units that can not be reached to day-to-day for various reasons. The group of buildings, which were not under a totally sanitized protection, suffered disasters and as a result they only saw simple repairs. Since the area does not have a holistic conservation approach, some buildings have reached the present day, and some buildings have not reached the present day. From these structures, daily mosques, imaret and kümbet-han structure have been reached. The Kümbet-Han structure from the reaching structures is a unit that has reached today's daily ruin with not being used. Other units have disappeared over time. While some of the information can be obtained from the sources, some of them can not be reached to their locations.

Within the area of the study, it was aimed to investigate the actual structure of the Kasimpasa Complex, which has an important place in the memory and development of the city, and to

establish a management plan for the complex by determining the protection problems and potentials of the complex in the light of the works done about the ottoman complex.

Within the scope of this study, each structure which constituted the complex and the complex was evaluated separately by field study, literature search and archive scanning. The units of the Kullian who do not reach the day-to-day are described in different positions in different sources. The information obtained by using the restitution sources has been processed on the map and the restitution experiment about the urban location of the units has been made. In addition, the protection problems that have reached the day-to-day life of the muller have been determined. In addition to these, potentials of the külliyen on national scale, regional scale, city scale, district scale, complex scale and separate building scale have been revealed. Through the assessment of the protection problems and potentials obtained, the "Management Plan" was developed from the concept of "Management of World Heritage Sites". The management plan created is divided into two parts as 'Unitary' and 'Whole'. In the context of the unitary management plan, each unit is evaluated with its own self. In the holistic management plan, the civilization is assessed with all the parts that arrive at the day or not. As a result of the study, it is aimed to increase the collecting and functional utilization of the remaining structures of the mulching with proper protection methods and management plan.

**Key words:** Kasımpaşa Külliyesi, Bozüyük, Documenting, Restitution, Cultural Heritage Management Plan

# CITY – DESIGN - AUTHENTICITY

# Investigation of the Current Land Use of Karabiga (Çanakkale) District

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## ABSTRACT

All over the world, the use of space are changing under influence industrialization and globalization and there are undergoing different pressures. Thus the natural resources of the regions are also endangered. This situation has shown that living spaces and regions need to be improved by planning. However, in order for the plans to be made to be ecological and sustainable, the landscape plans must be in all planning stages. As a result of unplanned developments in Turkey are experiencing major problems and landscape planning it is becoming mandatory for each city and region. Especially rural areas rich in natural resources, should be protected, without uncontrollably evolving with new functions. Planning for this purpose for these areas is very important. Karabiga, the study area, is a rural settlement rich in both cultural and natural resources. The town of Karabiga is located to the south of Marmara Sea, on the shores of Anatolian lands. The town is located in a region characterized fertility address full of secrets, that have mythological stories and legends in the ancient time. The Karabiga is a settlement formed by the settlement of the Miletus colonies and later It is a settlement where many civilizations are located. This town have been always at the forefront because there are ancient civilizations in the historical process, a harbor settlement and places with rich natural resources. The region has been known as a commercial port city where vineyards and various fields and garden plants were grown in fertile lands since antiquity. Karabiga, formerly known as Priapos, has ancient settlement ruins. However, today, the natural and cultural structure of this region is rapidly changing and losing its resources. The decrease in the local population in the region, due to the migration of the young generation to larger cities, also changing ownership of the territory of the region, thus cultural texture and field usage are also undergoing differentiation and changing.At the same time the second housing regions were formed In the coastal area and the character of the area started to be tourism-oriented. Moreover, the most important cultural transformation in the region is the establishment of numerous thermal power plants and transported the industrial products by sea. However, fertile agricultural lands have been abandoned to thermal power plants and natural resources can not be protected and are in danger of extinction. Fishing activities, the region's most important wealth, are also threatened by various pollutants. Thermal power plants are creating opportunities for out-migration as a newly emerging employment area in the region. Industrial population rises above the town population in the region. The region is now shaped by changing according to the wishes and living conditions of the new people. In this context, the land use of the town and land cover, geographical information systems (GIS) with the help of determining the natural environmental factors were investigated. In this study, it was aimed to create a map of area usage in order to

determine regional resources. In this study, field map was created using ArgCIS 10.5 program in geographical information systems(GIS). As a result of the study, the current agricultural possibilities of the region, the current land use, soil capacity classes, water resources, historical-cultural opportunities, tourism and recreation potential were revealed. With this study, it is aimed to create data for future planning studies by being reveal natural resources in the region. At the same time, also it has been introduce the region, which has been known as the address of abundance since ancient times, has a distinct value in terms of vineyards and agricultural opportunities. It has been determined that the thermal power plants that are increasing rapidly today are important both in terms of their cultural and natural values. As a result of the study, the area map of Karabiga and its environs was determined and recommendations were developed in terms of regional development in order to protect the natural and cultural resources of the region. In order to provide comprehensive protection in the region, it is recommended to bring a landscape protection approach.

**Keywords:** Karabiga, Landscape Planning, GIS, The Landscape Protection Area

# Evaluation of Temporal Changes in Land Uses of Kilis City

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## ABSTRACT

Population has been decreasing in rural areas and rate of urbanization has been increasing day by day with rising in population growth rate, rapid development of technology and industry This situation, which resulted in the growth of urban areas, have lead to intensification of built environment and increase in pressure on the natural resources of the city periphery. Losses of natural resource and these growth in urban areas play an important role in transformation of forms of the land use. In particular, the major ecosystems in the city surrounding have been affected negatively by these conversions such as agricultural areas, forests, coastal sand dunes and wetlands. Changes of these land use also bring about different rivalries between field uses, depending on the dynamics that can vary at the regional or local level. Another factor of causing changes in using of land has been rising of internal and external migration. Effects of migration on social and spatial structure differ according to reason of the migration.

The study was carried on in Kilis which situates on southern border of Turkey and hosts Syrian asylum-seekers as many as the urban population. Kilis city is situated in the southwest part of the Gaziantep Plateau extending between the Hatay-Maraş and Fırat rivers. It is located between 36°38'-37°02' N latitude and 36°42'-37°34' E longitude. Natural, cultural, demographic and economic structure of the city has been affected as a result of immigration events caused by civil war in Syria. As a result of these effects, there have also been significant changes in land use of Kilis city. A large majority of asylum seekers living have been concentrated in the urban areas and this situation have increased pressure on the environment. The boundaries of settlement has been expanding along with land' use planning without regard to sustainability of natural resources, demographic, socio-economic and cultural structure and rate of housing has been increasing day by day in Kilis.

In this study, it was aimed to determine temporal changes of land use on pre-migration and post-migration of the city. Forms of land use have been classified as built environment (settlement, transportation and industrial areas), water surface and agricultural areas.The study was carried out within boundaries of municipal adjacent area of the city.. RapidEye satellite image with spatial resolution of 5x5 m has been utilized in determining changes of land use. Satellite image of the time period before the migration of Syrian asylum seekers is on November 6, 2010. The next satellite image after migration is from September 2, 2017. Maximum likelihood classification algorithm has been used to classify satellite images with the help of "Training Sample Manager" in "Image Classification" of ArcGIS 10.5 software. They have been also benefited from 1/25.000 scaled

Environment Plan, which was enacted in 1995, 1/100.000 scaled Environment Plan completed on September 15, 2017 and Google Earth satellite images. After classification; it was determined that change rates with respect to built environment, water surface and agricultural areas of the study area using comparison technique of satellite image data on the relevant years

At end of the study it was found that migration of Syrian asylum seekers has exceed bearing capacity of the city and also the migration has caused changes in built environment, water surface and agricultural areas of the city Otherwise; it has been determined that the built environment has been particularly distributed towards second-grade land ability classes. On the basis of these results, ecological approaches should be adopted in the city'planning so that natural potential of the research field can be used appropriately. In this framework, it ihas been proposed to develop measures to protect the water surfaces and agricultural areas in particular.

**Key words:** Land use change, supervised classification, Kilis, migration, Syrian refugee

# The Use of Public Spaces for Urban Development and Socio-Cultural Consequences

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## ABSTRACT

Cities are places where societies, individuals come together and socialize, and a platform bringing together all social and cultural classes and ethnic groups and all different segments of society. Especially public spaces (official and private) have played a fundamental role in the establishment process of the cities. Individuals carry out their socio-cultural experiences through activities within these physical urban environments. In this sense, structuring of the society takes place in open public spaces where the relationship between individuals and society is supported by the physical environment. Public spaces play a wide range of roles, which can be classified as physical, ecological, psychological, social, political, economic, symbolic, and aesthetic roles. if we consider that the city is made up of public and private spaces, the public space becomes an inevitable component of the city.

However, today, we can observe that with the uncontrolled growth in big cities, they failed provide an ideal environment for living, and physical characteristics of installation of buildings and outer spaces are not in line with the expectations of the users living in the city, and inadequacies and defects in the open public space design in terms of supporting public living are evident. Besides, as a result of unorganized public spaces, spatial boundaries between different social groups became more distinct. Throughout history, social, political and economical changes have affected the public spaces, which housed the everyday life of cities. In pre-capitalist periods public activity have seen as spontaneous combination of everyday life activities, like work, entertainment and leisure and they all have diffused each other indivisibly. However, with the rise of capitalist system, these everyday life activities have become separate activities and required separate spaces.

Especially during the last decade, in parallel with the technological and scientific developments in the world, empirical researches have been conducted on the livability in urban spaces, people's quality of life and the development of the urban space quality, together with a general questioning of the concept of urbanization. The results of these researches are presented as research reports. Urban space is the main tool integrating a city. Urban spaces are shared by the city-dwellers and various users, and serve as the environment in which they convey and relearn cultural accumulation. Moreover, in the context of defining the urban environment (the formation of the image regarding that city), city-dwellers acquire the experience of being a city-dweller as a consequence of their cultural identities, individual development and interaction with each other in these spaces. In cities or urban places, the practical and theoretical problems experienced with

respect to public spaces are mostly methodological since it is not exactly known what is meant or understood by “public spaces”.

Adopting the approach that urban development ought to be “feasible and sustainable”, we aim to construct in this study a framework proposal, consistent and coherent in its perspectives, goals, strategies and implementation tools, which may be utilized in the urban renewal-restructuring-development efforts in Turkey of any size urban land. In the Introduction, we describe the general approach, goals, scope and methodologies of the study. The Second Chapter, where definitions and concepts are given, addresses the conceptual foundations, specific approach and viewpoint, and the handling of the underlying concepts of the framework to be introduced. The Third Chapter is devoted to the investigation of the topics of urban transformation, which comprises the origin of the constituents of the framework, and the theory and practice of urban renewal-development. The Fourth Chapter is the synthesis section of the study. Based on the assumption that the basic spatial instruments of urban development are “public spaces”, while the essential social instruments are “social interaction” and “urban consciousness”, we try to develop an “Urban Development Framework” capable of implementation in the special conditions prevailing in Turkey.

**Keywords:** Public Spaces, public life, urban space quality

# The Integration of Erzurum Industrial Complex as an Industrial Heritage to the Urban Landscape

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## ABSTRACT

The changes seen worldwide after the industrial revolution cause the transformation of places into capital instruments, both globally and at the urban scale.As a result, urban transformations are seen as an effective factor in the reuse of these areas.
The city center is a constantly changing part of a city with its dynamic structure in socio-cultural, economic, historical and spatial terms. In order to be able to keep up with this change, it is necessary to carry out conversion studies suitable for the traditional texture of the city, both in the city and in the immediate vicinity of the city.
In recent years, with the rapid growth in urban centers and the transfer of the industry out of the city, the urban and industrial areas, both architecturally and functionally, have been lagging behind technologically, creates the need to develop planning and design approaches that integrate with the city in these areas. Old industrial sites in the city that have not been evaluated are described as urban spaces carrying heritage potential and are described in the literature as brownfields. With the localization of the industry, such areas, which are dysfunctional and idle, have been great importance with their landscapes spread over a wide area within the context of their location, size and cultural potentials in the city center. Erzurum Meat and Fish Institution (Kombina) campus,in a wide area as a green area in urban macroform, generally has an important value for the city with this feature.
Established for the development of livestock activities in Turkey,the Meat and Fish Institution was institutionalized in 1952 The institution is located in a settlement which is located 2 km from the city center and is now moved out of the city. In this respect, it is very valuable as an industrial heritage structure in the city center.

During the research, extensive literature review has been done in general about industrial heritage sites in and out of urban areas. specifically, the building of the Meat and Fish Institution (Kombina)

in the city was examined. the application project informations planned for the area, the zoning plans belonging to the area were taken from the relevant institution and municipality. Comparative analyzes based on interviews with authorized persons and photographs of the area, landscaping elements, urban ecosystem and related to each other, temporal changes of the current structural and functional situation were interpreted.

In the study it is aimed to transfer the Erzurum Meat Combination located in the city to future generations as an industry heritage site, to bring the buildings to the city life with a proper function, in addition to be protect their original identities .
Implementations made in parallel with the rapid growth of the city of Erzurum
urban green space, accessibility and sustainability, thus suggesting that the city is a living city and an increase in urban qualities. The historic stone building, which served as an animal shelter in the same area, has been restored and used for another function within the municipality, while being preserved originally within the scope of urban transformation. A landscape application project has been prepared in line with the needs of the new institution in the area.
In this direction, a proposal for a urban landscape designed in harmony with the architectural restoration and landscaping of the old animal shelter building has been designed in order to stabilize the old building of the meat and fish facility in the vicinity and the surrounding area and in this way the city has been given a sustainable green texture by taking into consideration the historical significance of this Industrial structure.

When studying the urban transformation studies carried out in the study,the cities can show better quality and healthy physical development when the correct interventions are made to increase the quality of life of the city in accordance with the ecological, socio-cultural and historical texture of the city.
Industrial areas that have been drawn from the perspective of urban loss as unique designs and projects that provide identity to the city have come to the conclusion that they can be used as a public space by restoring the city and thus creating a more livable environment within the sustainable development of the city developing in the long term.

**Keywords:** Industrial Heritage, Meat and Fish Institution, Urban landscape, Erzurum city

# A Different Perspective on Çanakkale

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## ABSTRACT

Urban design is the result of the combination of aesthetics and technics and the desire to create habitable and livable spaces. Urban design processes are evolving in line with the key areas that affect the city. Universities have emerged as the most important institutions of the city they are in and they have maintained these characteristics until today. The steady increase in the number of universities has led to the rapid increase in the number of students and academic-administrative staff and the opening up of new campuses in this area, as well as the substructure that allows the education, teaching and scientific research activities to take place, and the requirements for the areas where various recreational activities have taken place. Hence, the recreation areas to be developed in the settlements should be handled and planned with a holistic approach together with other field uses. In the planning process, co-ordinated work should be performed by the professional staff of planning and design disciplines. Recreational areas have functionality that relates other structural elements in the settlements to each other in the form of an ecological network. Çanakkale Onsekiz Mart University presents one of the most beautiful examples of city-university harmony today in our country. The usage of many areas such as the university, airport,

military areas, Sarıçay each influence Çanakkale differently. The University offers important contributions to the city of Çanakkale through its numerous campuses in the city center as well as its educational and scientific activities, social, cultural and sports activities it has undertaken. The Terzioğlu Campus, which is the main campus in these settlements, is at the focal point of the city in terms of its location. Çanakkale Onsekiz Mart University presents visual contributions to the city as well as scientific, economic and social contributions. The Terzioğlu Campus is located on a vista that one can see the full view of the Dardanelles, Çanakkale, and the Kepez Town. Watching and observing the cities from different points helps to reveal a number of different, curious and exploratory thoughts and activities in terms of both tourism and the citizens. Terzioğlu Campus has a very favorable structure in terms of its location and in terms of enabling such activities. Çanakkale Onsekiz Mart University, where the study was carried out, consists of a recreational area, walking paths, amphitheater, pergolas, sitting units, lawn areas, which were built in front of Terzioğlu Campus Fine Arts Faculty Building and completed in 2017. There are also 2 indoor tennis courts and a cafeteria in this area. In the study, the existing recreation area was investigated in order to determine if it is suitable for building an viewing terrace encompassing the view of the city and the Dardanelles. For this purpose, application examples in the world and Turkey were examined. The technical and financial aspects were thoroughly analyzed and the approximate cost was estimated and preliminary design regarding how a viewing terrace to be built in Terzioğlu Campus should be was performed. As a result of the construction of the viewing terrace, it is thought that there will be a building which can be a center of attraction in Terzioğlu Campus, and this place can provide important services to both the campus and Çanakkale city.

**Keywords:** Çanakkale, Çanakkale Onsekiz Mart Universty, Vista, observaiton terrace

# A Study on the Sufficiency of Sport Areas in Ordu Province

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## ABSTRACT

Urban areas have a lively and systematic structure that emerged from the coexistence and integration of human and natural values. These areas offer a multifaceted service and function to the people and the environment of the city with its integrated and complex features. The open green space systems within the integrative nature of urban areas constitute the lung and identity of the city, as the city and the citizen are the areas where it can breathe. Open green spaces are natural or artificial spaces that to a spiritual and bodily peace of give relax a healthy, balanced and refreshing environment. At the same time, these areas provide a living environment for every living organism within cultural and natural habitats. Open green areas include active and passive uses. Active green spaces are usually shaped by children's playgrounds, parking areas and sport areas, which the people use for recreational purposes. Sport areas within the green space system contribute to the development of the urban physically and healthily and to meet the need for recreation. Recreational sport activities play an important role in improving the standard of living the citizen, of being in social and physical activities. Sport is one of the most comprehensive, various and intriguing types of recreation. On the other hand, recreation provides sport to become widespread in society. With these characteristics, sport and recreation affected with each other. People prefer sport facilities as well as open green spaces to play sport for healthy living and recreation. Sport facilities created in accordance with the preferences are important according to the user need and service quality and its must be capable of responding to the needs of the standards. Besides, sport facilities should be environment friendly, supportive to healthy life and accessible appropriate for recreational use.

In areas where urbanization is heavily exposed, the need for green spaces and sport areas, in recreational activities and healthy life is increasing day by day. Rapid urbanization, increasing urban population every day, causes the parks, facilities, sport and play areas planned for recreational purposes in the city to be inadequate.

This study was conducted out the district of Altınordu which is in Ordu province, in the Black Sea region. 45 sport areas and 65 outdoor fitness areas located in 22 neighborhoods in the district center were examined within the scope of the study. The current status of sport areas, equipment elements, size, facility capacities and numbers of cities and population scale and the compatibility of these areas with the standards have been determined. The data and documents belonging to the sport areas in the province were collected from the related institutions and the literature was

searched about the subject. The obtained data are in line with the field work, observations and measurements were made. According to the coordinates taken by GPS, the parking areas are plotted on the map and the areal densities are determined. Accessibility of sport facilities has been investigated by creating areas of 1600 m radius. Existing area size of sport areas and fitness areas were evaluated according to urban population and neighborhood population and the adequacy of the areas, the required size, and the amount of sport space needed were determined as to be the amount of sport area of 4 m² per person. The identified data were compared with the standards and solution suggestions were made proposed to remedy the problems. Sport areas in the city center should not be haphazardly placed, urban accessory equipment should be compatible with other sport areas and hiking and cycling way in the green space system. However, when the locations of the sport areas in the province of Ordu were examined, it was seen that the areas were randomly placed. When it is examined in population and neighborhood scale, it is determined that sport areas are insufficient.

**Keywords:** Ordu, urban area, recreation, sport areas

# CITY - PLANNING - TRANSFORMATION

# The Areas Opened to Settlement for Past to Present: A Case Study in Nigde City

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**ABSTRACT**

Niğde province, where many kingdoms lived, entered Ottoman domination after 1470. After this period, the city showed improvement in south-west, north and west sides. Migrants from the countryside began to settle in the western part of the city, and the zoning area is concentrated in this region. This situation, It has led to the extinction of available fruit gardens and green areas in these areas.Vertical urbanization has increased without leaving green areas among the newly constructed buildings. The urbanization problems, green area, and pedestrian path needs have shown an increase in the growth of the population. The green areas in this region opened zoning usually consisting the small gardens between the road and the buildings and from the central refuge of the road. Only, the plant planting is provided on the bike path and the pavement on the Bor Road opened a new zoning. In this study, satellite images of 2009, 2011, 2014, 2017 of the newly opened region were used. Through these images, the green areas covering the central refuge, pedestrian roads, and buildings in the around Bor road route tried to be determined. The satellite images belonging to different years have been digitized in Netcad software using the same reference points. Digitized maps have been transformed into the same coordinate system. These green areas have been compared over digital maps created for different years.In this developing region of Niğde Province, the adequacy of the amount of green area for human needs is investigated and solution proposals for the following years will be developed.

**Keywords:** Digital Map, Green area, Niğde, Urban, Urbanization

# The Evaluation of Gaziantep City Construction Plan in terms of Conformity to Settlement

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## ABSTRACT

The industrialization, development and economic improvement are being adopted as a single goal in current city plans and natural resources are being irresponsibly depleted; however, no efficient protection approaches are being put forward. Existent reserves face with the danger of extinction as the result of the land-misuses and excessive utilization. In order to make accurate and effective reserve management and take planning decisions, optimal land-uses targeting the preservation of ecological structure should be determined elaborately. The main purpose of the landscape planning in cities is to make the most suitable land use plans within the framework of sustainable city approach in order to maintain resources' continuity and to establish balance with the help of natural and cultural landscape characteristics of the area in determining the urban development potential. The purposes of this research which has been conducted in line with this objective are to create the most suitable model for settlement taking into account the natural and cultural landscape characteristics that will be decisive for the urban use of the settlement sector and to determine land misuses by assessing this model with urban plans and to take measures and develop proposals to protect the city's natural potential.

As a research scale, 1/25000 scale which is the environmental plan scale has been chosen. In order to determine the boundaries of the study area, a master plan of Gaziantep Province has been obtained from Gaziantep Metropolitan Municipality Urban Planning Branch Directorate. As the last plan that shows the land use of the city is the master plan in 2012, the boundaries of the study area have been determined on the basis of this plan. Once the study area has been identified, maps that

affect the study area, form the method and reflect the natural and cultural landscape characteristics have been created firstly. Later, by using the overlaying technique that is mentioned in Ian McHarg's study named “Design with nature” that form the basic rationale of GIS and using the methods of Kiemstedt’s study named “Usage Variance Analyses Method as an Ancillary Method in Planning” which is translated by Köseoğlu (1982), a mathematical method specific to the study has been developed and this method has been integrated into ArcGIS 10.2 program. In accordance with these methods, conformity maps have been prepared for the settlement areas. A mathematical approach has been used in the preparation of this map. It will be appropriate to explain this approach in detail.

The natural and cultural factors that can be decisive for the land use of the settlement sector and the sub-units of these factors have been determined primarily. Subsequently, the determined factors have been weighed by giving numerical values ranging from 1 to 10 according to their efficiency in determining the suitability of the use mentioned. While conformity map has been being prepared, the natural and cultural factors that could be decisive for the use in question, their factor values, subunits and the numerical values assigned to the subunits have been determined by the previous studies in the field [(Golany (1976), Steiner (1991), Ortaçeşme (1996), Mansuroğlu (1997), Yıldırım et all. (2002), Çelikyay (2005), Yılmaz (2005), Ekinci et all. (2006)] and consulting experts and academicians who know the study area. After all these values have been determined, the necessary transformations have been made in all maps of 1/25000 scale using ArcGIS 10.2 program. With the help of ArcGIS 10.2 program, firstly thematic maps (maps reflecting the natural and cultural landscape characteristics of the area) have been created and then the factors determined for the land use have been recategorized according to the factor weights of these factors. As a result of the study; by comparing the land use map suitable for the constructed settlement and the city’s last 1 / 25.000 scale master plan, evaluations for the future of the city have been made.

**Key words:** Gaziantep City, Geographic Information Systems (GIS), Land Use Planning

# Effects of "Code on Construction of Spatial Plans" on Spatial Transformation in Turkey

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## ABSTRACT

Planning is the whole of past, present and future decisions that are made by integrating social, economic, political, physical, technical and anthropogenic factors. In this context spatial planning is whole of future decisions made as a result of the physical and non-physical (social, economical, cultural, etc.) dimensions of the space. For a successful planning, the spatial/physical, ecological, social, economical, political, etc. all factors related to the field/topic must be analyzed and assessed holistically (Çetinkaya and Uzun, 2014). For this reason, successful spatial planning requires efficient data base, analysis capability and evaluation discipline.

Planning works, with goals of industrialization and modernization in agriculture, began in the 1960s in Turkey. The beginning of preparation of Five-Year Development Plans in 1963 brought discipline to these works (Yücel, 1995). The 5th, 8th and 44th articles of Construction Law No. 3194 dated 3/5/1985 have mentioned spatial planning and it has been obliged to be considered as a whole (Anonymus, 2018a). Because spatial planning started in Turkey in 1848 with issued "Structures Regulation" in order to zoning applications in some neighborhoods of Istanbul. Fragmented planning decisions have continued until this law (Anonymus 2018b). Today's spatial planning in Turkey are guided by "Code on Construction of Spatial Plans"

The Code was come into force by being published in the Official Gazette dated 14.06.2014 and numbered 29030. It covers spatial plans of each type and measure and procedures and principles for spatial plans and special purpose plans /projects in order to make revisions, additions, changes and examination of these plans. Targets of the regulation are to establish and implement spatial plans that bring decisions on land use and settlement in order to to protect and develop physical, natural, historical and cultural values, to provide protection and utilization balance, to support sustainable development at country, region and city level, to create healthy and safe environments with high quality of life (Anonymus 2018c).

Aim of this study is to demonstrate all possible effects of the Code on spatial change at local, regional and national scale in ecological, economic and socio-cultural dimensions.

**Key Words:** Spatial planning, Code on Construction of Spatial Plans, landscape architecture.

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# Transformation in Planing and Design Approach to Living with Flooding: Integrated Recreational Development Model with Ecological Sensitivity and Flood Control in Sivas-Center Kızılırmak River Corridor Sample

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## ABSTRACT

Flood protection plans in urban spaces are not still implemented in an holistic way either with landscape development plans or recreational design activities of river corridors in our country. Consequently, we face with urban rivers altered with flood protection structures where the link between citizens and water is cut with sometimes green or sometimes completely gray corridors in almost every cities of Turkey. This paper emphasizes the necessity of performing engineering activities of flood control in urban spaces and recreational development or green infrastructure activities simultaneously and holistically on a basis that is sensitive to ecological processes and foresees living together with the risk of flood based on the suggested model. This suggested model is developed within the scope of Sivas-Central Kızılırmak Corridor Ecological Sensitivity and Flood Control and Integrated Recreational Development Project implemented by the 19th District of State Hydraulic Works. Area of study is the river corridor starting from Kızılırmak River at the south of Sivas Province, and continuing to Kesikköprü in the west, as well as historical Eğriköprü Bridge in the east (approximately 8 km long and 600 m wide), and the micro basins of the river.

Protection, rehabilitation and recreational development decisions are taken and designed on the basis of Landscape Character Analysis and Assessment (LCAA) of Sivas-Central Kızılırmak River Corridor by the Project. Genuine characteristics of the process of designing the project in line with the ecological protection and recreational use are: (1) it encompasses higher scale analyses and assessments within the scope of urban space outdoor and green spaces system, (2) it includes lower scale analyses and assessments in association with the project area's recreational development decisions on higher scale, (3) it is executed simultaneously and in cooperation with the flood protection planning, (4) it is the first institutional example where the Technical Guideline for

Landscape Rehabilitation and Restoration to Nature is adapted which is prepared by the Turkish Ministry of Forestry and Water Affairs, General Directorate of Nature Protection and National Parks, Department of Sensitive Areas. This project design approach as a first of its kind has the potential to be a national model for flood planning activities of all river corridors in urban spaces.

Model is comprised of three integrated main phases. These phases and activities completed in each phase are as follows:

1. River corridor landscape character analysis and assessment (LCAA)
   1.1. LCAA on basin scale:
   1.2. River corridor LCAA and landscape survey
   1.3. Flood modelling
2. Sivas Central Kızılırmak River Corridor Landscape Plan and Environmental Affairs
   2.1. Landscape Plan
   2.2. Environmental Context
   2.3. Road Typologies in Urban Spaces
   2.4. Green Connectivity Plan
3. Nature protection and recreation project
   3.1. Layout Plan and Landscape Survey
   3.2. Plan of Functions and Focal Points
   3.3. Conceptual Function Diagram
   3.4. Function Plan related to the Area
   3.5. Concept Plan
   3.6. Preliminary Landscape Design
   3.7. Final Landscape Design
   3.8. Landscape Drainage Plan

The suggested model can be used for the flood protection planning and recreational development projects executed by SHW (State Hydraulic Works) where municipalities are/ or are not stakeholders besides the below mentioned spatial planning, design and management actions:

- Projects to be implemented within the scope of Regulation Pertaining to the Preparation of Plans for Protection of Water Basins and Management,
- Urban design and recreational development projects along the river banks to be implemented by Municipalities,
- Actions to be taken under the scope of Urban Forests or Nature Parks operated in cooperation with the Ministry of Forestry and Water Affairs and Municipalities,
- Actions to be taken under the Regulation of Conservation Development Plan,
- Actions to be taken within the framework of relevant regulations for the plans to be implemented in protected sites.

Simultaneous and integrated implementation of flood control and recreational development activities in the urban spaces will on one hand enable healthy and safe cohabitation of communities and flood which is a natural process, and on the other hand urban citizens may approach water and even have the chance to touch it.

**Keywords:** River, flood control, recreation, planning, design

# An Evaluation of The 2017 Urbanization Council Meeting in the Scope of Landscape Values And Environmental Sustainability

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## ABSTRACT

Between January, 27th and November, 08th 2017 a new vision statement for urbanization has been developed after 9 months of work with the participation of 133 experts from 100 different institutions, 4 different commissions (1/Identity Planning and Design in our Cities, 2/ Urban Renewal, 3/ Urbanization, Immigration and Adaptation and 4/The Role of Local Administrations in the New Vision of Urbanization). As acknowledged, "***The Urban Development Strategy Document*** **(KENTGES**) which was accepted in 2010 with the participation of 500 experts from 151 institutions in the scope of the 2009 "Urbanization Council Meeting" as a road map for the institutions and local administrations which operate on the issues of Planning, environmentally sensitive settlement and construction and is an urbanization and reconstruction vision targeting the year 2023. On the other hand, at the ***Urbanization Council Meeting***, the following points have been mentioned: that currently the urban-rural balance has been changing against the natural or rural areas, that a majority of the planet has been shaped by human influence as a result of increasing population and economic mobility and that in the near future cities will become places far from livable because of global climate change and as a solution it has been mentioned that it is an obligation to reconstruct the relationship between cities and the environment.

This situation is becoming more and more apparent with the examination and evaluation of urban citizen rights at an international scope. This process which started with the 1st Habitat Conference (1976, Vancouver) has continued with the Quito Declaration (October 17-20, Quito, Equator) and has gained increasing importance in the 40 year process gaining momentum towards making cities more livable places. Currently, with the **Quito Declaration** which has a vision of **Environmental Sustainability**, urbanization is being considered as the engine of sustainable and inclusive economic development, social and cultural development and protection of nature and environment.

The biggest problem of our cities is that they show a development parallel to the increasing human use and that they have become areas of agglomeration as a result of human density at time and space. For the ecological, social and economic sustainability of our cities, green network system comes forward as a "critical infrastructure" for today's changing and fragile urban environment. In order to analyze and integrate the ecologically based systems in our cities, green networks and green infrastructure has been brought to the agenda.

In contrast to the extremely growing/approximating structure of cities, green network systems as ecological values of the city, are what makes a city more unique, livable and adds an identity to it.

In this presentation, Identity-Planning and Design Commission has put forward strategic approaches about the integrated structure of cities with their surroundings under 5 sub-headings (Vision and Approach, Identity/Planning Approach, People Orientedness/Scale Hierarcyh, Urban Planning and Urban Design, Principles: Sustainability and Nature Orientedness). Among these sub-headings especially, the subjects of **"Sustainability and Nature Orientedness"** present the sensibilities of the Landscape Architecture Profession and identifies the responsibilities of the profession in our century. These studies have been considered within the scope of determining what needs to be done for the ecological naturalization and renewal of cities.

***Key Words:*** Urbanization Council Meeting/2017, Nature Orientedness, Environmental Sustainability, Urban Landscape Design and Planning, Urban Landscape.

# Definition of Landscape Functions and Landscape Sensitivity for Risk Management in Spatial Planning

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## ABSTRACT

Spatial planning studies are carried out in the Spatial Plans Regulations published in 04.06.2014 (Official Newspaper Issue No. 29030) from top to bottom in hierarchical manner as; Spatial Strategy Plan, Environment Plan, Master Plan and Implementation Plan. The phrase "*analyses of urban risks or conservation planning studies should be carried out for urban settlements or built-up areas where disaster and other urban risks are high. Risk mitigation measures for hazards and other urban risks should be identified in these plans*" has passed in the main section of the Spatial Plan's Regulations. However, considering that risk management / mitigation planning is based on ecological planning principles and that a participatory approach can not be achieved in the current legal and administrative structure in our country, it is thought that it causes some problems in the sustainability of natural resources.

Landscape plans or landscape planning approaches which are an important base in the preparation of spatial plans are not included in the process of preparation of Spatial Strategy Plan, Environmental Plan, Master Plan and Implementation Plan. Within this scope, studies on "Landscape Character Analysis and Evaluation" which is being carried out are not found in any legal process in recent years. The Landscape Character Analysis and Assessment (LCAA) studies are intensive work in our country after the European Landscape Convention signed by our country in 2004 and accepted by The Grand National Assembly of Turkey. The LCAA process involves the identification of character types and areas of landscapes, as well as the creation of bases for the ecological structure for spatial planning with different analyzes of some functions in the landscape such as water cycle function (infiltration), erosion prevention function, habitat function and biodiversity function. Undoubtley, the assessment of resource provisioning, regulatory, supportive and cultural ecosystem services is very important in the spatial planning process for the sustainability of natural resources as well as landscape functions. In this context, ecosystem services are being studied our country, both in ministries level and in interdisciplinary national and international projects.

In this study, It has been mentioned with the general framework of the TÜBİTAK (115K475) project entitled with "Developing An Ecological Planning Based Participatory Planning Model for Spatial Risk Mitigation" to investigate the spatial dimensions of natural hazards such as earthquakes, landslides, erosions and floods and to develop risk mitigation solutions to prevent possible ecological, economic and social losses for the Düzce Province and to determine the policies, plans and designs related to the environment. Thus, the importance of defining the Landscape Functions and Landscape Sensitivity in the spatial planning and managing the spatial risks is emphasized.

It has been effective in the selection of Duzce Province as the study area its ecological richness, diversity of natural and cultural landscape, to be exposed to different natural disasters within the time, and the changes and transformations that the social, economic and ecological structure of spaces have undergone as a result of these disasters.

As a result, it has been pointed out that landscape units which are defined as areas where water permeability, erosion risk and habitat function are evaluated together and landscapes are sensitive are important in spatial planning. It has also been demonstrated that the identification of these areas together with other natural hazards and their interpretation with ecosystem services is an important decision support tool in orienting urban development and supporting spatial plans in the formulation of strategies for different sectors such as agriculture, forestry and tourism.

**Key words:** Spatial Planning, Spatial Risk Management, Landscape Character Assessment, Ecosystem Services

# Changing and Transforming Urban; Ordu City with Its Silhouette and Vista

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## ABSTRACT

Transformation in the urban starts establishment of the city. The urban have more simple aims like security and harboring in its establishment. However, they transform to complex system with their function in the time. All new function in the complex structure diversifies life style, culture and structure of the urban. Changing and transform in the urban occur in result of human activities. Requests, expectations, traditions of urbanities and necessities of the time force to stay dynamic. Thus, the structure in the urban is updated in the dynamic process. The changing is sometimes positive or negative. The update has effects to preferability and tourism from the urbanities satisfaction.

The changing in the urban functions effects directly to the urban structure. Thus, the changing in life style and image of the urban perceive easily by urbanities and tourists. Even the smallest changing in the urban causes to important results. Most important characteristic that distinguish one from the other urban is to have to its own characteristic values. Every urban has original social, economic and cultural background. Urban values effect from culture, architecture, geography and life style of the urban. The distinctive characteristics like this create urban identity. The urban identity is a fact that it increases perceptibility of the urban, gets potential of the urban out in the open and provides the urban exists.

Urban identity has important component in many ways. Silhouette is one of the most important component of the urban identity. The silhouette is line joining earth and sky. It is effective in the perception of the urban and consisted of visual effect in wholeness of the urban environment. There is a very strong connection between the urban identity and the silhouette. Because all values reflecting urban identity gain meaning in perspective of silhouette.

Vista is as important as silhouette in the urban aesthetic. The vista points strictly connect with urban silhouette and the urban like the urban identity and urban silhouette. The vista occurs with came into view of further landscape. All urban have panoramic view and silhouettes in specific aspects of the urban. The vista points and the urban silhouettes bring into open values of the urban.

All urban have natural or human made values. The structure, topographic characteristics, geographic, geologic and historical structures and spatial items of the urban have effect on the vista and the silhouette. The urban silhouette and vistas has a role in the urban aesthetic, imagine and structure. Silhouette and vista is effective in recognizing, adopting and symbolizing of the urban.

Aim of the study in this context, it is evaluated urban silhouettes and vista points of Ordu City. Ordu city is a small coastal city fast developing in the Blacksea Region. And it has natural landscape values. Ordu city have changing topography and sea. Therefore, it is got different views from different points of the urban. In the study, it was used fractal and visual quality analysis. To decide most effective silhouettes and vistas of the Ordu city, first alternative of point and line in the urban were determined. Later, photos were taken for views of the urban from vista points and silhouettes views from different points of the urban. This vista points and silhouette lines were mapping. It was made fractal analysis with these photos. Besides, it was given points by visual questionnaire.

**Keywords;** Urban silhouette, vista point, Ordu City, Fractal analysis, visual quality, urban imagine

# CITY - PUBLIC SPACE - AUTHENTICITY

# Outdoor Floorings in Urban Squares: The Case of Çanakkale

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## ABSTRACT

An urban square is a public space where the urban life occurs intensely and which is used by urbanites at different times for different purposes during the day. The squares in Turkey have brought authenticity to the city identities from ancient times to the early republic periods. The concept of scale in squares have undergone certain changes. In the past, historic structural elements such as mosques, fountains, and houses served as a reference for scale selection. Today, this scale is brought down to the individual level. The Earth has a plane by its nature. From past to present, people have started to form floors on this plane in order to make life easier. And landscape is a concept that brings together the natural and cultural environment on this plane. Among structural equipment elements, surface coating is one of the most important factors of cultural landscape. They constitute the ground for three-dimensional spaces. These floorings can be made from natural or artificial material. Today, it has functions such as bearing pedestrian and vehicle traffic, guiding and linking. The tilings in landscape design works can be made of living substance such grass and ground cover or non-living substance such as concrete, stones or bricks. The developing technology moves up the coatings used to higher levels both in functional and in

aesthetic terms. They contribute to design with their color, texture, and form. A number of principles in the selection of these materials are taken into consideration. Climate, cost, etc. are some of these principles. This research was conducted to examine the outdoor floorings used in the urban squares in Çanakkale and to determine the mistakes made and make new suggestions. This study covers the Pier Square, Clock Tower Square, Republic Square, Victory Square and City Square located in the city of Çanakkale. The number of squares and the little space they cover in the city center of Çanakkale put restraints on the research. The research method consists of observation, examination, photograph-taking, and interviews with users. In the study, the tilings and materials used in the present squares were determined by the observations made in the city center of Çanakkale. **Pier Square:** Granite was used in the main tiling, walking center line and curbs while marble was used at the curb edges and basalt was used decoratively. **Republic Square:** Granite was used in the main tilings and mosaics were used to designate the main outlines and jointings. **Clock Tower Square:** Granite was used in the main tiling and basalt was used as the release agent between tilings. **Victory Square:**Granite was used in the main tilings while basalt was used in the center line within the fields and rubber was used in kids' playgrounds and andesite was used for the sake of creating a difference in tilings. **The City Square** is under construction. Problems were found in the materials used in some of the squares. These problems can be defined as mistakes in the application stage, abrasion due to environmental conditions, perishable materials, damage due to incorrect use and lack of maintenance and repair. There are a number of deficiencies in the squares as much as tiling mistakes. It was observed that none of the designs for the squares used in the research consider the guiding function, one of the most important functions of tilings in squares. There are no factors serving to guide the users to the field. There are no tactile tilings that provide individuals with disabilities with easy and safe access to the field. In addition, tilings that will facilitate the in-field use of these individuals were not used. In the chosen and implemented tilings, aesthetic factors were not sufficiently taken into consideration. The material to be used as flooring in the squares needs to be chosen in compliance with the ecological conditions of the region. The choice of these materials carries importance also in terms of affordability and labor. When this point is considered, it is seen that most of the material used in the squares in Çanakkale, the subject of the research, are ordered from outside the region. Planning landscape architecture and choosing tiling material proper for design principles for all the individuals constituting the components of the city in terms of functionality (including disadvantaged groups) will positively contribute to the easy, accessible and safe use of these spaces. As for aesthetics, authentic and non-monotonous applications that are noticeable, in tune with its close environment and has color harmony should be implemented. In the city of Çanakkale, as a result of the increase in the city population and thus a rapid increase in urbanization, important changes and transformations are occurring in the city. The squares in the city are affected by this. Design and implementation should be made within the scope of the present squares and potential squares that can be built in the future considering the points stated in this study.

**Keywords:** Çanakkale, outdoors, aesthetic, functionality, urban square, flooring

# User Contribution to the Design Process of Urban Squares; Sakarya Democrasy Example

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## ABSTRACT

Man, who tends to pursue individual life since his existence in the world, has not obtained his essential needs by himself throughout the history. Human being started to form communities to meet their nutrition, accommodation and protection needs. The communities formed by individuals with different abilities have built different structures in line with their needs and have developed their lifestyles as villages, towns and cities. Urban style living has brought additional needs such as transportation, shopping, coexistence and socialization besides accommodation, protection and nutrition. People have used public spaces to meet these additional needs. The Public spaces are either squares that planned by city or created by the intersection of transportation axes. The squares provide the basis for social participation, social organizations, coexistence and information exchange, political demonstrations, and social reconciliation, in short, the desire for people to become communities. These opportunities that squares provide to communities are a clear indication of how important the squares are in terms of public and social processes. Historically, the world's squares have been shaped according to social customs and traditions. Therefore, have shown several differences in shape and function in each geography. Nowadays, city squares offer opportunities to meet various social activities,shopping, and recreational needs just like Sakarya Democracy Square. However, as technology has developed, especially with the industrial revolution, social needs also changed and diversified. Due to this change and development, city squares have become inadequate. They have lost their function and meaning and became void. This study aims to determine the current needs in the design process of the Sakarya Democracy Square and to provide the most accurate and productive contribution of the users in order to meet the demands. Sakarya Democracy Square (Sakarya City Square), which is one of the most important squares of Sakarya and Marmara region, located around the city's main transportation axes, contains shopping malls, various private and public banks, public institutions,

and various social needs. In this study, the transformation of the square due to the changing and diverse social needs is investigated and literature survey on urban squares, visual impact and user participation was conducted. In 2018, the drawings and the video and images of the project were designed by Sakarya Metropolitan Municipality with a new point of view. Participants were randomly selected in various places in the city as well as people living outside of Sakarya. with different age, gender and educational status. Surveys were conducted to measure visual impact, user satisfaction and user participation. A Three-step method was used in the study. At the first stage, the present situation of the area together with the photographs and videos of the new design of the plaza is shown. 120 people using the square were interviewed face to face. In the second phase, an online survey was conducted using photographs of the new design of the area with 100 people who had never seen the area. In the third phase, an online survey was conducted with 60 people using the video of the new design of the area. Differences between the current state of the square and the survey design studies conducted by the three methods related to the new design have been revealed. The best and most efficient method is tried to be used to attract participants. As a result; With this study, we try to understand what the shortcomings of the current Sakarya Democracy Square are and whether there is a need for transformation due to changing conditions and needs.

**Keywords:** Square, design, participation, community, human

# Design Proposals for Child-Play-Nature Integration in Children's Playgrounds

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## ABSTRACT

Playing game is an indispensable part of every child. It is not only the most effective way of helping children to express their wishes and goals, and to prepare them for social life but also an important survival activity, such as eating or sleeping. Because of their nature, the children learn a lot by playing game, they improve creative skills and as a result they become happy. It is like a magical world that attracts them.

As a result of the rapid urbanization that brings together many environmental problems nowadays, playgrounds for children are formed in empty spaces between the structures with an unplanned and disconnected form. Considering the changing living conditions in parallel with urbanization, it became more restricted for the time child spent outside. According to a research conducted; while the time spent by children outside was 86 minutes/daily in 1981, but it dropped to 42 minutes/daily in 1997. Making children spend their limited time in a more qualified and productive way and integrating them into nature during this period makes them psychologically and educationally stronger.

In addition, it has become more risky for children to play in their own streets due to increased population, urbanization and traffic. For these reasons, the need for safe places for children to play games is increasing day by day.

Especially in the big cities, the lack of outdoor playgrounds, non-suitable playgroups and game tools that are limiting their motor development and imagination, prevent children from gaining life experiences that they can learn and win. Although they attract children's attention due to their

appearance, it is thought that these playing elements have deficiencies in terms of child development.

Besides, in recent years it has been revealed that outdoor playgrounds are an important element in bringing nature consciousness to children. The playgrounds which are designed on the basis of nature, offer children the opportunity to learn by living. As it is known, nature is the greatest teacher for everyone.

The purpose of this study is to find answers to the following questions;

"What should be considered in the design to ensure children's learning by nature?",
"What should be done to give children nature and environment awareness in children's playgrounds?" "What should be done in the direction of healthy development of children?"
"What should be done in terms of landscape architecture for child-play-nature integration?".

Within this scope, the objectives and purposes of this work are; to show effective solutions for the use of natural materials in the design of children's playgrounds in urban areas with high population density and what can be done in terms of landscape architecture for child-play-nature integration.

The research was conducted in three interrelated phases. These are data collection, analysis and lastly evaluation and suggestions. In the first phase, the design criteria that should be in children's play areas compatible with nature have been researched within the national and international literature. In the second phase; an analysis was made on what should be the landscape design premises that facilitate children's awareness of nature and their learning by experiencing natural environment. Additionally, which visual elements are used in landscape architecture aimed at raising the children's awareness of nature and the environment shown by practical examples in Turkey and the world. At the last stage, evaluations were made in the direction of the theoretical framework, and suggestions were made on how to make an ideal child play area design compatible with nature.

It is thought that the results of the research can shed light on future landscape design studies in terms of designing environmentally-friendly and non-limiting playgrounds.

**Keywords :** Children, Play, Playground, Nature Consciousness

# Determination New Approaches With Examples From Different Countries In Designing of Playgrounds

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## ABSTRACT

The playgrounds, which have an important place in urban open green spaces, are important urban components that contribute to children's physical and mental development. Playing elements used in children's play areas which is contributes to urban aesthetics as well as meeting the recreational needs of children. Very effective designs can be revealed with the use of floor materials, playground elements, vegetative elements and enclosing elements used in children's play areas. These designs contribute to making cities more livable, but also present innovations in terms of children's use. Children's playgrounds are attract attention where plastic and petroleum-based materials are reduced, natural materials are offered on a subject basis and different activities are used in different age groups.

In this study, The design techniques of children's playgrounds have been investigated in these places that have been made for different purposes in different cities of countries visited such as USA (Chicago, San Francisco, Champaign-Urbana, Las Vegas), Czech Republic (Prag), England (Dartmouth, Teignmouth, Torquay, Paignton, Brixham, London), Spain (Barcelona), Norway (Oslo, Bergen), Sweden (Stocholm, Gottenborg) after 2010. The playgrounds at visited places; landscape design, used game elements, floor materials, vegetable and enclosing elements are examined, and the comparison with the current situation in Turkey. In this study; examples of the playground designs are included in the study and examples from abroad are presented with photographs.

When the playgrounds in the 'Active Recreation Area' class in urban areas are designed well, it has been found out that some problems or diseases seen in today's children are eliminated and positive effects are seen in the development of children. The playgrounds provide the opportunity to develop cooperative spirit on children, increase sense of solidarity, gain concentration and assertiveness habit, recognize nature, plant, soil and environment, make various experiments, contribute to physical and spiritual development, increasing the sense of responsibility, providing sunshine and healthy development through clean air.

In addition, safety issues in the playgrounds, correct material selection, correct vegetative design, preference for ground materials, children's developmental capacity of the game elements and materials, suitability for different age groups are also considered as subjects to be examined in the design of playgrounds. The playgrounds are also an active recreation area for parents. Designing resting areas is also important for parents who have brought their children to these areas. As a result of this work, the innovations in the use of children's play elements (slides, swings, climbing elements, siege elements-barriers, stairs, roofs, sand pools, sports units, animal figures) and the points to be noted in the design are mentioned. In children's playgrounds; standard, dimensions, issues to be considered in plant design, design according to different age groups, recreation areas for parents, and the general condition of the children's playgrounds in Turkey, were presented solutions on what needs to be done for optimal utilization examined over existing examples. In the evaluations made Turkey in general, especially plastic-based climbing, slides and playgrounds are preferred including similar units, it is noteworthy quite inadequate and improper use in planting designs. Especially; the appropriateness of children's play elements to different age groups has been ignored. Similar mistakes were found in abroad. However, especially in children's playgrounds which were seen abroad and evaluated as exemplary designs; a theme is chose, organic materials such as wood are preferred, suitability for different age groups and areas for parental use are properly designed, new game elements are added to increase the mental and physical development of children and noteworthy that beautifully colored floor applications where children's desire to come to these areas are highlighted.

**Keywords:** Playground design, playground materials, the playgrounds, landscape of playgrounds, city and playground.

# A New Way For Improvement Open And Green Spaces In Cıtıes: Superblocks In Barcelona

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## ABSTRACT

One of the biggest problems of today's cities is the inadequate amount of open and green spaces in the cities. The open and green spaces provide many benefits to cities in terms of economic, aesthetic and functional aspects such as various active and passive recreational areas and facilities, sports fields, fresh air, biological diversity. However, with urbanization, open and green areas are gradually decreasing and leaving their place to new, much larger constructions and tools. This situation also lowers the quality of life of the human being in the stress and routine of daily life.

The Superblocks model is a way of organising the city based on reversing the distribution of public space among vehicles and people, giving priority to the citizen, to improve environmental conditions and people's quality of life. The proposal is based on changing streets' hierarchy.

A project, designed by the Municipality of Barcelona in collaboration with the Urban Ecology Agency, represents an innovative planning approach for addressing urban challenges such as mobility, public space, biodiversity and social cohesion. The name of this project is Superblock. It is a new model of mobility that restructures the typical urban road network. With its implementation, Superblocks provide solutions to the main problems of urban mobility and improves both the availability and quality of the public space for pedestrian traffic. In order to achieve these goals for mobility the big roads will have improved public transportation, the number of buses would be multiplied, the waiting time for the buses will be reduced, the use of bicycles will be reliable. All this improvement will make the quality of life in Barcelona augment. Superblocks are territorial units imagined as bigger than one block of the dense Barcelona´s urban matrix with strict grid pattern, but still smaller than a whole neighbourhood. The aim of creating such superblocks is to recover space for the general public, to preserve biodiversity in the city, to improve sustainable mobility as well as to encourage social cohesion and collaboration.

The superblock application seems to be a useful idea at first glance because of these features. In addition, there are some restrictions that apply to the areas where it is applied. For this reason, the people of the region are divided into two groups, those who support the application of superblocks and those who do not. For example, it is pleasing to see that the maximum driving speed of the vehicle roads is very low. However, the narrowing of streets and streets forces the flow of traffic to be one-lane and one-way in most places where vehicle owners can not find parking near their homes. Vehicle owners are protesting this situation, but those who don't have vehicles are very happy with this application. The people who deny and support this practice report their support or

dissatisfaction by hanging pannas on their balconies, windows. However, before and after the beginning of the study, it was determined that the noise level in the zone decreased, the CO 2 emissions decreased, and the outdoor land use increased. As a result, the decrease in the number and speed of vehicles passing through the unit time and the increase in outdoor space usage alternatives have been shown.

In this study, details of the Superblock application initiated in Barcelona, the contribution of the application to the city, its positive and negative aspects are explained.

**Keywords**: Superblock, Barcelona, city, open and green space

# Central Park's Planning Process and its Historical Devolopment

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## ABSTRACT

The city human, which is under the pressure of intense urban life, is influenced by the open and green areas on psychological rest, recreational activities and socio-cultural development. Urban parks are large scale parks with historical significance for the city, which serve this sense, as well as social and cultural functions, as well as the need for rest and renewal in the natural environment of the users.

Cities and gardens that are almost as old as human history have developed and changed with the ages. Today, examined by many disciplines of profession, cities and integral parts of cities urban parks are shaped by the necessities of the times and brought by them.

In the historical process, some of these parks disappear with lose important functions and semantic integrity in the past. Some ıf other parks are transformed into spaces that can meet contemporary requirements and re-winning the value of the past with the right planning.

In this scope, Central Park, the first public park in the United States was evaluated by considering the aims and objectives of the organization.

Centrally located in the heart of New York City, Central Park is also an important part of the city's open space system. The park is located on the northern edge of New York, with an area of 341 ha wide, with a long, narrow and large swampy area. Central Park is the first property for the era when it was built, and the city was planned while it was still in its formation phase.

Central Park emphasized the importance of function as well as aesthetic integrity in outdoor design; showed that well-designed urban landscapes, along with their urban functions, were instrumental in the physical and economic development of the city.

In this study Central Park was primarily dealt with in the planning and design decisions of the establishment phase. Later, the change in the park's daily turnover was assessed considering the periodic changes in the functioning of the park. Lastly, the present situation of the park has been discussed in terms of functional changes.

As a result, Central Park has undergone various negative changes due to cultural changes in the society, economic reasons, changes in the social class of park user population, rent policies, but it has been seen that these negativities have been changed positively by a successful planning and management system. The success of the planning system appears to have been achieved through the co-operation of different occupational groups as a whole, the values that the park has in its regeneration phase and that these studies

The parks, which have begun to lose their function by changing, will either disappear by themselves or will be regenerated by planning works. But the important point here is not to destroy the park and do it again but rather the creation of planning and design processes that maintain their natural-historical values and combine them with contemporary uses and urban functions.

The planning of urban parks by following these processes is very important in terms of urban and urban areas. Because the city parks are historical icons that reflect the past of the city and shed light on today, and they have served as a bridge between the past and present. These bridges are to be renovated without destroying, keeping the historical textures and meeting the needs of the times. Thus, parks will ensure that the quality of urban life is enhanced by performing the functions they have. The city parks should not remain in memorials or photographs as places with historical significance for the city dwellers and splendid past, these parks should be of historical relevance and of a quality that will respond to contemporary functions.

**Keywords:** City parks, Central Park, Functional change, Planning

# Examination of the Functions of the City Square in the Case of Düzce Anıt Park Square

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## ABSTRACT

The squares, which are the most widespread usage place of daily life in the history, have been a significant component of urban life with their different functions and forms. Throughout history, the squares that appeared as places where everyday life and striking events were experiencing took on important tasks in meeting the needs of the people of the city. The people of the city gathered in these places, and the social culture had the opportunity to express themselves here. The squares, which have an active role on the identity and quality of the city, enable the city to emphasize and preserve the historical values of the cities, to encourage tourism, and to meet the needs of urban people for recreation. In this study, it was aimed to determine the reasons of preference, usage patterns and purposes of Düzce Anıt Park Square, which was selected as a research area, and the extent to which the urban people meet their needs. Anıt Park Square Düzce is a city located in the city center of the city and used by people almost every hour of the day.
In this study, 250 people were interviewed face to face and questionnaire application was made. As a result of the study, Düzce Memorial Park Square's purpose of usage, reasons of preference, satisfaction of users' needs and satisfaction from the field have been revealed.

**Key words**: Square, design, functionality, Düzce Anıt Park Square

# PUBLIC SPACES - CONSERVATION

# Street-Based Criteria of Walkability: The Case of Izmir

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## ABSTRACT

Undoubtedly, overweight and obesity are among the main reasons of various health problems related to chronic diseases. They are frequent causes of preventable deaths and affects the economy in a negative way. The importance of taking measures to prevent obesity and overweight has been emphasized by the public health authorities throughout the world in recent years.

According to the World Health Organization (WHO), 25.7% of the world's population suffers from obesity by the year 2014. As for the European region, 23% of women and 20% of men are obese, and more than 50% of the total population is overweight. The number of people suffering from obesity has almost doubled across the world between the years 1980 and 2008. Turkey is no exception. According to a report by the Turkish Ministry of Health, more than 39.6% of the population is overweight and nearly 29.5% is obese. The Turkish Ministry of Health signed the "European Obesity Prevention Document" and initiated the "Obesity Prevention Program and National Action Plan" during the "WHO European Ministerial Conference on Counteracting Obesity" held in Istanbul in 2006. "Turkey Obesity Prevention and Control Program (2010-2014)" was issued in 2010 to carry out target, strategy and activities for the program within a framework. It is clearly stated in the report that "the most important negativities that increase the obesity risk are the changes in nutrition style and the lack of physical movement". It is empirically proven that regular physical activity reduces the risk illness such as cardiovascular diseases and diabetes, and lowers mortality rates, and contributes to emotional well-being. Clearly, increasing physical activity is set as the main target to prevent obesity and overweight for a healthier future in Turkey, and in the World.

"Walking" is considered as the most appropriate and easily accessible physical activity to maintain long-term health. It is suggested that promoting the "walking" is the most practical way to achieve a healthy society. Although many researches from different disciplines in literature interested in how the physical and spatial characteristics that may affect walkability, and how these characteristics can be measured, the development and enhancement of the criteria in this respect have been have been rather slow. Moreover, there is not a certain common consent on who should gather the data, and on the scope and scale of data. Although the data regarding this issue has usually been gathered by national and local public administrations in the developed countries

(comparable data is not available because the scope and scale of data provided by countries and provinces changes), there are a limited number of studies focusing the case in Turkey. Unfortunately, there is no standard method, frequency, and format on the collection of walkability data by the public institutions on.

In 2014, an audit tool for data collection was developed for the Izmir province Karşıyaka district within the scope of a TUBITAK project, as a pioneer attempt in Turkey. In this research, the previously developed "street-based criteria of walkability" is revised with the help of field study experience and updated findings in the literature. The criteria were tested in İzmir province, Buca district through the field study. Thus, an original measurement method is described to analyze the extent to which the current spatial characteristics that encourage walking to help in designing walkable urban environments. The findings obtained through the study are discussed both for researchers and for decision makers in local governments.

**Key words:** walkability, quality of life, environmental psychology, spatial perception

# Pedestrianisatizon in Urban Public Areas: The Case of Samsun İstiklal Street

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## ABSTRACT

Nowadays the rapid growth of cities along with the increase of population forces cities to change and transform economically, socially and physically. One of the areas this affect can be observed is the trade points in urban centers which, together with the increase in the number of vehicles, become places which have to be quickly passed through instead of being places where you can stop and stroll. Keeping in mind that the users of these places are the pedestrians, these locations need to be re-transformed into trade centers through pedestrianization projects. Pedestrianization is the process of transforming one part of the city roads into pedestrians-only areas or allocating wider areas for pedestrians to walk through specific designs. However, pedestrianization projects do not become successful only by creating physical areas in the trade centers of the cities where pedestrians can walk. Apart from the physical changes, the project needs to be considered as a whole together with the social and economical changes. Locations of pedestrianizations projects where this approach is adopted remain as defragmented places where only traffic is decrease. These locations also bring along many problems. As a result of these problems, quality of life, which can generally be defined as creating places which answer to the needs of the public and provide the necessary service and welfare, are decreasing in urban centers. The aim of this study is to provide evaluation for the effects of the physical, social and economical results on the quality of urban life, caused by the pedestrianization project of Samsun Istiklal Street which was closed to traffic in 2014 under the concept name Street- Shopping Center. A survey and an area analysis were conducted in January 2018, at the location of the project in order to measure user satisfaction with the location and to determine their problems and needs. When preparing the survey content criteria was determined using the topics related to the place from under the titles Access and Connections, Aim and Activities, Convenience and Image and Socializing specified in the American Project for Public Places Inc. (PPS), which is used to measure the quality of public spaces. 40 randomly selected participants (20 business owners, 20 pedestrians) were included in the study. The survey questions were evaluated based on the likert scale between 1 and 5. In the area analysis the previous and the current state of the street were compared. In the survey conducted among pedestrian users (11 male, 9 female, age range 17 – 61) general data on the decrease of means of access and security, the sufficiency of urban furniture and landscape, the increase in food and beverage and shopping facilities, the increase in the real estate and rent costs, the change in the inhabitant's profile and the insufficiency of parking lots was acquired. In the survey conducted with the business owners, though, (20 male, age range 23 – 62) general data on the decrease of means of access and security, the sufficiency of urban furniture and landscape, the increase in food and beverage and shopping facilities the increase in the real estate and rent costs, the change in the inhabitant's profile, the insufficiency of parking lots, the decrease of small business based on the growth of chain markets, and the decrease in the number of customers and product sale and

purchase was acquired. Within the scope of the area study, it was observed that in the new state of the street the pedestrian area arrangements and urban furniture arrangements were made, the façades of all structures were coated with the same material and in the same color as part of the front facade improvement practice. Many valuable trees, particularly a magnolia tree which represented the street, were uprooted and moved to Batipark in a damaged state. As a result of the study, when the pedestrianisation project of the Samsun Istiklal Street was assessed based on the urban life quality standards, it is found out that the location gained value. On the other hand, transportation problems and lack of parking lots shows that the project did not get enough attention and due to security problems it has been interpreted that welfare was not ensured.

**Key words:** Quiality of life in cities, public places, pedestrianisation, street

# Investigation of Changes on Squares as a Tectonic Element of the City: Taksim Square

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## ABSTRACT

Alteration is a part of multi-layered urban structure. However, it can be observed a deterioration in tectonic structure by intervention of inevitable globalization on the changing forms of cities and consequently loss of city identity. We focused on the change in the tectonic structure of the city. Research questions are listed below:

- What are the elements that built the tectonics of the city?
- What is the role of the Istanbul squares in the tectonic structure of the city?
- What could be the factors on changes of the tectonic structure of the squares?
- What are the relations between the change of tectonic structure and the speed of this change?

An area is selected in Istanbul while looking for answers to these questions within the scope of the study. Archival research has been conducted for analysis of the history of that area and interpretation of the obtained qualitative data.

The meaning of tectonic can be analyzed commonalities between the meaning in architecture and different fields. It is defined as a division of earth science which investigates relevance to each other of disintegrated ground layers in the field of geology. It can be understood that it has a feature of wholeness by disintegration; it has associative networks by layers; relations are based on tectonics by relations between layers. For instance, when we encounter a claim of 'a tectonic shift in urban culture', it indicates that deformation on binders of elements that constitute the cultural dynamics. Therefore, it may be deduced that tectonic has a tightly woven pattern.

The state of being woven can be identified with the pattern of cities. The squares where the patterns come together are important as the tectonic element of the city. The squares are the nodes of the city that allow people to enter the city.

Taksim square has been in constant transformation for various purposes from the modernity of republic to the present. These transformations can be observed via physical boundaries defining the form and usage defining the identity from binders which construct the tectonic structure of the square.

Cities are places where human intervention is at the highest level. Cities that change with users' interventions have the power to change people's lives. This power is formed by the physical and social structure that occurs over a long period of time. It can be inferred that temporal dynamics have significant influence over squares which is tectonic elements of cities. There are changes in the Taksim Square that spread over time and become squeeze in time.

When interventions on the squares are examined, it is possible to claim that the issue of nowadays is increasing frequency of intervention. People have to face a different tectonic change every time they go there. It means that social factors cannot be included in the pattern. Therefore, it caused social disruption. Weak relations as a result of attempt to rebuild the square in a more frequent manner can be observed on ground of the square as well. Constant damage to the structural pattern on the grounds of the square is an indication that tectonic of the square could not keep up with speed of the transformation.

Squares as tectonic elements of the city developed or changed depending on the culture and needs of periods throughout the history; have gained a unique identity. The Taksim square has always protected the feature of being an urban focal point. This is a consequence of the tightly structured construction of Taksim Square. However, changing process from spreading over time to squeezing in time in the tectonic structure of Taksim square causes the potential for deformation of the state of gathering. If there is enough time to adapt the changes, the state of balance can be provided again. Otherwise, the new knots in the squares of the city are not getting tighter which conclude emergence of weak knots repeatedly. As a result, Taksim square loses its unique identity.

**Key words:** Tectonic element, structural pattern, nodes, square, urban transformation

# Examination of the Porosity Concept in the Revitalization of the Urban Public Space

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## ABSTRACT

Urban development in the past, focusing on quantitative proliferation in the city, has resulted in a number of closed areas, disadvantages of infrastructure, narrow roads, unsafe walking areas, and inadequacy of parks. Not only the lack of open green spaces such as parks and squares, but also the lack of public space that support everyday life for the inhabitants of the city, also affect comfort. The city loses its meaning if modern societies can not meet social and cultural needs to improve the quality of life of citizens. The public spaces are the only places that support social discussion, physical and psychological accessibility, pleasant environment and critical thinking. Public space is often understood as a place that is easily accessible to anyone without paying a specific fee. In other words, the use of public spaces by the group, such as low income, old people, margins and homeless, is an act of influence and the occupation of these areas can make it difficult for others to use it. The public space must consider the understanding and needs of the social class in a holistic manner and accommodate users at various levels. Thus, people can establish a communicative life through interaction. This supports the formation of the publicness of life. Accessible, safe and comfortable public space is an important factor in providing public services to people and creating experiences and values that everyone in the community can share. It is considered an important object of urban transformation projects because it can guarantee the role of a catalyst that will contribute to the vitality of the city.
With the beginning of modernization, cities are focused on quantitative production. Indoor space creation and vehicle-centered living have been the main targets. In this process, psychology is the second plan. The place, on the other hand, is characterized by the relations between the various elements that make up it. These factors play an important role in maintaining or separating space. The continuity and the separation constitute the relation of the subgroups in the interrelation. For this reason, we can collect components under 3 main headings.

First, public spaces in the city should be easily accessible and connected to the environment by all. Because the ultimate goal is to use public space. The access path of the area is connected to a horizontal defined area using a ladder, elevator, overpass, underpass or a vertical element connected to a floor level. It is a method for naturally directing and facilitating enter. In addition, determining where to go could be an important factor in creating public space.

Secondly, the items that match the surrounding circle should be used. Materials such as grass, stone, soil, pebbles, and pavement materials such as concrete and urea are also compounded. At the same time, water plants can have spatial comfort and variety through planting seasonal or perennial plants, fences and trees. Using all these together, alone or in combination, is effective in the formation of the landscape.

Third, the special installation areas of the facilities should be determined in order to minimize the mass occupancy rate of the cities. These facilities can be classified in various forms such as street facilities, green facilities, information facilities, traffic facilities, activity facilities, recreational facilities. Accessibility to areas is facilitated due to specialized actions in designated areas. The characteristics of the space and the behavior of the user can be changed, thus, the spatial quality is improved.

In cities that contain all these elements, spaces penetrate each other. Depending on the weakening of the boundary between space and space, the voids are seen to be intermixed by increasing their porosity. The porosity is the abandonment of rigid, independent ties and successive field experiences of objects. It refers to voids that have been freed from extensive deformations from areas used for various purposes. When appropriate contrasts are brought together, it has been seen to be used strikingly and productively. It uses its spatial features in harmony with the surrounding landscape, to expand the space and to feel the overlap of visibility inside. It shows how the architect influences one's various roles, human life. It is noted that various experiences can be attained by experiencing the architecture of the place and its surroundings. The field can be seen as empty, but it is regarded as a space with a neutral meaning from simple space. This increases the likelihood of being a new area for various purposes.

The scope of this research is to understand the coexistence of public and private spaces using the concept of porosity as well as the direction of improvement of the quality of life of people in the public. Based on permeable space features, cities and their immediate surroundings are focused on seeking an improvement to revitalize them. It is envisaged that the place that apply the concept of porosity in the survey will serve as sustainable areas in communication with the city dwellers.

**Key words:** Zoning, accessibility, public space, material, porosity

# In Spatial Transformation Process Examination of Urban Integration Levels of Urban Archeological Areas via Practices in Europe and Turkey

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## ABSTRACT

Urban archaeological sites have taken place in the urban conservation literature along with archaeological finds that emerged after the Second World War. During the rebuilding periods of post-war cities, archaeological sites were also considered as a layer of cities, contributing to the inclusion of important information in European history by intensifying scientific research. The archaeological sites providing an important "change" in the history of the cities were also followed with interested local residents. Long-term scientific research and excavations had negative consequences as well as positive results. The areas where the traces of the past periods of the cities are located cannot keep up with the speed of change and transformation of the cities and limit the interaction with the surroundings of the area, and there are spatial problems like unsafe urban spaces and, garbage areas. Theories and practices for integrating these areas with urban life have begun to be developed. By examining the urban conservation conventions, charters, reports and recommendations signed after the meetings held in the international scale between 1906 and 2018, urban conservation history is divided into three periods: between 1906 and 1974; the period of conservation and research, between 1975 and 1991; the period of evaluation of archaeological data in the planning works, and after 1992 to present day; the period of integration of archaeological sites into the city.

The purpose of this paper is in the spatial transformation process, examination of urban integration levels of urban archaeological areas through practices in Europe and Turkey. The archaeological areas that should be handled at different scales were evaluated in urban area scale, site scale, and building scale and two samples were selected from each scale related to the spatial transformation of archaeological areas. In urban scale; The Tarraco Antique City (Tarragona-Spain), which is the first colony on the Iberian peninsula of the Roman Empire and became a capital city of the empire for a period and Saathane Square (Samsun-Turkey), which is the first Turkish castle town by the sea samples were selected. In site scale; Metropol Parasol (Sevilla-Spain), where a combination of different cultural layers and Küçükyalı Arkeopark (İstanbul-Türkiye), which is the participation of local people in the events throughout the duration of the scientific research samples were selected. In building scale, Verona Amphitheatre (Verona-Italy) which is the best-preserved amphitheatre from the Roman period and continues to be used in socio-cultural activities and the Antakya Museum Hotel (Hatay-Turkey) which is the intersection/ stratification area of different civilizations and the first museum-hotel samples were selected.

Selected examples were evaluated by the implications made from the documents signed in international scale; the duration and results of the scientific researches carried out in the area, the spatial transformations unique or not unique to the nature of archaeological site, the legal administrative tools used in spatial transformations, the socio-cultural dimension of transformation, participation, application techniques and methods criteria. The examples that have been examined have stratified after the spatial transformations they have attained so that they become "authentic" urban spaces. As a result of the researches, Tarraco Antique City has come to the fore because it is a special example that enables the integration of archaeological stratum into today's urban spaces with every different space-specific planning strategy. The specific planning work in this area and the sensitivity of the local residents to the characteristics of the area are mentioned as the supportive elements. Metropol Parasol on the building scale, although the construction process occupies the city agenda for a long time, the result was one of the most important places in the Sevilla city, with its product being adopted by local residents. Despite the different legal arrangements and different implementation processes in all the examples, it can be said that the main factor in integrating archaeological areas into the city is directly related to the interest of the local residents to the area. The paper aims to add to the literature that new and authentic urban spaces can be constructed, new socio-cultural spaces can be created with the help of urban archaeological areas' features, and all layers of the city can live together by examining these examples.

**Key words:** Urban stratification, urban archaeological areas, integrated conservation, integration of urban archaeological areas into the city.

# Local Governance Planning Policies in the Protection of Wildlife: An Example of Adana Seyhan Dam Lake for the Improvement of Wild Life Development

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**ABSTRACT**

Adana Seyhan Dam Lake Wildlife Improvement Area in the city metropolitan of Adana has been declared as protected area according to the Law No 4915 and in accordance with Article 3 of the Decree of the Council of Ministers numbered 2006/10966 that are published in the Official Gazette dated 05.10.2006 and numbered 26310. As Seyhan Dam is located in coastal areas, like in other areas of the city, rapid urbanization has begun, resulting in uneven urbanization. Along with that, local governments, which are looking for solutions to increasing housing demand, have to open these areas to construction and this situation has started to affect urban identity and protected areas in time.

In the Seyhan Dam Lake Hunting and Wildlife development the application area that remains in area of Adana Metropolitan Municipality, Seyhan and Çukurova Municipalities, it is detected illegal construction and many urbanization problems in that area due to discrepancies between Environmental Planning Plan 1/100 000, 1/25 000 Master Planning Plans and Implementation Plans 1/1000, which conflict with the principles prescribed by law.

In the article 3 of the Law on Reconstruction No 3194 it is said that "Any field shall not be used for purposes contrary to the plan principles of any measure, the conditions of the zone it is in, and the regulations provisions", but although the Wildlife Promotion Area is a 1/100,000 scale plan, it is detected that it has not been put in the sub-scaled plans. Field planning studies are still ongoing. Suggested development plans and management plan studies are continuing. Even though it has been reported that the zoning status has been determined according to the Master Plan of Metropolitan Municipality by all district municipalities, Metropolitan and county municipalities are responsible for the settlement on the Wildlife improvement area.

In this study; it has been dealt with the contradiction between the principles prescribed by law and the environmental plan about the area covering the Seyhan Dam Lake Hunting and Wildlife Improvement Area, master and zoning plans and implementation development plans, zoning applications made in protected area and the elements that are effective in the implementation process. The effects of housing and building applications on the Wildlife Improvement area have been examined. In this context, by putting forward planning policies in protected areas of local governments in Adana City Metropole, the results will be evaluated and planning studies will be presented.

Who has the responsibilities resulting from the contradiction in the plan hierarchy? How is the irregularity formed? Who should check these? While the current master reconstruction airport is

in effect, which operations were required on the plans which already exist on Seyhan area of hunting and wildlife improvement that was determined by the decision of the council of ministers in 2006. If there were special plan changes etc. revisions within this hierarchy, how should they participate in the process? While there are many deficiencies such as the lack of a management plan for hunting and wildlife improvement, by looking for an answer for how zoning activities and planning studies could be sustained in these areas. By this way, a discussion environment will be created in this subject area.

**Key words:** Seyhan Dam Lake Hunting and Wildlife Improvement Area, management plan, environmental plan, master plan, implementation plan, local administrations

# Bursa City Museum of Virtual Tour of Space in terms of Comparison of Perception

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**ABSTRACT**
With the development of technology, we can find a chance to experience the place or have an idea about the place through the virtual tour created by bringing the digital data together without the space. The virtual tour does not offer the opportunity to experience the place as much as it is on a private platform. However, with the added varied feauteres level of perception can be increased. These are plan,voice, information papers and so on also it must be able to have different and original things according to the nature and importance of the work. It is very important nowadays to access information in digital environment instantly. The city museums are an important information center in terms of the memory of the city its history. This feature of the city museums differs it from the others. Accessibility of the information in the museum gains importance. If the city museum is located inthe historical building, it is especially important to transfer it to the visitor with all the nakedness that it ispossible to perceive it originally, because it carries a document feature by itself in the building at the same time.
In this study, we selected virtual tours of the Bursa City Museum, which is the old court house of cultural heritage, as a sample. The building was built in 1926 at a point in the center of the city where it was located in the valley of Sculpture Square as a courthouse and it has been used with the same function until 1999. This building, which has two floors and a basement, was transferred to the municipality in 2001 and started to be used as a city museum in 2004 after the restoration. The purpose of selecting this sample is to have two different virtual tours of the same city museum. And to see how we can perceive or perceive the work that undergoes the change of function through the virtual tour without going to the place after this change and transformation. While one of these virtual tours on two different sites shows the place with his own place order , the other virtual tour leaves the virtual tours to the person who is using the virtual tour the place or the place is showing the place with his own place order. From one of the tours the plan accompanies us while touring the tour and that make us understand the concept as a whole. This plan also provides important data for examining theoriginal state of the structure and the post-alteration state, since it is given in reference to theoriginal plan. In the study, literature search related to virtual tour, city museums, museums and re-functioning were conducted. By comparing the two virtual tours with each other, we can see what features are better informed about what features are unique and what is more informative and to show what can be added or removed in order to be able to perceive the original more clearly.

**Keywords:** Virtual Tour, Bursa City Museum City Museum, Re-Functioning, Cultural Heritage

# ENVIRONMENT - WATER RESOURCES - CONSERVATION

# Investigation of the Consumptıon Usage Base of River Urban Corridor's Corridors

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## ABSTRACT

Stream corridors are an important component of urban landscapes and meet the recreational needs of urban users by increasing the environmental quality, which shapes urban identity. As it is abroad, many river corridors in our country also offer positive contributions to the green systems of urban landscape. These areas, which affect human health positively, also contribute to the developing economy of the city. The fact that river corridors in latent cities are under mismanagement models and urbanization pressures cause river corridors to become less available and turn into idle spaces. This situation is not accepted by city users but also harms city aesthetics. The transformation of the river corridors in the city center of Rize into infrastructure channels has become unacceptable in today's conditions. These corridors cause environmental pollution over time and create a flood risk, which has negative consequences for the city. What is important is to ensure that river corridors are rehabilitated and transformed into tourist and recreational spaces and placed in the urban green space system.

In this study, spilled into the sea passes through the Rize town center, under the construction pressure along the river corridor and Turkey's rain in the title of having the streams of Rize city (7) assessment of the current situation, the bed and spent until today the immediate surroundings physical transformation is exposed manifesting problems were discussed (Özeren and Hepcan, 2013). While these problems are being explored, the ecological, economic and social contributions of the river will be provided as a reference to the "river corridors" approach of the city as ecological and recreational corridors. Planning and design proposals for the improvement of these river corridors located in the city center of Rize have been developed and different forms of use along the corridor have been examined and suggestions for making them more functional have been presented.

**Keywords:** River corridor, Rize, urban landscape, conservation-use, rehabilitation

# Determination of Agricultural Landscape Areas in Düzce

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**ABSTRACT**

Agricultural landscapes are an important part of urban open-green spaces. These landscapes contribute to ecological (microclimate, biodiversity, surface water control, inhibition of heat islands, carbon uptake, etc.), economical (real estate and land market, agricultural product market, etc.) and social interaction (recreation, etc.). It is also an important part of ecological cities that support sustainable life. The aim of this study is to reveal agricultural landscapes in Düzce. It also develops a classification system for these areas (housing gardens, public gardens, nurseries, greenhouses, fields, nuts gardens, etc.). The study was carried out in the adjacent area of Düzce. In the study, firstly, urban plans, satellite images, forest management maps, soil maps and Düzce agricultural information system data were evaluated holistically and agricultural landscapes were determined. Geographic information systems and remote sensing technologies have been utilized in the identification and classification of agricultural landscapes. As a result, a process has been put forward for the identification and classification of agricultural landscapes in the city. In addition, the qualitative and quantitative characteristics of these areas have been emphasized in the process of determining the contributions of the agricultural landscapes to the city (ecology, economy, quality of life, etc.).

**Key Words:** Landscapes, Agriculture, Agricultural landscape, Urban, Düzce.

# Determination of the Areal Change in Water Resources Through Remote Sensing and the Effect of Rain, Evaporation and Population on The Change

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## ABSTRACT

Water is the most important resource for the continuity of life. In addition to daily consumption, water is also consumed continuously in every area from agriculture to industry. Therefore, water is a resource, lack of which is felt the most. Urban water need is met by closed water constituents such as nearby dams and lakes. While water constituents basically get fed by rains, reduction occurs through evaporation and water consumption (such as daily human consumption, agricultural irrigation, industrial use etc.). The changes in meteorological conditions and the seasonal changes are the parameters affecting water mass (water supply) and water covered areas, the most. On the other hand, population grows in parallel with the urban growth and development. The increase in population causes higher consumption of water resources. Therefore; while a positive relationship is expected between population and water consumption, a negative relationship is expected between population and water mass. According to this information, the water supply in a water mass can simply be associated with the rainfall input and evaporation and water consumption outputs. Correct management of water resources can only be possible by a proper monitoring. Monitoring of water supplies by geodetic measurements and observations may not be performed as desired, particularly in large areas. Thanks to the developing satellite technologies, satellite images make it possible to watch the earth in a more precise and frequent manner. Satellite images obtained from the satellite platform allow for concurrent view of large areas. Satellite images are remote sensing data that are frequently and successfully used in the monitoring water resources.

It is possible to monitor the water supplies and determine the changes happening, using the water index produced by satellite images. Water indexes, such as the normalized difference water index (NDWI) and modified normalized difference water index (MNDWI), facilitate water management and determination of the changes in water supplies. Relation of the outputs produced with satellite data in integration with the data obtained from other resources, empowers the remote sensing studies, make them more reliable and meaningful. In other words, evaluation of the combination of data from different sources, facilitates successful and sustainable monitoring and management of water resources. In this research, the relationship between the areal change observed in Atikhisar Dam Lake, located in Central Town of Çanakkale, which is used for multi-purposes (for daily water consumption, as drinking water, agricultural irrigator and flood wall etc.) as the single water mass feeding the city center and the rainfall, evaporation and water consumption causing such change. As the change of the water supply is directly proportional with the areal change of water, the areal value was used instead of the water supply. The areal change in Atikhisar Dam Lake was determined by using the MNDWI water index formed with Landsat 8 OLI (Operational Land Imager) multi-spectral satellite images. The years between 2013 (when Landsat 8 OLI was launched) and 2017, were selected for the range of the study. All the images were collected from the first half of June, as the end of the rainy season and beginning of the dry season. Meteorological data were evaluated to cover the 9-month-long rainy season (autumn + winter + spring) until the beginning of the dry season. Rainfall data belonging to the meteorological observation center located in Çanakkale City Center, which is the closest to Atikhisar Dam Lake, were obtained from the General Directorate of Meteorology (GDM). Evaporation data were calculated with Meyer's formula for the open water surface evaporation, by using the wind speed, vapor pressure and relative humidity values belonging to the same station, which were obtained from the GDM. The population data were collected from the database of Turkish Statistical Institute (TSI). Classification of the satellite images between the years 2013-2017, revealed out a 5.2% expansion of the urban areas. In parallel, the population was observed to have increased 16.8% according to the of the TSI data. While the amount of rainfall tended to decrease over the years, the amount of evaporation tended to increase, in general. The area of Atikhisar Dam Lake, as determined with MNDWI, was observed to have downsized 29% from 2013 to 2017, with the negative effects of the meteorological variables and the level of water consumption increasing in parallel with the increase in population. As expected, a significant positive correlation was observed between the change in water area and the change in rainfall, which was measured as 0.76 Pearson correlation (r) value. A very strong negative correlation of -0.98 r was found between the change in water area and the change in evaporation, indicating that the adverse effect of evaporation on the change in water mass, was very strong. Finally, a very strong negative correlation of -0.94 r was observed between areal change and the population change. This clearly shows that, the need for water increases with urbanization and the increase of population and the increasing level of water consumption has important effect and pressure on water resources. In conclusion, this research revealed out the extent water resources were affected by the meteorological and human factors (daily human consumption, agricultural irrigation, industrial use etc.). The advantages offered by multi-time satellite remote sensing in the monitoring and management of water resources, were defined.

**Keywords:** Evaporation, Population, Areal Change of Water Resources, Remote Sensing, Rainfall

# Fountains in Historical Environments: The Case of Kastamonu City

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## ABSTRACT

There is a strong connection between water and humankind, which is the indispensable source of life. During the past history, it is observed that mankind moved water with the help of aqueducts and canals in the settlements where it was not close to where it was located near water. Special arrangements have been made to ensure that water, which is a valuable resource, does not flow over time, and so-called fountains are often built in the center of the settlement or on a wall adjacent to the houses.

It is seen that fountains adorned with ornaments in various civilizations contributed to the city in terms of functionality and aesthetics. In many cities, squares are known to be around the fountains and symbolically meaningful as well as functional of the fountains. The fountains, which have an important place in the Turkish society, have been one of the constructions they have done to the settlements where they have lived for charity by rich people in terms of faith. The fountains located in different places in the city have become one of the places that are called as meeting area and offer socialization to the people living in the neighborhood besides the functionality.

The purpose of this study is; to attract attention to fountains, one of the important cultural heritages that should be preserved as historical and cultural value, Kastamonu City is the situation of the existing registered fountains in the urban site; perceptibility, harmony with environment, maintenance, functionality and historical criteria. In this context, the study was carried out by using Visitor Employed Photography (VEP) method with 35 students from Kastamonu University Landscape Architecture Department. With this method, the perceptions and preferences of the users were studied. It has been determined that there are 38 fountains registered in Kastamonu City and these fountains have been examined in terms of perceptibility, harmony with environment, maintenance, functionality and historical criteria. In the scope of the study, students were asked to take photographs of the fountains located in the urban protected area and to make a ranking. Likert scale was used in the evaluation of the obtained data. The most popular fountains are rated 5 with the least rated fountains. Then averages of the total points were taken.

As a result of this study, it was determined that 38 fountains belonging to different periods, including the Ottoman Period, which is within the urban city limits of Kastamonu city, were found. It has been determined that the fountains are mostly neglected, they are not available, the fountains are located at different elevations from the road level due to improper infrastructure works, and the wrong choice of the materials used in the fountains in the restoration works cause the disappearance of the historical features of the fountains. As a result of the evaluation made by VEP method; 4.1 cents in Topçuoğlu Mosque Fountain and 4 points in fountain in front of Gazipaşa Elementary School was the most preferred fountain remaining as a remnant wall remnant located

in the cracked door street was determined as the least preferred fountain with 1.7 points. These results indicate that the most popular fountains are preferred because of their functional use, central location and well-being and unfavorable fountains are neglected, not suitable for their surroundings and difficult to perceive.
Çeşmeler is one of the historical artifacts that provide information about the past from periodical and historical aspects and Kastamonu which hosts many civilizations is a rich city in terms of fountains as well as a rich culture in terms of various architectural constructions. From this point of view, the fountains in the city of Kastamonu, The Cultural Capıtal Of The Turkıc World in 2018, need to be restored in a more harmonious manner in order to restore it to the foreground in terms of city identity and to be more perceptible as a city symbol.

**Keywords:** Fountain, Urban Identity, Cultural Heritage, Kastamonu

# Calculation of Rain Water Holding and Usage Potential in Public Buildings: Bartin University Agdaci Campus Case Study

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## ABSTRACT

97.5% of the world's water, which is 1.4 billion $km^3$, is in oceans and in seas as salt water and 2.5% of it is in rivers and lakes as fresh water. Due to increasing drought and desertification, this rate is getting worse. Water, which is an indispensable resource for all living beings on our planet, influences more than 40% of the world's population worldwide according to United Nations Development reports and at least one out of every four people is estimated to be affected by frequent water shortages by 2050. Annual precipitation within the geographical borders of Turkey is equivalent to 501 billion $m^3$ of water in average. While some of this water is returned to the atmosphere through evaporation, some of it is turned into the seas and ponds within closed basins through the rivers. Countries are classified in three different ways according to their water assets and the amount of water per capita per year; ***water poor*****:** less than 1,000$m^3$, ***water scarce*****;** less than 2,000$m^3$ and ***water rich*****;** more than 8,000-10,000 $m^3$. In Turkey, which is in the "water scarce" group, the annual amount of water available per capita in is estimated to be 1.519$m^3$. Considering the rate of population growth, our country's population is predicted to reach up to 100 million in 2030 and provided that the continuation of water areas available in our country is ensured, it is foreseen that the amount of water per capita will decrease to 1,120 $m^3$ by approaching the limit of "water poor" countries. Based on this result, it is necessary to change our water usage habits and bring rain water back to our lives through new methods. The United Nations mentions the need to invest in infrastructure, to build sanitary facilities and to encourage hygiene at all levels in order to ensure access to safe and accessible drinking water by 2030. The water transmitted from the public water mains to reach our homes and workplaces by traveling for kilometers is both costly and may cause thousands of people to have water shortage in case of any physical breakdown. In self-contained smart buildings, ***rainwater holding systems*** are at the top of the highest priority structures. Through this study, it is aimed to plan the self-contained public buildings in terms of water by proportioning the rain water holding capacities of public buildings in the city to the annual water use of the building and to lead rain water holding systems to integrate in private houses in the following stage. The roof surface areas of public buildings to be calculated with the help of Quantum Geographic Information Systems (QGIS) and the building surfaces in the gardens suitable for water holding are calculated by proportioning them to the monthly rainfall of Bartin.

Bartin University Agdaci Campus was chosen as the testing ground and the capacity of the water holding tank to be constructed in the building for the monthly water amount used shall be calculated. While stored water can be used as hand washing water, agricultural irrigation and toilet water, it can also be brought into use at the same quality as the water supplied by the municipalities provided that it is undergone various physical and chemical processes. The rainwater holding

systems applied to the buildings are simple and can also be integrated into the building after construction. Since rainwater holding system reduces the amount of water going to sewer and rainwater discharge channels and delays access to the evacuation system, it shall also contribute in preventing Bartin, which suffered a major flood disaster in 1998, from experiencing such a disaster again.

**Keywords:** Rain Water Holding Capacity, Intelligent Buildings, Sustainable Smart Cities, Bartin, QGIS

# Personal Footprint Score in Faculty of Forestry Academicians, Bartın University Example

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## ABSTRACT

A Water is a vital for people because it is not survive for life. In the last two centuries industrialization has led to a rapid increase in population, production and consumption. Unplanned urbanization, misplaced land use, and the impact of global climate change caused by flood, drought and temperature have led to a decrease in the supply, increased demand of potable water resources. On the other hand, water has become an important environmental problem because of the decrease in the amount of water that can be directly used due to pollution of the water.

Turkey is not rich or poor country for the existence of water resources. Therefore, it is necessary to prevent the pollution of water resources, to decrease the usage of water per person and unit production, and at the same time to increase the amount of water that can be used for useful purposes. In other words, water should be used efficiently. Effective water management should be provided for water efficiency. Water efficiency is one of the most important subcomponents of water management and water saving is one of the most important subcomponents of water efficiency. For this reason, both unit people and society, as well as water consumption per production and consumption should be reduced and water saving must be ensured. For this, first of all, it is necessary to determine the water consumption of each of these units, that is to determine the water footprints.

The concept of water footprint includes both direct water use and indirect water use in the production process. Personal water footprint; the total amount of clean water resources used for the production of goods and services consumed by the person. In other words, the personal water footprint does not only contain the water that someone consumes in drinking water, bathing, or hand washing. It also includes all the products used in everyday life (clothes, books, music, houses, cars, furniture, etc.), energy used during the day, processing of the purchased goods, packaging and transportation. In this way, it causes a lot of water consumption and indirectly affect the water resources around the world.

There is a serious problem and pollution in underground and above ground water resources in Bartın province. In addition, the proportions of formations within the network water reduce the quality of the water and restricts the use of water. For this reason, the intersection water is used as drinking water throughout the province. For this reason, the concept of water footprint is important for the effectiveness and sustainability of water management for Bartın.

In this study, we will focus on reducing personal water consumption and proper use of water for water saving with personal water footprint. The results from the personal water footprint account survey are intended to show why the reduction is necessary.

Towards this end, this study examines the personal water footprints of academics at the Bartın University Forestry Faculty using a web-based water footprint account survey to explore the effectiveness and sustainability of water management. In the selection of the sampling area, Bartın province has many problems related to water for many years and it will be alive and it is also effective to take department in the Faculty of Forestry which is closely related to the ecological environment and has high environmental awareness. The purpose of the water footprint concept is to measure the environmental loads that people bring to the water supply.

The sampling area consists of 63 academicians from the Bartın University Faculty of Forestry (Forest Engineering Department, Forest Industrial Engineering Department and Landscape Architecture Department). A web based personal water footprint online calculation method will be used in the study. The 3 departments in the Faculty of Forestry will be evaluated in their own right first. Then, a generalization will be made about the Faculty of Forestry by making a comparison between the three deparments.

Personal water footprint includes direct and indirect water use associated with personal habits. The water footprint account survey results will show how people differ according to their dietary habits of personal water footprints, household water use within and outside the home, industrial goods consumption, departments, age ranges and titles. The reasons will be exemplified why and how the water footprints of household, industrial and food components differ according to the person.

These results, may explain why personal water use patterns are greater for the personal water footprints of academics in the three departments of the Bartin University Forestry Faculty and will be able to evaluate the personal water footprint results of academicians whose work areas are related to the ecological environment and are highly environmentally sensitive.

In addition, this study aims to raise awareness of the concept of personal water footprint. It is also aimed to contribute to the work to be done in this subject.

**Keywords:** Water footprint, Bartın, personal water footprint, Faculty of Forestry

# Solution Approach to Water Problem in Urban Area: Rain Garden

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## ABSTRACT

At the beginning of problems in urban areas are rapid population growth, unplanned development, environmental pollution and rapid destruction of natural resources, inadequate source comes depending on these problems. Urban climate change is also accompanied by these problems. With the climate change problem, the natural water cycle is distorted and causes the flooding. All these problems result in irreversible consumption of natural resources. Rainwater, one of the most important natural resources, is transformed into the source of disasters without being used as sustainable. The best solution for this problem is the rain gardens, ecological and economic systems those are natural, providing efficient and recyclable use of clean water resources.

Problems of such as increase of rainwater passing into superficial flow, shortening of rainwater transit time, reduction in the amount of water reaching the groundwater level, deterioration of surface water quality, are make obligatory to create holistic solutions for rainwater drainage (Butler and Davies, 2004, Dunnett and Clayden, 2007). Therefore, it is very important to controlling, managing and sustainable using of rainwater in urban areas. To provide this, the primary target is making the water easier to infiltrate into soil with reducing hard floors in urban areas and increasing of soil surfaces and green areas. Rain gardens systems are one of the best practices that can make a solution in this direction. Because today rainwater is mixed with wastewater without being separated from the infrastructure systems by traditional methods. Traditional rainwater waste system; duct, pipe, loom etc. structural rainwater collection systems. This system quickly removes rainwater from the environment, causing pollution of receiving waters from discharged rainwater and underground water resources cannot be fed enough (Çakıroğlu, 2011). This situation is limiting and even blocking the sustainable use of rainwater. Especially population increase and increase of construction in the unplannedly developing cities make these problems much bigger. Therefore, this work has been deemed necessary from these problems.

Sustainable systems are used for stormwater management to prevent the adverse effects of rainfalls, protect underground and surface water resources, reduce flood and flood risks, create alternative water resources (Demir, 2012).

In this context, sustainable urban rainwater management models emerged. The target in these models; increasing the amount of storm water passing through the surface stream by keeping it waiting with various natural solutions, feeding the groundwater thus contributing positively to the natural water cycle. Some sustainable stormwater management systems designed with this in mind; biological holding area, in other words the rain garden, permeable outdoor flooring, dry well, rain drenched, infiltration hole, roof garden, rain barrel, and cisterns (Karakoçak, 2011).

In working method, firstly a detailed literature study on rainwater recycling systems was carried out by examining the problems related to water in the urban area. In the second stage of the

method, rain garden design principles are put forward. Basic principles have been put forward in order to implement both functional and aesthetic designs by studying varieties of rain gardens and technical details. It has been determined, in the selection of plant species and determination of what should be considered when making the composition of the rain garden by considering not only the functional but also the aesthetic effects. In the last stage, rain gardens application revealed gradually. These are: 1. Field observation and creation of maps; 2. Precise location of the rain gardens; 3. Examination of land soil; 4. Determining the size of the rain garden to be built; 5. Application of the rain garden; 6. Planting.
As a result of the study, how to make the rain garden model that can be applied to different cities in our country is determined and a sample model is created. With this model, examples of plants suitable for growing under the conditions of our country are given. It is envisaged to make rain-gardens designs with these species considering the ecological needs of the region.

**Keywords:** Rain garden, rainwater management, sustainability, water cycle

# Permeable Asphalt in Rain Water Control in Landscape Architecture

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## ABSTRACT

Concrete and asphalt-growing cities transform into heat islands, directly reflecting the sun's rays and creating air pollution-triggered environments. In this case it gives economic, ecological and psychological harm to the neighborhood, people and even the country; causing the temperature difference between the cities and the surrounding green areas and the countryside to deteriorate ecological balance. On the other hand, due to increasing urbanization, industrialization and consumption habits and pollution of the environment and the atmosphere, the tendency of the air to warm up on a global scale increases day by day and threatens the emerging environmental problems, disasters, water, land and air life. This also shows the impact of cities on climate change. Emissions from vehicle exhausts, heat from fuel waste, and global and local scale heat increases. The end of global climate change; unexpected extreme warm weather, drought, thirst, melting of glaciers, violent storms, etc. are one of the important problem areas of today. In addition to climate changes on the global level, changes in the microclimate structure of cities as a consequence of urbanization come to fruition and regional warming is occurring in cities(Kuşçu and Şengezer, 2012). Along with the changing urbanization and consumption concepts, the urban climate which is undergoing deterioration is accompanied by the effects of global climate change and also exhibits climatic behavior that goes beyond human comfort conditions and results in death. Increased vegetation texture, impermeable surfaces and dark colored surfaces, which are deteriorated in the city centers, increase the heat absorption and this warming effect is further increased. The most prominent indicator of the presence of heat islands in a city is the slow rise in daytime temperatures, which occurs at nighttime temperatures, which also causes a decrease in daytime

and nighttime temperature differences over time (Kuşçu, 2012). With heat island effect, the city will face serious problems of survival. Therefore, surface permeability has an important precaution to increase design surface quality (Cheng vd., 2016). Small-scale city breezes can be created by making large green spaces inside the city to pass these problems. In newly planned residential areas the street widths and the coefficients around it should be calculated taking into account the sky visibility. Because city canyons with a small prevalent sky visibility rate affect the distribution of temperature and pollution by reducing wind speed. The most important solution in this regard is to use concrete and asphalt that pass through rainwater on road surfaces. It is necessary to harmonize cities with nature. The cities should be planned, trimmed and stretched by protecting the air, water and soil, ensuring rain water meets the earth, keeping the prevailing wind direction and speed, preventing a structure from forming a shadow over another structure, creating fresh air movement through green corridors and creating easily accessible spaces. (Öztürk, 2017). However, it is possible to prevent urban deformation caused by increasing floods and excessive rains, to bring rain water directly to the ground, to reduce the amount of water discharged through the infrastructure of cities, to balance the atmospheric relations between soil and air and to enable the renewal of underground waters it is necessary to extend the use of water-permeable concrete and asphalt in cities to manage rainwater properly, to prevent rainwater contamination and to minimize the pollution load variability of the wastewater treatment plant(Öztürk, 2017). In this study, water-permeable asphalt concrete, which is known as permeable asphalt, will be discussed and its properties, advantages in use, advantages provided by ecology, advantages in design and planning and difference from other coating materials will be defined in general terms asphalt and concrete material.

**Keywords:** Water storm, flood, asphalt, landscape

# ENVIRONMENT - SUSTAINABILITY - TRANSFORMATION

# Material Usage on Façade Design of an Era's Buildings Collapsed Due to the Transformation at Bağdat Street

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## ABSTRACT

Representing one of the vital arterial roads in Istanbul, Bagdat Street's configuration is based mainly on transportation functionality. However, the street has been configured in line with the consumption purposes regulated by post-1980 policies. Thereby, the street has been converted into the consumption areas where physical and social structure has, in turn, evolved and changed to respond aforementioned change.

Bagdat Street and its neighboring areas have undergone functional and structural changes as an outcome of planned or unplanned effects. Aforementioned change is best characterized by the buildings bordering the street. Buildings on the street represent residential, residential + commercial and commercial functionalities together. The buildings facing the street have been exposed to different structures due to the historic dynamic changes. Wooden mansions of 1910s were superseded by the masonry modern villas in 1930s and 1950s. Thereafter, four-storey apartment blocks with gardens were built instead of villas across the street after 1950s. Related structures comprising of 4-5 stories have been demolished and rebuilt due to the rapid restructuring movements adopted after 2011.

The buildings define the architecture of the era they were built in. Today, buildings of the aforementioned era co-exist in heterogeneous manner on the street. The most important difference between the buildings is the materials and their application on the facades. As the natural stone covered facades of low-storey buildings applied via the adhesion technique reveal their specific processing and design features, they're authentic. Facades, which were treated as a unit communication with the environment until 1980s, have become a product of the industrial sector.

Existence of difference between the aforementioned eras in terms of the shape and function and its reflection on the building facades is an expected outcome. However, the change process should not be realized by ignoring the previous period's architecture, but should be held in controlled manner and planned by considering the dynamic and static impacts of the envisaged structuring on long-term structuring.

Despite the fact that the function of the buildings on the street changed in the form of residence, residence + commercial and commercial buildings, the architectural identity of the street is assigned by the residential buildings. These buildings revealing humble characteristics make people feel the residential identity at first glance. Furthermore, their sincere characteristics welcoming people and facades designed with light-shadow balancing reveal the importance assigned to the

façade design. However, straighter approach can be observed on new buildings reconstructed along with the transformation movements. They evoke the impression that the designer was not involved in the design process, any concern on creation of composition and concept was not felt and the material was used as an industrial product on the façade undertaking the technical task.

After promulgation of the Law on Transformation of Areas under Disaster Risk dated 16.05.2012 and numbered 6303 issued to eliminate legal-administrative problems on urban transformation process, renewal movements specific to each risky building have been initiated at Bagdat street as it is located within Kadıköy district 2nd earthquake region. Within this framework, residences giving the main identity of the street were /are being collapsed. Traces of an era are removed from the urban memory. The street was renewed and new identity was created by collapsing and renovating the buildings.

This study analyzes well-planned and mastery examples of the relevant era by drawing attention to the material usage on street-facing facades of residential buildings that were built in 1970 and thereafter (most of which are collapsed today). Despite the fact that these buildings of significant importance in terms of the urban memory have to be demolished due to the disaster risk, it is aimed that they should act as a source of inspiration in design of new buildings.
Therefore, all buildings bordering the street on Bostancı-Göztepe axis are analyzed to evaluate the data on change of building facades at Bağdat Street. 2-storey independent buildings are not considered instead of which 4-5 storey buildings are included within the scope of the evaluation on change of building facades bordering the street. Buildings were selected by considering the façades that reflect the features of their construction period, have survived, are still used and bear characteristic properties. Only street-facing facades are taken into consideration as the street façade called as the front façade have more qualified features.

**Key words:** Bagdat Street, transformation, material usage, facade

# Solutions to Mitigate Heat Island Effect by Using Recycled Glass in Concrete

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**ABSTRACT**

Heat islands can be considered as surface and atmospheric heat islands. Surface heat islands can affect human thermal comfort and air quality. 70-80°C surface temperatures on pavements have been measured on hot summer days. As one major thermal characteristic, solar reflectivity or albedo (1-solar absorptivity) is an indicator of the reflecting power of a surface. It is defined as the ratio of the reflected solar radiation to the incident solar radiation at the surface. It is dimensionless fraction and is measured on a scale from 0 to 1. Albedo of 0 means no reflecting power and albedo of 1 means perfect reflection. Increasing the solar reflectivity of a surface by using surfacing materials of light colour or applying light colour coating on dark surfacing materials can lower the surface temperature. Solar reflective materials can be identified as one of the most promising solutions to counteract urban heat island. Recycled glass used in concrete mixture can be an alternative material to mitigate heat island effect. The size of the glass particle needs to be identified well enough to prevent alkali-silica reactions (ASR) in concrete. Recycled glass content affects strength of the concrete. Because of that, proportion of the recycled glass which will be used in concrete mixture mustn't be beyond the determined limit value. When concrete is heated under conditions of fire, significant temperature gradients are observed between the concrete surface and the deeper layers. The surface temperature becomes significantly higher than the inner parts. High temperature damages concrete structure and alterations of its physical, thermal and mechanical properties occur. Obtaining a concrete which has a lower temperature when it is heated is essential to mitigate heat island and to protect the concrete from fire. Ideal concrete mixture was tried to be determined in this study and for this purpose, 9 different types of concrete mixtures were prepared by using recycled glass to mitigate heat island effect. 9 different concrete slabs (0.5m x 0.5m x 0.15 m) were prepared by using these mixtures. Recycled glass content and size of the glass were different at those mixtures. The surface temperatures of these different concrete slabs were measured by using thermal camera in summer at different hours in a day. The effect of recycled glass in concrete on mitigating heat island was determined by this experimental research. Albedo, ASR and strength of the concrete were also measured for these different concrete mixtures. Ideal recycled glass size (smaller than 1 mm) was determined to prevent ASR and optimum recycled glass content was detected to meet the concrete strength value. It was observed that, using recycled glass in concrete mixture decreases concrete surface temperature almost 10°C in summer at 14:00. Surface temperature difference decreases at other hours in a day. The surface temparatures of these slabs were also measured after heating them by a flame for ten seconds. It was observed that, the surface temperature decreased 16°C by using recycled glass in concrete. This result shows that, recycled glass is also effective to get fire resistance concrete. In this study,

it is determined that, recycled glass, which is needed to be used in sustainability, is a good alternative material to be used in concrete mixture to mitigate heat island effect. This mixture can also be evaluated to be used in risky areas where fire can take place.

**Key words:** Urban Heat Island, recycled glass, concrete

# Evaluation of Structural Systems of TOKİ Houses in terms of Sustainability

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## ABSTRACT

Recently, new sustainability measures have been added to the occupancy permit documents in Turkey. One is for showing "the class of energy performance and green gas emission". The other shows "sustainable green building class". As sustainability and low $CO_2$ emission start being important concerns in Turkey, social housing (buildings for low and middle-income people) projects with its high proportion in total need further investigation indeed. Since The Housing Development Administration (TOKİ) governs the sector regarding the construction technology and the prevailing market standards, sustainability of TOKI housing is an important issue in urban scale, especially for metropolitan cities of Turkey.

TOKİ aims to meet 5-10% of the housing need in Turkey. Between 2002 and 2016, dwelling unit number produced by TOKİ is 583515 which constitutes 9.2% of total number of dwellings take occupancy permit. Within this period, 85.20% of TOKİ houses is produced as social type housing for low and middle-income people which reveals the importance of sustainability in TOKİ housing. Moreover, this TOKİ housing is usually applied as typical projects which results in same rights and wrongs practiced for many times. In other words, same sustainability mistakes (if any) occur again and again in Turkey, a country being part of Kyoto Protocol.

From past to present, the construction sector in Turkey prefers reinforced concrete (RC) as the primary structural material. According to occupancy permit data of Turkish Statistical Institute (TUIK) for 2002-2016, 92.6% of residential buildings is made of RC, where masonry, steel and timber constitutes 5.8%, 0.23% and 0.22% of total, respectively. Assuming that the given statistics on structural system material are also valid for TOKİ social housing, this study investigates the potentials of other materials, particularly steel, in terms of environmental parameters. Among alternative structural systems, shear wall system (also called as tunnel form system), has been primarily scrutinized since this system is usually preferred for social type TOKİ housing. Despite its relatively short erection period, RC shear wall system may have large emissions of $CO_2$. Thus, this study compares sustainability of RC and steel shear walled systems to find the optimum model that can be used for social type housing. So, this study aims to evaluate the sustainability potential of other alternatives for houses of low and middle income people.

For evaluating the potentials of alternative options, sustainability is analyzed in terms of the material and structural system. Firstly, frequently applied TOKİ social housing types are investigated and classified in terms of their heights and plan configurations. Among those, a representative

typology is selected and its structural members are re-designed in accordance with current standards and regulations in Turkey both for concrete and steel. This is accomplished by structural design programs widely used in Turkey to reflect the current construction practice.

After structural design properties are assigned to each model, these models are compared in terms of sustainable parameters via Life Cycle Analysis (LCA) which is a method that comprises all stages of building process. There are several common programs to run LCA like GaBi or ATHENA as well as a new one, Tally, which is the plug-in of Revit. In this study, Tally is used for LCA. The outputs of Tally like global warming potential and primary energy demand are compared.

Through comparative analyses, this study presents the sustainability of current TOKİ social housing practice. Due to the impact of build environment on urbanization and environmental problems in Turkey, the construction sector needs a pioneer to force all sector to build sustainable houses. TOKİ, as a public institution, has necessary power to correct the mistakes which are replied at its own typical projects. Consequently, this study evaluates alternative ways of obtaining an overall sustainable development starting from social housing level.

**Key words:** Sustainability, structural system, TOKI housing, life cycle assessment

# The Impact of the Changes in the Facade Materials on the Dynamic and Intelligent Building Envelope in Energy-Efficient Buildings in the Cities of Future

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## ABSTRACT

Meeting the energy demands that grow along with the developing technology play a decisive role in international relations as well as being important for the sustainability of social welfare. Political reasons such as the negative impacts of environmental pollution resulting from fossil fuel consumption on nature and human health and diminishing reserves resulting from the use of non-renewable resources and its repercussions in the countries' economy have triggered an important process as to the search for new ways of solutions.

In the Environmental Conference held in Stockholm in 1972, it was put forward that the negative effects of increasing environmental pollution on the ecological balance threaten countries and that the fossil energy resources should be rapidly dismissed and renewable resources should be turned onto. In line with this vision put forward, conscious designers and practitioners in the construction industry adopted principles, namely, reducing the adverse effects of buildings and making use of renewable energy sources as a primary objective. From this perspective, the buildings that form the cities of the future are approached from a different point of view in terms of design, construction and detailing. The first step of the work to be done for this purpose is the building envelope, which assumes a function as a dynamic filter between indoor and outdoor environments.

The building envelope is an element of construction that surrounds the building to define the structure form and provide the comfort conditions inside the building. Building envelopes, which have fixed features in traditional architectures, have not been effective in ensuring the continuity of interior comfort conditions due to their inability to adapt to changing environmental conditions. With the introduction of new materials and technologies as a result of the industrial revolution, a significant progress has been made in the design and implementation of building envelopes. Today, with growing awareness of the environment and sustainable lifestyles, building envelope designs that are convenient for energy efficiency and performance have begun to be developed.

The function of smart envelopes developed by Negroponte for the first time in 1970 with the concept of "architecture responding to environmental conditions", can change itself dynamically by reducing the energy requirements of buildings. The smart envelope is also defined as a composition of construction elements that confine the exterior space, allow adjusting the building's functions on an individual- or majority-basis, affect the environmental changes by estimates, ensure continuity of comfort with less energy use, and protect from external weather conditions. Smart envelops are construction elements that adjust themselves like the skins of living organisms

and adapt to the external conditions and in this way, play the most important role in providing indispensable needs for users in the building physical conditions, thus reducing energy expenditures and improving user comfort.

Dynamic architecture, another concept effective in architecture that responds to environmental conditions, has the ability to transform physical conditions for its use in designs and can shift its features depending on its own particular or external factors. When both dynamic and smart envelope designs are combined in an architectural context that can respond to environmental conditions, the component that provides the greatest contribution to this formation is the material.

With the different approaches brought about by sustainable and innovative architecture, the form can be shaped not only by function but also be smart and dynamic systems which are compatible with the environmental conditions and keep track of the performance. The architecture formed by these approaches creates a dynamic system that takes inspiration from nature, and adapt to environmental conditions, moving away from a static structure exploiting nature and its environment. In this context, the dynamic and smart façades developed in line with technological advances in the recent period, have gained importance with inspiration taken from the definition of "building envelope design which can adapt to changing environmental factors". What advances this building envelope design, which is also effective in energy-efficient structure designs this far, is the flexibility created by transformation and enhancement in the material. In this study, features such as different façade alternatives, energy saving, natural ventilation, effective solar control, the interior comfort of office buildings produced with dynamic and smart façade designs will be analyzed based on examples to be examined. With the key idea created by the definition of "architecture responding to environmental conditions", the regional climate of office buildings inspected will be identified and taken as a comparison criterion with the other parameters analyzed, and the role and potential of the materials used in building envelope in the buildings that will form the cities of future will be evaluated.

**Key Words:** Sustainability, energy-efficient architecture, building envelope, system and materials, variability

# Reflections on Change and Transformation: Exploring the Potential of Kinetic Facades in Terms of Sustainability

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**ABSTRACT**

Scientific and technological developments after the industrial revolution have influenced and changed people's lifestyles. This change leads to increasing energy demand, depletion of natural resources and environmental problems and calls for alternative solutions. The building sector, which damaged the environment by using a significant portion of natural resources, was one of the areas where these searches reflected. These design approaches, which are referred to as "climate-based design" in the 1970s, "energy-conserving design" in the 1980s, "energy-efficient design" in the late 1980s and 1990s, and "sustainable design" in the mid-1990s, it is aimed to search solutions on the scale of cities as well as urban while minimizing the damage to the surrounding area. In the cities and buildings of future, design criteria should be dealt with in a multidimensional, holistic approach.

'' Sustainable design '' is a top heading that covers other design approaches and can be described as a planned form of structuring, supported as a solution to global environmental problems. Sustainable design has different scales of application in urban design and building design. Sustainable design approach is not merely physical of building, but it also deals with ecological, economic, social and cultural dimensions of buildings. Sustainable architectural design must be done in a scale that will include the from first step of the planning to destruction and re-planning of the building. Sustainable architectural design has the principles such as making long-lived-high performance structures with energy conservation parameters (sustainable energy performance, use of passive and active energy systems, etc.), flexible and adaptive design (variability, meeting future requirements) the use of new and renewable energy sources, the use of local materials and labor, the creation of healthy spaces and the provision of indoor air quality, the use of recycled materials (eg, waste management and recycling), preserving biodiversity and habitat damage. Alternative design approaches such as '' kinetic architecture '' which adopts the principles of sustainable design approach is coming to the agenda interaction between technology and increasing interdisciplinarity and the in the direction of these principles. Kinetic architecture '' is the concept of change-transformation in building or in building elements. This change or conversion is achieved through the complete or partial movement of the building elements (adapting to changing environmental conditions). The purpose in kinetic architecture is to adjust the indoor environment conditions to the optimum level according to the outdoor environment conditions. For this purpose, in kinetic architecture with movement, energy production and conservation in design, visual transformation and aesthetic purpose, physical environment control, functional change-flexibility are aimed. In this context, the aim of the study is to evaluate kinetics and sustainable architectural design approaches based on façade design in structures designed by adopting the

principle of kinetic architecture, which is a current field of development that embraces principles of sustainable design. The theoretical framework and principles for the façade design regarding the sustainable and kinetic architectural design approaches to will be defined and evaluation criteria will be determined. As a method; In the case of three buildings designed with kinetic architectural design approach, the common points and differences of these two approaches were compared within the framework of criteria set in façade design. In the end, by evaluating the comparison made through the samples; examples of kinetic architectural design are similar to those of sustainable architectural design principles and different aspects have been put forward and the innovations and potential and development possibilities brought to façade design have been determined. In this context, it's seen that, flexible and economical environment buildings has great potential by integrating '' kinetic architectural design and sustainable architectural design for facade solutions. In future, it will be inevitable for architects and designers to be informed by these design approaches for open up new horizons.

**Key words:** Sustainable architecture, kinetic architecture, facades.

# Analysis of LEED V3 Platinum Projects in Turkey in Line with Material and Resources Category

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**ABSTRACT**

18. the industrial revolution, which emerged in England in the second half of the century, has produced significant results that affect the whole world in different areas. In the first years of the industrial revolution, production factories were established in cities under the influence of rapidly developing technology and the importance of agricultural sector in the economic structure of the countries decreased. As a result of this situation, migration from rural areas to urban areas has started and population in urban areas has increased rapidly.

Industrialization and urbanization were seen as a very important revolution in terms of Economic Development at first, but in time these innovations have led to environmental problems that adversely affect the lives of all people.As a result of production and new technological developments in factories, the decrease of natural resources used unconsciously, fossil fuels and toxic wastes emitted to the environment, and the concrete transformation of green areas have been the most remarkable environmental problems.

The adverse effects caused by these environmental problems in the following periods have caused global warming and climate change. 19. The concept of sustainable development has started to gain importance instead of the concept of economic development as global warming has become a threat to all world people since the beginning of the century.

With the increase in sensitivity to environmental problems, the concept of sustainability has come to the fore in the construction sector and building types, which are called eco-friendly or green buildings, have emerged. As the interest in green building projects increased, developed countries have issued Green Building assessment certificates to certify the environmental impact of these buildings, to reference other projects, to accelerate implementation processes and to encourage the whole world in green building. In 1990, the BREEAM(Building research Environmental Assessment Method) certificate was issued in the UK where industrial revolution began and environmental problems were seen most. Later, in the United States in 1998, LEED (Leadership in energy and Environmental Design) certificate was published and BREEAM certificate with the most widely used certificates have become.

Green Building evaluation systems in our country is a new concept. However, in recent years, green buildings have become very popular and have an effective market in the construction sector.

The most preferred Green Building certificate system in Turkey is the LEED certificate. The reason for this is that the applicability of the LEED certificate is easier and more understandable than other certificates.

The aim of this study is to determine the category of successful projects that have obtained LEED certificate in our country and discuss the reasons.Since there is no LEED v4 Platinum field project, which is the latest version of LEED certificate in Turkey at the time of the study, only LEED v3 platinum certificate projects were analyzed within the scope of the study.

As we begin to work, digital data has been collected from the American Green Building Council (USGBC)website, where records of all projects that have received LEED certification worldwide. By evaluating these numerical data, the success rates of all the projects that received Platinum certification were statistically determined. When these statistical results were evaluated, it was observed that projects with the highest degree of certificate of platinum obtained the lowest success rate from materials and resources category within the scope of LEED v3 certificate in our country.

In the continuation of the study, all the criteria included in the material and resources category were taken into consideration and the reasons for getting low scores were examined and the study was completed by making suggestions to improve this situation.

**Key words:** Environmental issues, sustainability, green building, LEED certificate, material

# GIS Supported Sustainable Construction Wastes Management Model Proposal

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## ABSTRACT

Rapid urbanization and correspondingly increase in urban population provide development in construction sector in our country as it is observed in the whole world. The construction sector including a large amount of sub-sectors and collecting many different specialization areas under the same roof, causes further enlargement in the volume of the sector. Due to this rapid development in construction sector, there occurs an increase in excavation, construction and ruin wastes. In addition, the management of these wastes are confronted as a significant problem. The wastes emerging during the construction and after the destruction of buildings are among the heaviest and the most sizable ones. Together with the acceleration in construction activities, change in living standards and with the effect of socio-economic structure, the contents of construction wastes become varied and the area it covers enlarge. By the putting into force of the Law on the Transformation of Areas under the Disaster Risk, the application of urban transformation has started in addition to this, a large amount of construction and destruction wastes are added to the system. In this context, the wastes produced within the process, and the control and management become one of the most significant problems of societies at present. In spite of the existing by-law, the owner of activity who is not suggested for any place to dispose wastes or avoids any payment if a place suggested, is apt to dump wastes to the places where he can find easily in the city or to the closest place according to his view. Stream edges, agricultural areas, natural heritage assets and areas required to conserve are the places in which construction wastes are dumped. Apart from the nature fell into ruin by the dumping of construction wastes many sectors, such as agriculture, tourism and trade, are influenced in a negative way, and this case is contrary to the sustainable environment politics. Except for the solid waste management, a management system, which includes recycling and disposal of these wastes, doesn't exist for excavation soil, construction and destruction ones. This causes the complexity in the waste management process and creates a significant urban problem. Because of this reason, it is extremely important to establish a sustainable construction waste management and to support it with the advancing technology. By means of the presented proposal in this paper, on construction waste management supported by geographical information systems, it is aimed to carry out the management of construction waste process in an easy and efficient way. In this frame, within the scope this paper, the Construction Waste Management System by support of Geographical Information Systems is proposed. Through the Construction Waste Management System, it is aimed an integration of the system to the principles put into force by the by-law and realisation of construction waste management in an easy and efficient manner.

**Key words;** Environmental Management, Construction Waste Management, GIS, Management Model.

# CITY - APPLICATION - TRANSFORMATION 1

# Neighborhood on the Edge of Disappearance: Türk İş Blokları

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**ABSTRACT**

"Seyfi Demirsoy Quarter" called generally as "Türk İş Blokları" with the name of the constructor Labor Confedaration, is planned as a first example of neighborhood design composed of social houses as the early example of organized-mass workers' houses in Turkey in 1965. There are 2566 dwellings and 281 blocks on the 32.7 hectares of area. According to the results of 2012 ADNS, a total of 7160 people were registered. The average household size was 2.84 persons. One of the main concerns in the area declared as a transformation area in 2013 is focuses on the possibility of loss of social networks in the area and physical environment created by the planning and design based on neighborhood principals. For that reason, by evaluating the social networks and physical values created by the design of Türk İş Blokları quarter in which these concerns are embedded, discussions about the transformation process of the area will be made and the answers to the following research questions will be sought.

Research Ouestion 1: Under the threat of being lost by the approved Transformation Project, what are the main design principles which have a great impact and contribution in the formation of today's physical environment and social networks?

Research Question 2: How can the transformation process that does not coincide with "the demand of sustainability of neighborhood" be reshaped by positive components arising from planning and urban design integrity?

The concept of the neighborhood is a concept developed in the western countries in search of solutions to the problems that arise with industrialization and urbanization. The original idea of the neighborhood concept is a homogeneous settlement area within walking distance, designed as a whole with social facilities (primary school, worship, cultural sites, open and green areas) that 3000-12000 people will live. It is desirable that social networks should be strengthened by common areas, which are organized in the design, so as not to break up with the main roads connecting the neighborhood to other parts of the city as much as possible (Ersoy, 2012). When Türk İş Blokları are evaluated in terms of neighborhood design, it is seen that the 4 and 5 storey buildings in the area are organized as cluster houses, in other words in the form of courtyard houses. In this spatial pattern, housing groups are arranged around the semi-private common open space (courtyard), from which the facade is taken and accessed by a single entrance to the common area. The inward self-regulation of these principles is carried out for social and visual reasons, so that the internal

courtyard for off-neighborhood relations can sometimes be made open to traffic (Lynch, 1972, Soygeniş, 1995).

In addition to the semi-private common areas, the blocks also have their own private gardens. As is known, private spaces are defined as spaces under the supervision of persons or groups, while semi-private spaces are spaces that are visually perceived, although they are visible from the outside and are not physically impermeable (Newman, 1976). Over time, with the increase in vehicle ownership, car parks began to take place in semi-private common areas. Nevertheless, when the distances between the houses maintain the privacy of the dwellings, and the ratio of the height of the houses to the size of the courtyard is taken into consideration, the human scale in the area is not lost. In addition, the design principles of the neighborhoods were able to maintain homogeneity as a residential area with no commercial use. However, with the Transformation Plan, it was decided to increase the number of houses with increasing total construction rights form E: 0.72 to E: 2, (Ministry of Environment and Urbanisation, 2018) and to increase the number of houses, it is understood that cluster housing development, green texture of the area and the neighborhood integrity provided by the design principles is abandoned.

On the other hand, living together for a long time in the same area is one of the factors that helps to stabilize and to develop personal networks based on family, friendship and neighborhood relations (Hanson, Pratt, 1995, p.37, Gültekin, N., Dündar, Ö., Erdoğanaras , F. Ve Sat, A.2007). The fact that the median age is 41 in Türk İş Blokları (TUİK, 2012) and that the people living above the age of 65 are represented at highest ratio in the area (19%) (TUİK, 2012) is a neighborhood where the elderly population is concentrated. This elderly group has been found to have lived almost on the block since the beginning of the process, that everyone is familiar, often seen, and therefore social networks are very strong in the field. The high rate of homeownership in the neighborhood (80%) (TUIK, 2000) also increases spatial fixation. Elderly people who are interviewed are exposed to the fear of "being socially loosened" and "nothing will be like the old days" that will be experienced in the field together with the transformation.

Revealed by examining the photographs and the environmental values of the area, as well as the in depth interviews on the field with social networks and other findings of the researches, the questions of what are the design components that have impact and contribution? "and "how the transformation process, which does not overlap with the demands of the neighborhood, can be reshaped by positive components arising from urban design and planning integrity"will be answered.

**Key words**: Türk İş Blokları, transformation, social networks, neighborhood design, cluster housing.

# Transformation of Housing Production Process: From 1968 Model Social Housing to 2018 Model Residences / Türk-İş Blocks-Ankara

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**ABSTRACT**

The aim of the paper is to analyze the "living environments created by social housing" which are actual forms of housing production from the second half of the 1960s to the late 1980s in Turkey. Today, these environments are subject to urban transformation due to their low densities and high urban rental values.

The first social housing of Ankara, (consisting of 281 blocks and 2566 houses) is the neighborhood of Seyfi Demirsoy known as Türk-İş Blocks which was constructed between 1968 and 1972. The Confederation of Turkish Trade Unions (named as Türk-İş) was established in 1952, by initiating the first example of the housing production process by co-operatives with the Türk-İş Blocks Building Cooperative, enabling cooperatives to become effective actors of the housing production processes. Housing problem of the poor and low to middle income employees constitutes one of the most prominent problems of 60s in big cities of Turkey. Seyfi Demirsoy, the head of the Confederation of Turkish Trade Unions at 1960-1974, played a dominant role in the formation of the first cooperative in 1965 to ensure workers' housing rights. With the contributions of the Turkish Real Estate Bank (Emlak Bankası), SSK loans and funds raised by the cooperative members, 2566 houses were built in Aydınlıkevler. The cooperative houses were delivered to their owners in 1971-1972. An additional 3500 housing units brought together a higher number of workers in 1973 and a new cooperative was laid in Ankara with the name of "100.Yıl İşçi Blocks" by the same Confederation following the high demand arising from the successful completion of the first housing production process outside of the free market conditions.

At the same time, Türk-İş Blocks Neighborhood that is planned and designed around seven island-based heat centers for residential, school, parks and is an early example of a social housing designed around a large courtyard, semi-private and private areas surrounded by four-five-storey cluster houses, is one of the first examples of a "pioneering cluster neighborhood design" beyond its period's housing characteristics. This original urban life environment, which is important in the field of urban planning with the provision of space / place / environment serving to the formation and sustainability of dense neighborhood relations, has been under urban transformation process since 2013. Unlike other transformation examples, the Türk-İş Blocks Transformation Process, which has been influencing all other physical, economic, social and urban components of the neighborhood for almost five years, has been criticized for being a "tension-disagreement-crisis" where the social components are in conflict with physical and economic expectations, according to the pilot in-depth interviews conducted. Despite the last five years and the steps taken, transformation process is

ambiguous and the scene couldn't be fully understood by the inhabitants of the neighborhood. The construction of a residential living area, which is planned with a holistic understanding of a housing environment and organized in a single way, is a sign of the point reached in the dimensions of planning, construction and application. Although there is an approved transformation plan by the Ministry of Environment and Urbanization, the first demolition and the first transformation has not yet begun, besides the transformation plan decisions that cannot meet the socio-economic structure and expectations of the residents of the neighborhood, declared by the "self-motivated muhtar" as an actor. *"... The games played in the spacious courtyard, the same elementary school, the same high school... and we grow... Turkey has changed; it changed the Türk-İş Blocks. Whenever I go there again, it becomes the place where I grow; the breath I take is breath... I find myself! My neighborhood is here ... Now the building which is massed in urban transformation will be demolished and the new ones will be done... The location is incredibly beautiful, seven minutes to Kızılay, one side is Altınpark, green ..."* describes the fear of losing the original urban socio-spatial environment that has been tried to be protected for many years, creating a problem and anxiety in the area.

In this study, with the aerial photographs of 1942, 1957, 1966, 1972, 2000 and 2018 and the process of spatial change will be tracked. Data on social, economic and cultural structure of the neighborhood were obtained from TURKSTAT and in- depth interviews with the residents.
With the study the following issues will be surveyed and questions will try to be answered:

- The "original identity and characteristics of built environment";
- Detailed documentation for the identification and preservation of the social, cultural and economic components of the "place";
- Damage that is caused by the insensitive and especially fragmenting transformation approaches.
- "Can the co-operative housing production model be an alternative to the market-based transformation model, helping to preserve the original living environment components and keep residents on their place?
- Can strong projects that take social tissue into consideration be handled with physical applications?
- What can be the alternative organization and financing approaches for "the areas of urban transformation?

**Key words:** urban transformation, housing cooperatives, alternative housing production processes/models in urban transformation, Türk-İş Blocks-Aydınlıkevler-Ankara.

# Sustainable Urban Design and Smart Cities: A Model Suggestion for the Urban Regeneration Region of Ankara, New Mamak.

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**SUMMARY**

With the ever increasing world population and urbanization rate, the limited natural resources of the world are rapidly consuming, the quality of the air is getting worse and leading to important problems such as climate change. For this reason, Sustainable Urbanization has become a common goal of all developed and developing countries. The current understanding of urbanization needs to be re-examined in order to ensure that a needs of one generation can be eliminated without destroying the chances of meeting the needs of subsequent generations. Because of all these reasons, the "Smart City" approach has a holistic approach to solving all problems in the city in order to provide Sustainable Urbanization. In particular, local governments need precise data so that they can come up with solutions to all problems in cities. Smart Cities offered both intelligent and holistic solutions to urban problems with information and technology services they offered. Thus, a rapid communication mechanism emerged between the individual and the services offered. Smart Cities; smart environment, smart people, smart governance, smart mobility and smart living are the cities that are more comfortable, healthier and greener than today's cities.

The city planning and development of Ankara, which started with the "Jansen Plan" of Hermann Jansen, started with planned rallies due to both improper populations of the envisaged population and misplaced government policies and unplanned settlement and expansion in Ankara, has become a design. It is important for us to work at this point that problems such as traffic, uneven urbanization, irregular and unplanned settlement have been lifted and that natural resources for Sustainable Urbanization are used reasonably, water basins are protected, urban air corridors and green bands are respected, it is possible to show Local Governments how to create healthy and most important people-oriented living spaces. For this reason, Ankara New Mamak Urban Transformation Region was selected as a pilot and it is aimed to find solution proposals that will provide sustainable urbanization to all problems experienced in the region with "Smart City" systems and to present them to the use of Local Government. When the study is completed, the problems and solutions proposed on the pilot scale will be used to bring out guidance methods and methods in urban planning and design that can be applied throughout the city of Ankara, thus bringing an integrated Smart City model to the city administrators that provide rapid, environmental and public participation to all urban problems.

For this reason firstly the weaknesses and strengths of the region, the problems experienced in the Ankara New Mamak Urban Transformation Region will be examined and the findings obtained will be analyzed and regional findings will be created. Despite the fact that there is a new concept in the literature in the light of the findings obtained, the entire literature on the topic will be examined for the concept of "Smart City". First of all, solutions that have been tested and do not work will be examined and what can be done is Smart Cities; smart environment, smart economy, smart people,

smart governance, smart mobility, smart life dimensions will be analyzed and analysis will be done on which problems and ways and methods will be used. The reason that intelligent cities are mostly world cities will also be utilized by internet sites of exemplary and successful cities. The related studies will be evaluated in terms of document collection, comparison, interpretation and major theories and theories of the city and not only these studies will be interpreted but will try to make definite and solution oriented proposals to the problems. In addition, the SWOT Analysis of the region is presented in the model proposal for the Ankara Mine New Mamak Urban Transformation Region of Ankara and this urban transformation region will be examined in terms of the requirements of the Smart City and the methods and methods for the urban planning and design in the Smart City will be revealed.

After all; Resolving the problems experienced in the New Mamak Urban Regeneration Region of Ankara will be tried to strengthen the weaknesses of the region and to transform the problems into advantages with the opportunities and to implement the Sustainable Urbanization with Smart City applications. In the light of the obtained data, a model proposal will be presented to the city administrators for the Ankara genius and attempts will be made to obtain methods and methods for becoming a capital city that can compete with the world smart cities.

**Key words:** Smart city, smart environment, municipality services, urban planning, urban design.

# Local Public Participation Process Before Urban Renewal Applications: Case of Yıldızevler Neighborhood, Ankara

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**ABSTRACT**

For the last 40 years, cities have been (re)shaped and reproduced on the basis of different approaches including global city, competitive city, brand city in the focus of neoliberal development and competitiveness discussions. As a means of neoliberal economy, falling rates of profits within the capital accumulation process have brought the structural environment to the forefront as a new investment instrument. Urban transformation has become one of the important tools of this new investment process. The most crucial point of the criticisms directed to the transformation projects discussed in many respects is that the renewal/transformation applications are being used as one of the most important means of obtaining rent from the city.

Till 2000s, urban transformation practices were highly associated with the transformation and redevelopment of slum areas in Turkey. However, with national concerns on disasters & risk management and unqualified housing stock in cities, various laws and regulations (especially Law no. 6306, known as disaster law) have been brought into force in a way to signal a new phase in urban transformation/renewal discussions. In line with Law no. 6306, the transformation/renewal of areas that are strategically located in the city with low quality of housing as well as building-based (re)constructions have been on the agenda of authorities in “risk and disaster management” process. The perception, that the transformation is being forced and enforced without compromise with the local people, ignites the "rent-driven transformation" debates, leading us to the fact that, the process needs to be compromising, participatory and democratic.

Participation in urban transformation includes the stages of designing, practicing, monitoring and evaluation together with all relevant stakeholders such as property owners, tenants, municipalities, ministries, private companies obliged to carry out the project. In order to be able to fully implement the participatory process, it is necessary for the local people living in the field to take an active role at every stage of the process. However, practical applications of the participatory approach are often confined to the involvement of local people in informative meetings, and these meetings are confronted as an instrument for the inhabitants to be persuaded to the project being designed. However, the design of the transformation/renewal process in an integrated manner can provide the opportunity for stakeholder reconciliation and joint development of the project, strengthening the possibility of the adoption of the process by residents in the field through responding to their needs & expectations and creating spaces that are compatible with their lifestyles. This is accompanied by the fact that the main problems in the participatory process need to be spotted by the local people and the factors that impede the progress of the process should be identified. In

this context, in this study, it was researched how and in what extent local inhabitants participate urban transformation/renewal process in an area subjected to transformation.

In this context, a field study was carried out in the Yıldızevler District Police Blocks, which was declared as a risky area in 2010 but whose transformation applications have not yet begun. In April 2017, a questionnaire consisting of structured questions was used as the data collection method in the field study. Through conducting questionnaires, it was aimed to measure the level of perception and knowledge about urban transformation, to determine the stages of urban transformation/renewal in which the process is participatory or open to participation, to examine the level of participation of the inhabitants and the problems experienced in this process.

Questionnaires were conducted on 256 people living in the area. According to findings of the study, the most fundamental reason for not starting the implementation of the transformation is the lack of reconciliation between the implementing companies and the local people. The participation dimension of the process is limited to information meetings conducted by companies that intend to load the transformation application. The lack of awareness of the legal rights of individuals, the inability of local people to establish their own representation mechanisms, the differing expectations from renewal, and the belief that inhabitant expectations are not taken into account by practitioners have been influential in the lack of participation in the Yıldızevler renewal practice. The most important contribution of the study is it's focus on the process before application in a potential transformation area and try to reveal the relation between participation and urban transformation practices within the context of causality.

**Keywords:** Urban transformation and renewal, participation, expectations from urban renewal

# A Study on Timely Change of Urban Focus: Ankara Sample

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**ABSTRACT**

The squares as a marketing and advertising item have a big influence on how cities are perceived by local and nonlocal people. Some squares are identified with the cities themselves and constitute the tourist's preferred preferences. For example, Istanbul and Ankara overidentify with Taksim and Kızılay Square respectively. However, big cities such as Istanbul and Ankara do not have only a focal point to meet their intensive population. Other focal points were squashed under the fame of the main square and remained places where users discovered over time. Users who migrate to cities with more than one focal point prefer different focal points throughout their stay in those cities. This preference tends to shift towards other focal points over time, as users' first preference is the city's most well-known city center. This prevents the sustainable use of the squares and causes various problems, especially for the main squares. This research aims to explore whether user preferences have changed over time, and if so, why this change happens. To discover what features the focal points need to accommodate in order to remain as users' favorite place and to make various suggestions in this regard are also within the purposes of this research. In this research, Ankara was used as a sample because there were more than one focal points in Ankara. By using Kızılay, Bahçelievler and Tunalı focal points, this study examines the preferences of the people who were not native to Ankara and spent 5-6 years there for certain purposes and reasons for the preferences. The study has limitations in exploring user preferences in user oriented methods in Ankara. In addition, the questionnaire's target group were the people who have migrated to Ankara to study at universities, which is another limitation in terms of criteria like education level and age distribution. A "Survey" study was conducted with people who came Ankara from another city and lived in Ankara for at least 4-5 years in order to find out how user preferences changed over time, and if possible to find out the reasons of this change and how to go about it. With this method, it is desired to learn how frequently and for what purposes the squares are used in the first and last years of the users, and what features the squares should have in order to remain as first option for users whose preferences changed by time. The obtained results are explained through tables and graphs. Most of the users in Ankara say that they prefer Kızılay Square in the first place and that they made this preference because they associate the city with this square. The usage of main squares decreased from 11-15 hours per week in the first years of accommodation, to about 1-3 hours per week in the last years. As it can be understood from these results, the charm of the main square disappears after a while for the users, and the users are starting to look for alternative focal points. Bahçelievler and Tunalı for Ankara are the most outstanding options among all alternatives. With this change in preferences, the city image for people is expanding and becoming more inclusive. In other words, for the users coming from abroad, the city looks like a single center, but over time this image becomes multiple center which are in interaction with each other consistently. When the causes of this change were examined, it became clear that the main squares did not host adequate activity. Thus, it turned into a static structure and users did not feel like participants of

these squares. This study has resulted in a change in user preferences over time in cities with more than one focal point. When users prefer the main squares associated with the identity of the city in their first years, this preference is gradually shifting towards other focus points by the help of their discoveries. In addition to this, it is necessary for the squares to provide an ever-changing view to the users in order to remain as the priority choice of them, and to allow the users to see themselves as participants. This enables sustainable use of the focal points by the users.

**Keywords:** Users' preferences, focal points, Ankara, Kızılay, change in preferences.

# A Trial of the Concept of Transition / Transformation in the Urban Scale with the Natural Environment Based Biomimicry and Clean Energy System

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## ABSTRACT

Increasing energy consumption, on one hand, leads to a rapid depletion of resources, on the other hand to increased consciousness on the environment and to the awareness of people about environmental problems. In this sense, the concept of clean energy has become very important throughout the world and has become the main agenda of many designers. If our cities are still able to produce something in spite of this rapidly increasing consumption in every area, it will be a natural consequence that we can try to make clean energy productions in our designs that we give back to the nature starting from the nature again. For this reason designers approaches to nature,they used nature's own sustainability method with ecological designs to organize the design process. One of the new approaches is biyomimicry which is inspired by the nature. In this work the protection of energy is targeted as well as how nature can be used in urban scale as a design process.

From the past to present, the humanity has used the architecture primarily for protection against natural conditions. The first people used protection / sheltering were inspired as seen in the performing nature and thus resemble nature / inspired by nature, firstly biomimetic concepts imparted to the literature by Otto Schmitt in 1969, it has gradually turned into architecture commonly used design format. Torras (1970) said that; "Nature inspired architects will build the future because this is the most rational, most robust and most economical method". Benyus (2002) states that "in order to express nature, we must first explain the nature and our struggle against nature and define the three principles of biomimicry as follows;

- Nature as an example,
- Nature as a criterion and
- Nature as a mentor.

Zari (2007) dealt with biomimicry at three basic levels: organism level, behavioral level, and ecosystem level. Baumeister (2013) mentioned that biomimicry design lenses (biomimic life principles and biomimicry thinking) with these lenses he talked about biology concepts for questioning and designing for biology. According to Lodato (2005), the application of biomimicry is defined in 4 stages. These;

- If a choosing properties that a living organism can go beyond existing technology possibilities,
- To bring out principles and processes that provide superiority,

- To define the biological systems which may be beneficial to designers by developing models and methods,
- To prove the possibility of transferring this knowledge to a reliable and efficient hardware.

For human lives to contain healthily in urban scale conservation of nature and natural energy sources and new and production of clean energy from natural sources idea of sustainable developing basic approach are influenced in architectural design, as in all other areas. For these reasons it has become mandatory to design urban areas where buildings and natural environment are together. İt has been the basis of latest approaches whic is to maket he architecture as enrgy producing systems. How can the biomimicry approach be used as sustainable data on the urban scale from these definitions? Is it possible to design architectural transfer from biology to nature through a clean energy system on urban facility? The question of how this probing can be resolved on a sample with questions is investigated in this study. Working in this context can be used as a design pattern on urban scale, clean energy systems with biomimicry and two approaches that can be used at the design properties and sustainable design principles using natural transmissions. It has been decided to study how biomimicry can be constructed with clean energy system at the urban scale.

Following this decision, observational survey conducted on Celal Bayar Boulevard in the city scale; the Boulevard was chosen because there is a high speed train station on the one side and a public institution building on the other side, fast and consists of the traffic load in the area, no urban elements (pedestrian overpass) for pedestrian crossing between Ankara Courthouse and Gazi University Faculty of Architecture on Celal Bayar Boulevard it has been determined as a study area in terms of suggesting how similar problems in the city can be resolved. In this study, it is proposed to analyze the solution of the problem in the crossing between the selected field and the environment through the integration of the clean energy system at the organism and behavior level inspired by the nature and this proposal aims to make a suggestion which can be an alternative to the solution with clean energy systems at urban scale.

In her work Zari (2007) classified biomimicry levels through a building example mimicking termites and defined organism level, behavioral level and ecosystem level in terms of form, material, structure, process and function of all levels. The research first tried to find an answer to the question "Can the design of the pedestrian overpass be made as a sustainable data to the city with zero energy consumption in the urban scale?" And secondly, "How to cope with the negative weather conditions by using a non-stationary moving element, can be obtained without depletion of the existing energy resources?". An algorithm created for problems identified as a working method, before starting the steps of algorithm making the case that may mimic the organism and behavior level design may ensure the achievement of the objective of the design Mimosa Pudica as the most suitable plant species selected. Due to the Biomimesis of the design theme chosen for the study, the algorithm for probing was also created with the aid of design lenses (biology for design) found in the biomimesis.

With the algorithm created, discover has begun to search living organism that meet the requirements for bridge design and a bush plant, named as the best –known Mimosa Pudica, and popularly known as the sensitive plant which is found in nature, has been selected for which the organism and the behavior levels for design can be imitated. The basic features of the plant were investigated during the abstraction phase and the Mimosa Pudica plant's self-closing for tactile and violent air currents for protection purposes was dealt with as a pedestrian overpass design to protect from environmental conditions (such as strong wind, rain etc.). While creating this system the imitation of leaves shutting down with clean energy integration was brainstormed, the pedestrian overpass to create the pressure for pedestrians using the stored electricity of the battery

produced by field piezo panels in flooring and storing system can be transmitted to the wing at both sides of the battery. Thus, by means of the energy obtained by pressure has been aimed at encouraging the use of clean energy in urban element. Structurally outside plant response were investigated whether they can be included in the editing, the knowledge of the form of the plant which operates a single radical several bodies that plant body portions was acquired so that the single body direction can occur by trimming based upon the single body and is defined as the basic of the body spine system to which the plant leaf. All of these processes at the urban scale of zero energy consumption by urban sustainable data as pedestrian overpass design of the plant, selected in order to propose format (structure) and by imitating defensive behaviors were included in fiction the pedestrian overpass scale. It is assumed that when the plant is touched or when it is strongly exposed to airflow, it closes its leaves to the body, the structure designed by the system integration of the system turns itself off to create a sheltered environment for humans in adverse weather conditions. The main target to be reached with all these stages is; to find answers to how problems can be solved with a sustainable design understanding through which the transition / transformation and authenticity of the city can be achieved through clean energy.

**Key words**: Clean Energy, Transformation, Productive Approach, Biomimicry, Sustainability.

# CITY - APPLICATION - TRANSFORMATION 2

# Durable ("Resistant to Shock") Cities "Evaluation of Sustainability": Evaluation of Eskişehir City

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## ABSTRACT

This report will discuss how the "sustainability" approach, one of the decision support tools that emerged from the sustainable development agenda in the 90s', and the "sustainability" approach, which stand out in the recent regional development debates, can be considered together. In the post-1980 period, local / regional development policies all over the world are focused on growing up based on internal dynamics and potentials, in other words developing regional competitiveness. In this approach, focuses on developing human capital, sectorial specialization, benefiting local knowledge and developing innovation capacity, is been described. However, this new strategy based on entering global value chains is often overlooked. The fact that cities or regions have no control over the formation of standards in the global markets being tried to be part of is an important paradigm.

As cities become increasingly stronger links with the outside world, outward migration to developed countries and domestic migration trends in developing countries have increased social tensions in big cities, increasing way. On the other hand, climate change issue has also caused for the formation of risks in medium and long term. None of these changes, whose examples can be enhanced, directly affect the future of the cities / regions, not being under the control of the cities / regions.

How these changes and new problems arise, how different regions and cities react to the same external shocks and how they recover after these external shocks is an important debate issue. The main exit point here is the fact that in many cases some cities react differently to external influences than others.

The important issue in terms of durability-driven development is the question of "what kind of policies can be developed to gain the capacity to better interpret the dynamics of the urban systems with economic, social, urban, architectural and environmental dimensions, to respond to change and to achieve adaptation?", and opening to debate "Sustainability assessment ". This method of assessment, with its universal criteria, is resistance to shock developments and policies, which should be addressed by cities in the process of taking care of the adequacy of their habitats, preserving and protecting resources, preventing pollution, protecting ecosystem services, and balanced planning, implementation and management " (resistance to shocks) cities in order to become aware of what policies should follow.

Eskisehir city is a city with very rich cultural characteristics, familiar with many different cultures within Anatolian lands. It is also privileged city in tangible and intangible cultural diversity and richness. It is clearly seen that the Turkmen and Yörük settlements in the 18th and 19th centuries and the migrants from the Crimea, Caucasus and Balkans in the early 19th and early 20th centuries contributed to the cultural formation in Eskişehir and its surroundings. The intangible cultural heritage in these cultural formations is very diverse. In Eskişehir, where many ethnic elements live together, cultural transfer environments, cultural diversity and projects and practices in order to keep alive the areas where this cultural diversity is alive provide a positive contribution to the city in evaluating sustainability and the "resistant to shocks". The purpose of this study is to apply the dynamics of urban systems in terms of urban, architectural and environmental aspects in order to be able to respond to the changing and emerging problems.

Opening the debate on the question of how to develop better policies for interpreting social, urban, architectural and environmental aspects of Eskişehir city, developing policies to respond to change and adaptation, and the "Sustainability Evaluation" method in the light of development based on durability ("resistance to shock") is the main purpose of the study.

In the method and method of work, first of all, in order to solve the urban dynamics of the city of Eskişehir about consideration of the development focused on durability, the research questions about the interpretation of the urban, architectural and environmental dimension will be sought.
Later on, the sustainability of the projects and policies made in the areas will be assessed in order to monitor the adequacy of the living spaces of the city, the protection of resources, the competence of eco-system services, etc. In the final section, the findings will be interpreted to provide suggestions on what other policies could be developed to respond to change and achieve compliance.

**Key words:** Durable *kaplangorde@gmail.com; uavdan@anadolu.edu.tr*
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# Evaluation of Urban Expansion and Land Use Change in Eskişehir Using Remote Sensing and Geo-Information Systems

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**ABSTRACT**

An urban area can be defined as a human settlement with high population density and infrastructure of built environment, while urbanization can be defined as gradual increase of the population living in urban area. Urbanization is one of the most significant contributors to environmental problems as more than 50% of the human population lives in the cities. Geographical Information Systems (GIS) and remote sensing are useful tools in the formulation, implementation and monitoring of urban development. Remote sensing techniques are used to carry out land-use change detection by using multi-temporal remote sensing data. Land-use change impact analysis is further carried out by the integration of GIS and remote sensing. This study evaluates the urban expansion of the city of Eskisehir in northwestern Turkey, using satellite images in order to monitor and evaluate the growth of the city over the years and the potential damage that it had been done to the environment. For that purpose, six Landsat-5 satellite images, starting from 1987-2011, and three Landsat-8 images from 2013-2017 were used in this study. All of the images were selected from leaf-on periods, or summer period. Using remote sensing techniques, various vegetation and built-up indices can be obtained and used in the assessment of vegetation cover. The Normalized Difference Vegetation Index (NDVI) has been widely used for vegetation extraction, while the Normalized Difference Built-up Index has been used for urban area extraction. Both NDVI and NDBI were calculated for the urban area of Eskisehir and its surroundings. Afterwards the results were analyzed and compared on yearly bases. The results indicate the changes that happened in the last decades in the environment as a result of natural forces or human activities by using satellite data and GIS spatial analysis. Thus, is has been noted that the green area in Eskisehir been has drastically lowering and from 1987 until 1995 the green area has lowered more than 30%, and more that 45% by 2009. However, after 2009 it has been noticed growth in the green areas for more than 10% by 2011. The results also present the urban expansion over the years which have negative correlation with the vegetated cover of the study area.

Monitoring of the city expansion can be useful in better understanding and managing of the urban and the green areas of the cities in order to prevent environmental problems in the urban areas such as air pollution, unusual rise in temperatures, over exploitation of natural resources etc. The results from this study can be useful for visualizing the environmental changes that can help in both urban and environmental planning and protection, as well as for economic and social development of the city of Eskisehir.

**Keywords:** Remote sensing, urban monitoring, vegetation monitoring, environment, satellite images.

# Spatial Pattern of Porsuk River Route in the City of Eskişehir: Transition and Analogy

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**ABSTRACT**

The identities of cities, in other words the formation of the meanings for citizens takes place over a long period of time. This formation can be said to be a combination of the natural conditions in the city, the geography of the city, cultural structure, architecture, unique values, different lifestyles, politics in city development and city memory. As in many examples in the world, rivers passing through the city emerge as one of the main components of this multi-dimensional formation. It is same for the Porsuk River, which passes through city of Eskisehir. Porsuk River, which has a regular flow, is affects to the city both affected by the city, while dividing it into two and continuing on its way from east to west. The Porsuk River, which has been faced with negative pressures during the rapid urbanization process, has been rehabilitated in the context of a comprehensive project in the 2000s. This process, in general, revitalized the Porsuk River and its immediate surroundings in the city center, strengthening the city's relationship with water. However, it is not possible to observe the same kind of integration in all parts of the city where water passes, and it seems difficult to talk about a sufficient diversity in the nature of this integration. From the vicinity of the city center to the boundaries, the water is often seen as a passive element of the city within the built environment. Integration with a river and a city can be achieved when it is possible to establish spatial relations networks with the area where the water passes and nearby roads, bridges, squares, structures and green areas. In this sense, the level of integration between the river and the city is directly related to the transition and analogy in the spatial pattern.

In this study; the relationship between the Porsuk river and the city of Eskisehir is evaluated on the basis of the variations and similarities in the spatial pattern. The spatial pattern displays a fragmented structure on the route that Porsuk follows in the city. In order to determine where and how the spatial pattern changes, two methods are followed: The first one is a series view analysis conducted on the structures, monuments, openings, orientations and boundaries of both sides of the Porsuk River. Second determines, through the sub-regions emerging through the serial view analysis method, the experience between the river and the citizens (in, on, on the edge of) and kind of it (boat, gondola, pedestrian bridge, vehicle bridge, onshore bench, cafe / restaurant, pedestrian road / region, square, vehicle road, green area, park, picnic area, windows, balconies, terraces, etc ....). While this second method is being followed, through the screening of photo archives, the stream of communication with the citizens is also looked at in place of the memory of the city. Basic outputs of the study; It is on the route that Porsuk follows in the city that it has spatial patterns

which are differentiated in some ways and resembled in some ways. The different parts of spatial patterns; the city center clearly shows itself mainly in three parts; the part between the city center, the city center and the boundaries, and the boundaries. When similar parts are evaluated, it seems that there is a tendency towards the direction of construction. However, even in the case of urban rivers, reconciling approaches to nature and the built environment should not be ignored. The sustainability of the meaning that Porsuk carries for the city; instead of short-term and consumption-oriented quests, long-term and streamlined solutions are needed that will not risk renewing itself.

**Keywords:** Urban river, urban identity, serial view analysis, Porsuk River, City of Eskisehir.

# The Effect of Change and Transformation in Urban Areas on Soundscape: The Case of Eskişehir

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**ABSTRACT**

The social, economic and managerial changes that take place in cities over time change and transform the urban environment and the space by influencing the process of development, change and transformation of the city. The changes and transformations in the cities cause not only spatial changes but also changes in environmental conditions in the city. The aural features of the surrounding area are also among these environmental conditions.

Sensors enter the circuit in determining and defining the auditory characteristics of the environment. The environment around people is visually perceived as 90%, and auditory psychology is of secondary importance. For this reason, terms used in visual perception are used in defining the auditory environment. This brings convenience in terms of the way in which soundscape are handled and expressed. In this context, it is mentioned that figure-ground matching in visual perception can be used to define soundscape. According to Gestalt psychology, which distinguishes between the figure and the ground, the figure is the focus of interest and the ground is the time and the environment or the circumstances. Later, these terms were added to the area that the observation was made and that defines the space. It is suggested that Schafer performed auditory perception in three categories. These are "keynotes," "signals" and "soundmarks." These terms are also defined as auditory landscape components. In the auditory landscape approach, the figure in the visual perception represents the soundscape, which is the environment in which the sounds spread, if the signal or sound mark is the sound of the background environment (keynote sounds). However, since an soundscape is made up of hearing events, not objects, it is difficult to reveal an soundscape change within the process of historical change and transformation. To get an idea of the soundscape of the city or part of the city in question, old audio tapes, audio tapes can be used to get information from those who have witnessed the past. However, if audio and / or live sources can not be reached, it is possible to make various inferences about the changes in the visual landscape by using a lot of images taken at different times, drawings and maps showing the changing appearance over the ages before them, and also by using visual perception.

With the establishment of Republic in our country, in the cities started to change and this change accelerated in the 1950s. Eskişehir is one of the cities that started with the Republic and where the ongoing process of change and transformation was clearly experienced. While the urban development in Eskisehir was unplanned until 1950s, the plans in 1956, 1986 and 2002 shaped urban development. Urban plans have caused changes in the urban soundscape due to the distribution of functions, their influence on the transport network and systems. The aim of this study is to show how the changes and transformations that have been experienced since 1900 in

Eskisehir affect the soundscape of the city through keynotes, signals and symbol sounds based on macro, medium and micro scale, old maps, zoning plans, photographs and documents. As a result of the researches and evaluations made, it has been revealed that the urban change and transformation in Eskisehir during unplanned and planned period changed the physical space and spatial usages and this change reflected in the soundscape.

Odunpazarı, Hamamyolu, Porsuk River environment and Industrial Region were determined as research area in this study. In the study, it was researched what kind of influences and transformations of urban areas such as the spread of entertainment and recreation places in the city center, reorganization of highway and pedestrian way connection, inclusion of railroad transportation system in urban life. With this work; emphasized the importance of the concept of soundscape in terms of urban identity / acoustical identity. Urban planners, architects and central and local governments who are influential on the and changes and transformation of cities are required to take into account the perception of soundscape in the design and transformation of cities and / or urban parts.

**Keywords:** soundscape, Eskişehir, change, transformation

# Analysis of Originality in the Traditional Urban Texture of Sivrihisar District by Rule Based Analysis Method

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**ABSTRACT**

Sivrihisar, which is home to many civilizations, has survived until today by preserving its original quality of the traditional urban texture. This urban texture is characterized by the influence of different civilizations and cultures, while cognitive and self-repeating rules on different scales.

In this study, Sivrihisar was analysed with shape grammar, a rule-based analysis method of traditional urban texture, and it was investigated how the rules of the City were formed step by step. Shape grammar analysis method was chosen as a tool for abstracting the steps in urban formation and making them understandable and interpretable.

As a result of the analyses carried out with the grammar of the form, the rules of shaping of the traditional urban texture were adopted and the purpose was to define the urban texture and to analyze the logic of how architectural elements were formed.

The aim of this course is to investigate the relationship between urban elements, the structure and the focus of these abstractions, which are used in the area of usage of form grammar and which are used in the analysis of existing language, designs and architectural styles (analytical) method.

In this study conducted on the city scale, Sivrihisar traditional urban texture was studied in the center, sub-centers and related neighborhoods. The rules for the formation of the traditional urban texture are collected in 3 main headings. These are;

A. Central region formation,
B. Sub-center and neighborhood formation,
C. The traditional urban texture.

Elements of the formation of the central region, religious structure, the architectural elements feeding the square and square, fountains, baths, parks, etc. it was observed that these elements were formed within the framework of certain cognitive rules when they came together. This square is surrounded by commercial spaces. Trade places have been established for the sale of fixed goods and the challenge is used as a market place where food is sold. The central region is connected with the main transportation routes and the surrounding cities, while the streets are connected with the housing. It has also been observed that these cognitive rules repeat themselves on a smaller scale

in the lower center and do not become deformed. In sub-center areas, the square is open areas that are not designed by itself, with the expansion of the street or the intersection of several streets. These squares are usually located around the mosque-Masjid. These squares are connected to the main building via the streets, while organic streets are also connected to the neighborhoods. The settlement of the houses and the formation of the sub-center are completed.

The rules that are based on human and nature are also compatible with these. In this study, these rules were analyzed step by step and fictional rules were adopted. In this study, it was found that the traditional city was formed on the basis of the rules and it was the focus of functionality in these rules.

Analysis of the traditional urban texture; the square, neighborhood, centrality, settlement of buildings, focal points and fictional priorities, analysis of the elements forming the city between each other were resolved.

Three basic relationships were used when examining the sample of urban tissue. The first of these parameters were the centrality concept, which includes spatial arrangements that define the city center and the urban life connected to it, the sub-center, which expresses the urban layout where several small families come together in the vicinity of the housing area and the scale of the housing in the housing area.

The texture of the city was analysed by form grammar in the context of architectural language. It is aimed to determine the relation between abstractions and urban elements, the whole of fictional rules and the focus.

As a result, the traditional urban texture has been shaped by cognitive rules that prioritize the social cultural structure, which is human-oriented, organic, functional, and harmonious with nature. With this study, it is aimed to use Sivrihisar traditional urban texture as a database for shaping design that can be transferred and/ or interpreted in New City designs.

**Keywords:** Sivrihisar, traditional urban texture, rule based analysis, shape grammar, architectural design

# The Story of Mediatic Urban Transformation

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## Abstract

In recent years, urban transformation is very popular issue at architecture and urban planning in Turkey. Not only architects and urban planner but also academicians who are interested in the theory of urban transformation are trying to discuss, evaluate the process and conclusion of urban transformation. One of the most important stakeholder that affect the issue, beyond architect-urban planner actors, is the real estate investor. Urban transformation, that was proposed to use for the buildings that to have potential damages in disasters, is now being used to revitalize the marketing system toward the real estate and areas, where monetary value is weak. This process is not only limited to the transformation of building but also transforms on parcel-island-neighborhood basis. Thus the market value of the structures with very low financial values has increased considerably. In this context, existing buildings are destroyed without thinking their values (architecture-design-history-technical-green area ... etc) in the transformation and new projects are satisfied both the owner and the investor. One of the cities, where such projects (urban transformation studies) were conducted, was Kayseri. In Kayseri, where had a very rooted history, urban transformation studies have been started in many regions. Some of the areas, in which the urban transformation studies are carried out, are available structures/areas with technically serious security problems but some are which called as a collapsed area, located in the city center and user profile is changed and also comfort conditions are not adequate, are also evaluated in transformation despite have no risk. The main target of the article is to explain how real estate/areas, where the monetary value is weakened, have transformed their monetary values and how this transformation has brought great returns for the investor and also how they are valued and put forward by urban transformation is also explained on an example. The example chosen as the article case is Sahabiye Distirct which is located in Kayseri city center, that has many original values such as historical, architectural, technical, material and it also shaped by the first plan in 1944. It's transformation story was started by competition that had no jury (contrary to the competition law in Turkey), competition was not concluded then three architectural offices prepared transformation plan and this plans were voted by public and one of them is chosen and chosen plan is started to implementation. Other topics, that evaluate in the article, are "Monetary" transformation in the city center under the urban transformation of the Sahabiye District, which was constructed with a low-rise, garden, modern design approach in the city center. In the article scope first of all, the historical background of the district will be briefly explained and then the urban transformation process will be discussed and finally the final product will be evaluated. Apart from all these parameters, investors' point of view on the field will also touch on how real estate value of the area increase.

**Key Words:** Urban transformation, Real Estate Market, Sahabiye District, Kayseri.

# CITY - APPLICATION - TRANSFORMATION 3

# Reviving the Past to Protect Future: Sustainable Strategies for Brownfield Regeneration: Bursa Sıcaksu Leather Tannery Region

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## ABSTRACT

Regeneration of brownfields located in city centers through sustainable strategies has become a major issue after 1980s. By the impact of economic restructuring and environmental movements all over the world, traditional industrial lands lost their importance and some cities has become to implement new development strategies in their transformation process from manufacturing city to service city. Even though brownfields represent opportunities in order to obtain sustainable development with their strategic locations, they have also some obstacles in terms of environmental spatial and socio-economic perceptions. Especially the contamination on land and surface water and decline on the region have raised the problems to high levels.

In Western countries, the brownfields regeneration have handled in a way to include all the main dimensions of sustainability concept (economic, social and environmental ) and these areas regained to cities by performing comprehensive public participation processes. Because of the need of distinctive approaches from the other regeneration lands, local and central governments allocate financial supports and reformulate new legal regulations for brownfield revitalization.
In Turkey, many urban regeneration projects has put forward in cities in order to eliminate spatial problems, to obtain more livable urban environment, to offer more qualified urban areas and to canalize the urban development through sustainability principles till now. However, most of those projects have negatively criticized by urban planners and architects because of their impact on urban rents and also their exposing more complicated problems from their former uses. In many of those projects human health, urban traditional structure and city vision for the future have generally neglected with the motivation to do the greatest and most rentable project as soon as

possible. In brownfields, although the negative effects of the contamination on land on human health, all the environmental factors are disregarded and only concentrated on industrial heritage and city marketing.

The leather tannery industry which has an important role in Turkish economy has become on urban debate with the transformations of their former locations in the city centers. Traditionally they located along the waterside to supply water and for waste disposal. Leather tannery industry use organic and inorganic chemical materials (toxic and/or dangerous) and water in huge amounts. Therefore, there is a risk to contaminate the soil and underground /surface water.
In this paper, it is aimed to evaluate the brownfields revitalization projects in Turkey through the analysis done on Sıcaksu Leather Tannery Region in Bursa in accordance with their impact on human health and sustainability.

As the fourth biggest city of Turkey, Bursa has a leading role in culture, tourism and industry. The brownfield revitalization issue is evaluated regarding with the field research results on the Sıcaksu Region in 2017 and soil analyze, done by an internationally accredited company. These analyses results indicate that there are arsenic, chrome and nickel in the soil, in the amounts of excessing the limits of Turkish Environment and Urbanization Ministry and EPA. It is known that touching by skin or breathing these chemicals can cause cancerogenic impact on human health. In this context there is no doubt that for the sustainable development of the city the region should be remediated from those chemicals at the first stage of regeneration.

Those results obtained from Sıcaksu Leather Tannery Region also show that similar risks can be existed in the brownfields which are located in other cities of Turkey. Therefore there is an emergence need to fill the gaps in legislation and implementations. This study is also original and valuable because of its being the only research which draws attention to the environmental dimension of brownfield revitalization not only in Bursa but also in Turkey.

**Keywords:** Brownfields, regeneration, environmental risk, sustainability.

# Analysis of Urban Transformation Works during the Process of Constructing Habitable Cities: The Case of Bursa

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**ABSTRACT**

The concept of urban transformation is expressed as a comprehensive vision and action aimed at providing a permanent solution to the economic, physical, social and environmental conditions of a region which has been subjected to a change in order to generate solutions for urban problems. The main aim is to raise the living standards of the individuals living in these regions by rehabilitating the settlement areas that have become collapse zones,

Urban transformation applications happened firstly as the implementation of projects that would contribute to the economic development of the city in the former abandoned ports and industrial areas, in the housing areas where low income groups lived in poor economic and physical conditions and their social solidarity vanished in Europe in the 19th century. In particular, the renewal of the destroyed and burnt down cities in World War II, the restoration of the damaged cultural heritage, the obligation of reviving the economically depressed areas, have caused the concept of urban transformation to emerge.

The urban transformation projects in Turkey which come to the agenda after the 1980s have been implemented as the rehabilitation in the regions with historical texture, the collapse zones and the slum areas of which transformation could not have been carried out with the correction and reconstruction plans. After Law No. 6306 adopted in 2012, apart from the slum areas, the urban transformation works in Turkey have been carried out in the residential areas in a central location of the city described as with a high rent value but risky.

The purpose of this study is to analyze through a critical eye to what extent the urban transformation projects prepared in the framework of establishing safe habitats by raising the quality of life in the regions of the city which have become old and depressed socially - economically - physically - spatially have achieved these goals. In this context, the basic variable directing the study will be the framework offered by Law No. 6306. The spatial projection of the study is the urban transformation works carried out in the towns of Yıldırım, Osmangazi and Nilüfer which are the central towns of the city of Bursa.

It is estimated that the population of Bursa which is the fourth largest city of Turkey will reach up to 3,4 million in 2023. Due to the pressure of increasing population, the existence of wornout - risky building stock in the city, the earthquake risk and the high rent on the lands of the city, the reconstruction activities in the three central towns of the city - Osmangazi, Yıldırım and Nilüfer have started to pursue a development focused on urban transformation. Approximately 33% of the town of Yıldırım where the unplanned settlement is the most intense in Bursa is planned to be renovated by urban transformation works. Urban transformation works in this region have been carried out by the municipality because of the low rent value of the region. In the Osmangazi district, the

arrangement of the squares, structuring in the region defined as the reserve building area have been rapidly carried out. The Nilüfer town which has a planned and qualified building stock, has become a preferred region for private construction companies with the precedent decision of a 0.50 increase of the metropolitan municipality. The proposals of the investors are being evaluated by holding transformation meetings in the sites built before the earthquake of 1999. With the precedent increase, in the transformation works in which 8-storey and higher construction is planned by removing the 4-5 storey sites, it is observed that the building stock has been increased but the technical and social reinforcement area has remained fixed. Within the scope of the Law numbered 6306, transformation works have been initiated in a total of 156 sites in the town of Nilüfer in 2016 - 2017. In 2018, the urban transformation works in the region have been suspended due to the fact that the implementation of the 0.50 precedent increase is unlawful.

In this study, how the process have functioned, what the role of the people during this process was in the transformation works which have been carried out either by private construction companies or under the coordination of the local governments will be examined. By conducting markings on the city map for the aim of facilitating the spatial traceability of the transformation works carried out in the city, the scope of the urban transformation works - the implementation methods will be seperately handled on the basis of towns. In the final part of the study, to what extent of success have the urban transformation works carried out in the city of Bursa reached towards attaining the goal of establishing sustainable, safe and quality living areas, what the physical and environmental problems witnessed in this process are will be analyzed.

**Key words:** Urban transformation, sustainability, life quality, urban rent, Bursa

# User Identity and Authenticity in Existing Housing and Environment: Bursa, Hürriyet Neighborhood

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## SUMMARY

Nowadays uncontrolled population growth and urban growth; identity, belonging and the disappearance of the place, and identity. Bursa, one of Turkey's major cities, industrialization and rapid population growth with immigration cases has survived. Increased population, uncontrolled and rapid urbanization, migrant communities around industrial areas were established, and planned or unplanned houses were formed in different regions. One of these neighborhoods founded on the basis of relations between kinship and fellow citizenship is Hürriyet Mahallesi. In the master plan prepared by Osmangazi Municipality for the areas to be intervened in urban transformation, Hürriyet Neighborhood is located in the region (Region B) where plans will be rearranged and urban design will be implemented. Hürriyet Mahallesi is a region inhabited by Bulgarian immigrants who came to Bursa during various immigration periods since 1950's. Planned, but with the formation of different housing typologies over time, it has become possible for the residences to vary in street, garden and courtyard relations. There are differences in the semi-open, the open-closed area relationship or common usage areas. The identity, culture and migration habits of immigrants have caused changes in the built environment in their new places. The user's intervention in the housing and housing environment can be regarded as strengthening the quality of living, loyalty, belonging and quality of life, shaping the place of living according to his own needs and life culture. At the same time, as a reflection of the culture, the creation of different uses and physical elements around housing and housing is an indication of identity and authenticity. In this context, in the design of housing and residential surroundings, needs, desires, anticipations and culture, it is important to strengthen the sense of belonging as well as to create a unique "original" design approach. In this context, the research questions are as follows:

• Does the intervention of the user's residence and environment in relation to the residence and the user strengthen the belonging and the place where it is attached?
• Can the physical interventions made by the user be a sign of your identity?
• Can the specific design be developed to create similar uses or relationships with the acceptance that the interventions reflect the need or identity of the user?

The issue of working constitutes a research on identity, local authenticity and quality of life in the Hürriyet neighborhood which is within the urban transformation area of the B region. The aim is to develop an "original" design approach by utilizing local data versus "identification" in residential projects produced through urban transformation. As a method, literature survey and questionnaire

application were determined. Questionnaires were prepared by investigating the literature on the immigration phenomenon in Bursa, the formation and change of Hürriyet neighborhood, identity, belonging, locality and authenticity. The face-to-face interview and survey technique with the housing users determined in different typologies and the intervention of the user, the locality and authenticity were questioned. Suggestions have been made for the unique architectural design approach aiming at strengthening the sense of belonging and belonging in the future in the residential production of Hürriyet in the light of the obtained findings.

**Key words:** Migration, identity, housing and environment, locality, authenticity

# Subculture Areas and City: A Case Study for İnegöl

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## ABSTRACT

A large part of the population in our country lives in the cities. Especially in the period of after the Second World War, the migration movement from rural areas towards cities, which reaches a visible level, also continues today. All the individuals who immigrated to the cities from rural areas are classified as urbanite or included in the urban class. The determinants of this process are the inclusion of immigrants who are urbanite residents in the urban, economic, social and cultural areas which also constitute the urban identity, as well as a close relationship with the new settlement area from the geographical point of view. Much of the immigrant population who are concerned about the need to provide housing and security needs primarily and at the same time in the most economical way is located in the slum areas where the rent is lower than the city centre. Therefore, the slum areas are in constant interaction with the countryside. To put it more clearly; the slum areas are fed from the countryside. The slum areas, which are home to an intense population that has not yet reached urbanite identity, are separated from the city centre in terms of their identity. As a result, subculture areas are emerging as well as areas where urban cultures are experienced.

Geographically assessed within the city Subculture areas should be organized in such a way as to encourage urbanite identity to be acquired in a short period of time rather than the architectural qualities of the immigrant rural settlements. In this respect, housing types and street structures that will determine the social life will enable the urbanite identity to be acquired in a short period of time. At the same time, the planning and implementation of urban design should also prevent the emergence of social divisions.

In this study, two different subculture areas, Üçevler Neighbourhood and Kalburt Location, which are located in the İnegöl district of Bursa province, were determined as the study area. Primarily; cultural, economic and social similarities and differences of the subculture areas subject to the study, in order to understand the general qualities of the subculture areas in terms of determinants such as geographical, cultural, economic and social similarities and differences. As a result of similarities and differences, it has been attempted to understand the extent to which these two subculture areas can be included in urban life. Thus, a number of conclusions have been reached on how to accelerate the process of subcultural involvement in the city.

In this context; if the residential types and the non-residential areas are similar to the residential types and street structures seen in the city centre, the process by which the individuals can be included in the urban life is accelerated. Similarly, the urbanization process is positively shaped if it

is in continuous contact with the city centre for economic or social reasons. On the other hand; activities such as agriculture and farming, which enable the rural lifestyle to be sustained, have been reached the conclusion that the individual negatively affects the process of being involved in urban life.

As a result; when urban planning is being done, a socio-cultural entity must not be thought of as a mechanical entity; on the contrary, people's social forms of life, their tendencies and concerns must be taken into account. On the other hand, cities differ from each other in that they have certain characteristics. In this respect, the regulation of urban areas and the urban planning that shapes human life are not considered as absolute truths, and all the changing conditions regarding urban and urban life must be taken into account. Emphasis should be placed on the creation of social spaces that will allow socialization and the design of street structures in this direction. The main concern of urban regeneration approaches should be related to the sustainability of social life. Therefore social life should be supported while creating communal spaces of common use.

**Keywords:** Subculture, slum areas, urbanite, social life, İnegöl

# Old Villages – New Districts of the City: A Field Study in Gebze Villages

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## ABSTRACT

Due to population increase and growth of urban areas, rural settlements at the periphery are left under the pressure of transformation. While "rural" is corroded as a concept, rural areas turn into low cost lands and the share of non-agricultural sectors in rural areas increases. In this sense, transformation of the rural areas at the urban-metropolitan periphery should be analyzed not only spatially but also with its environmental, social, economic and cultural aspects. In the process of policy generation, objective sets of different agents are reconciled. Nevertheless, recent regulations about rural in Turkey have become a new point of discussion. While the abolishment of village status with legal regulation had effect from settlement to life style in rural area, it is not possible to say that locals had the right to speak in this transformation-transition process. Moreover, damage on rural life and village culture depending on agricultural and incentive policies encourages transformation of rural areas.

"Proximity" of rural areas at the periphery is an important factor in transformation process. "Proximity" enables access to services such as education, health services, thus it becomes possible to live in rural area and commute to the city. Moreover, thanks to this "proximity", weekend activities and facilities built for this aim, short-term (holiday-weekend-summer cottages) accommodation villas or sites for upper-middle income group, storage facilities for industrial areas and even new industrial buildings, mass housing built by actors such as cooperatives or TOKİ can be possible. It is seen that in recent years those who migrate to city from other cities and even from other countries settle to these "proximate" villages. This situation defines a new and complex process in which the immigration is not only from rural to urban places, but also from urban to rural places as well.

This study focuses on the rural areas of Gebze, which is in similar process. Although Gebze is in the border of Kocaeli, it was industrialize under the effects of growth dynamics of Istanbul metropolitan city and attained its current industrial city image in this way. Despite the dominant industrial image of the city, it has seventeen villages, which have valuable agricultural area and forest. Although these villages have turned into districts with the recent law, rural life and agricultural activities are still sustained largely. In this study, the aim is to determine current situations of these villages, which have turned into districts, define the aspects of transformation and put forward how the rural-urban life dilemma is considered on local basis.

In the first chapter of the study, following the introduction, the concept of transformation in rural area is addressed and sub-dimensions of transformation are defined. In the second chapter, legal regulations about rural areas in Turkey, differentiations in policies, change of village status in time were discussed. Development dynamics of Gebze and current status of rural areas were discussed in the third chapter. In-depth interviews with the local actors in the field were presented in the fourth chapter. In this sense, views of muhtars (village headman) and members of village were taken about prominent issues in rural area, and views were taken about the direction of change in rural area, dynamics, effects and future predictions from related institutions in urban area. Conclusions obtained as a result of this process were discussed in the final chapter and policy suggestions were presented for future practices.

While the example of Gebze puts forward that there is a pressure for intense housing and industrialization in villages proximate to the city, there are also problems resulting from industrial pollution and misuse of agricultural lands in agricultural production going on in the same villages. Among these villages, there are examples in which the social structure has changed due to immigration and the village gained cosmopolitan structure. In the villages, which are away from city center, problems arise from agricultural policies and process of transformation to district and difficulties of access to services were observed. It is analyzed that there is a need for further researches that would consider socio-cultural characteristics of rural areas apart from agricultural areas and forests. One of the most important arguments of the study is issues of bringing service through municipalities to the fields of agricultural and rural production and monitoring of practices by municipalities include potential problems whose results would emerge in the future. In this sense, it is seen that; effective and coherent policies for the whole rural-urban areas should be generated and it is necessary for related institutions to specialize about rural areas and rural development for they have effect on development dynamics and planning processes of rural settlements.

**Keywords:** Gebze, rural, urban periphery, transformation, urban growth

# The Impact of Closed Housing Settlement on Urban Formation and the Factors of Cultural Change: İzmit Example

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The places that are expressed in terms of house, nest etc. are places where people are confronted by themselves, where they feel free, relieved, trustful. The shelters they have built with the purpose of protecting from external conditions since the first man, continue with the importance with many elements included in today. The globalizing world differentiates many habits, changing cultural elements. Traditional attitudes and behaviors leave place to innovate with cultural exchange. Fashion actions that are not found in their own culture are accepted within the society. On the other hand, changes such as growing cities, difficulties in transportation, problem of trust, being away from co-friends, covering a large part of the business day and diversification of needs constitute differences. Life is changing, changing.

Housing settlements are also taking advantage of these rapid changes, new initiatives are being proposed and new projects are being implemented to ensure sector profit. Compact living spaces are located in residential sites. Many more activities, including a gym, swimming pool, movie theater, cafeteria, dry cleaner, hammam, sauna, are now only one step away from their homes and access to these facilities is provided through the life of traffic. Site administrators and security units are responsible for the safety of property, property and family members. The neighborhood also has improvised neighborhoods. Now you can greet someone in the garden, you can make new friendships in the hiking trails. The holiday is next to you.

The situation in Kocaeli Province is not different. Located in the area called Bithynia in the early ages, the city was home to many civilizations. During the Republican era, the residences and cooperative houses were built in the region where the industry started to develop. The people of İzmit have always wanted and aimed to be an influential and homeowner who has always worked in a salaried work, regular income. First, building around the industry has begun. Because it is located between the province, the mountain and the sea, there are fewer flat areas, so today the settlement begins to slip towards higher places.

Within the last 40-50 years, the construction, which started with the construction of detached houses and co-operatives, has continued to present different types of plan with the construction industry affected by the fashion. The apartment building has started to build and market garden, duplex, triplex houses in villages and districts in urban residential areas and later in local settlements. Those who wanted to try new things, who thought that their dreams would come true, got houses from those sites. However, when they realized that they were in need of city due to reasons such as work, education and health, this fuss in the 1990s left their place to city turnaround.

Construction companies do not give up their site housing applications. They continue to produce ideas to sell their dreams to people with different concepts, different names, functions, activities, beautiful modeling drawings or models. Following the trends, new trends continue to diversify

when they arrive daily. Residence, mansion, park houses in the project such as duplex-penthouse duplex penthouses are about to saturate.

In this study, who took the lead among the most popular immigration counties, which in the metropolitan status, the people most of the work salary in the public sector or industry, Turkey's expensive cities in located in Kocaeli state of the housing sector, customers are offered a which project, how the traditional life with new life how the urban interface is affected by this change.

Neighborhood and neighborhood relations in traditional settlements have left their place to the neighborhood of the site. People who can pay the same fee live in the same place. In contrast to the expectation that the difference of education, family structure and cultural elements will be heterogeneous in the traditional neighborhood, it is a situation that comes from a homogeneous gathering, a place where respect, love feels, Ownership of the neighborhood, its protective nature, its sense of privacy, its communicative attitudes, its own safety has now been replaced by a sterile life separated from the city by the garden walls, the club of the security officer.

As a method, literature review will examine the existing touch, the observation, the characteristics of housing projects. In fact, the change of the construction means the change of the city's fiction, roads, streets, and streets. The nature of the stores, the location of the schools, the changing of parking needs. That is, life, culture, activities and perceptions are changing with indoor residential settlements. People who are members of the collective are not confident, they live in a safe area, but they have a sense of people who have to go to work, to go to school, to go to the area that is unsafe for them to get involved.

The type of building that is housing the most circulation in Turkey. It is desirable to have the ability to live, to create status, to relax in the summer, at the weekend, to leave the children, to put their head. With its sociological, social, technical and technological dimension, housing is not just four walls. One of the most important issues in terms of architectural profession in the indoor residential settlements built as mass housing is to know the user and design the average general user profile. The houses offered to the market are also tested by trial and error with the possibility of easy loans, but they are tested whether they respond to the request at the time of their living.

It will be very important to know and understand the lifestyle, culture and culture of the user and his wishes, as in the period of traditional settlement, in order to sustain and protect the environment in the construction of each unit that returns the world and the nature to the built area.

**Key words:** Kocaeli, housing, closed housing settlement, change, culture

# Sustainable Planning Approach: Case of Bolu

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**ABSTRACT**

From that time on they began to appear, the cities have been shaped by the history they inherited from the past, the culture that joined them, and the geography they are in. In addition to the geography-culture-time components included, the city identity is shaped by the life of the residents of the city and the traditional heritage elements that describe this life. This form, emerging in historical and cultural conditions, constitutes the common memory of the society on the one hand, and on the other hand leads to the change and transformation in the city alongside the changes experienced in the forms of social relations. Urban identities are formed by being affected by every change and transformation in society in the long term. For this reason, the city not only has its own identity; but also the identity of those who live in it.

In spite of its evolution from physical and technical needs, but today planning has become a more flexible and versatile structure / mechanism. During this change process; it is important that living areas are accepted as places that live with economic, ecological and social aspects and shape our way of life, so that works for the creation of sustainable living spaces should be realized and this should be done through "participation" mechanisms. However, it is seen that neither the world nor the country have fully included the planning approaches developed in this context in practice. Accordingly, discussions are carried out within the framework of concepts and applications, experiences and perspectives are shared, studies are being done to define the points that are mentioned as "must" and the standards related to them.

In recent years, starting with the reason of the social, economic, technological developments experienced in the world and in Turkey, globalization process have brought about a rapid urban change the transformation process, too. Except for the positive returns of this process, unidentified cities included unplanned, undeveloped and unhealthy urban environments have emerged as a result of the policies implemented; consequently they fail to satisfy in meeting people's needs. By recognizing these negative developments that have emerged, the concept of "sustainability" has been put forward and the ways of actualization have begun to be investigated. Depending on the changing lifestyle, the threat to natural resources has led to a focus on the physical dimension of sustainability, and the search for solutions to these problems has begun. Yet the socio-cultural dimension of sustainability, which is often neglected in the context of these quests, is an important requirement in ensuring sustainability of fundamental changes to the social, cultural and economic organization at the ecological level.

Parallel to the developments in the world, efforts are being made to produce sustainable solutions in order to preserve the richness and diversity of existing cultural assets in our country. It is necessary to develop new solutions in accordance with the country structure, conditions and the number, quality and importance of our culture assets, rather than international practice examples and solution models are directly adhered to our country. These original solutions to be produced must conform and overlap with international contemporary approach and application principles.

It is clear that destroying the physical environment shaped in the national culture and replacing it with new is destroying one of the roots of historical continuity and consequently of history consciousness. In the context of today's urbanization conditions and planning practices, the ways in which people adopt their habitats to date are ignored. In this context; there is a need for action plans based on values and providing local development.

Purpose of the study is based on the main theme of "Cultural Sustainability" by examining the effects of the basic concepts of sustainable planning on the city / the evalution of today's conditions of the city of Bolu as the study area by mentioning yesterday's Bolu and presenting a strategic direction for its tomorrow.

Scope of work basically divided into six divisions. Following the first chapter telling the purpose and scope of the work, a general introduction is given to the subject of the second chapter in which the emergence of planning discipline, what changes and developments are witnessed in this process, and the sustainable planning approach. In the third and fourth sections, in particular the conceptual descriptions and explanations of 'planning' and 'cultural sustainability' are detailed, various examples from different experiences and studies in the world are presented. In the last section, which includes the results of the research and evaluation on the selected Bolu city as the study area, there is an evaluation and conclusion part that the researches related to the conceptual infrastructure and the sample area mentioned and described in the previous sections are related to each other and connected to one another.

In this context, culture is considered as the main component of planning and in this context, it is emphasized in conceptual framework as an indispensable part of sustainable planning approach. First, selected from the world and Turkey focused culture models and application examples of this conceptual framework examining in particular, are open to evaluation. Then, the scope, targets and applications of planning studies focused on strategy development and vision definition made in our country are compared with the planning studies made in Bolu city which is selected as a study area. Based on the data obtained as a result of the literature review, "culture-oriented vision", the example of the suggestion action implementation plan is open to debate.

**Keywords:** Sustainability, planning, culture, urban, Bolu

# CITY - APPLICATION - TRANSFORMATION 4

# Antalya City Urbanization and Environmental Issues: Konyaaltı Beach Project

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## ABSTRACT

Urbanization is described as the development of urban life. There are some problems that urbanization brings. These problems in Turkey, the problems arising from mistakes of the urbanization movement. People who migrate from the rural area to the city often form unemployed, secret unemployed abundant cities. It is possible to deal with the problems that urbanism brings to our country in various ways. All problems can be examined under two headings: economic problems and social problems. When considering the city of Antalya on urbanization, that contain significant differences from growing cities with activities such as trade and industry in Turkey reveals. Antalya's urbanization process that began after 1980 with investment in tourism was first brought him to a different location from the other major cities of Turkey in terms of population growth. This rapid population growth has accompanied an intensive immigration to Antalya.

Konyaaltı Beach is one of the city's landmark, and to allow the use in marine and coastal length of approximately 6.5 kilometers and the city is also an important beach for Turkey and the world. Antalya Konyaaltı coastal region; has a unique identity with mountains, beaches and cliffs. The city has retained its charm for many years as a tourism center with its coastal potential and other natural beauties. In coastal areas excessive use of resources, intensive settlement pressures are result of environmental problems of peculiar to coastal areas. These problems are experienced intensely throughout the city of Antalya and rapidly destroying the natural resources of the city. These problems have made it necessary to use the Konyaaltı Coast in a more favorable way. For this purpose, a new project has been designed and started to implement.

The purpose of this study is to investigate and interpret the positive and negative effects of the Konyaalti Beach Project, which is considered and implemented in the re-planning and design of the Konyaalti Coast, in the region. At the Konyaaltı Beach Project; The project area on the 6.5 km coastline is 1.090.000 $m^2$. 257.000 $m^2$ of 290.000 $m^2$ coastal area is open to public. There are 30,000 m2 of additional green space, includes 5,504 new trees and 33 buffets. The main objectives of the Konyaalti Beach Project are; To reinforce the city identity of the city through the sea coast which is the most important value of the city, to make the urban coast accessible and perceptible for every kind of user, to strengthen the access and access opportunities from the near and remote environment for the functional vitality of the area to have the urban meaning, strengthening and diversifying the western coast of the city, facilitating the macro-level accessibility of the coastal

lane, which is the center of attraction for the city and the region, enabling physical integration with nearby habitats, and creating a park with a swimming pool that meets the ''Blue Flag'' criteria for domestic animals.

Today, solutions to reduce environmental problems are being implemented in many areas. The number of new construction sites and constructions has been increasing steadily for various reasons, mainly population increase. However, should an earthquake in Turkey, the cities economic, social and physical problems, especially in large cities has led to the need for large areas of urban transformation.

In the Konyaaltı Beach Project, Minicity, which is used for a different purpose, has been demolished and left a serious amount of structural waste. The recycling of these structural wastes and the use of recycled materials in the construction of the planned structures and may be of considerable benefit to the environment. The materials to be used due to these reasons; sustainability, recycling, energy conservation, less consumption of resources, etc. must be selected by the project designers and project implementation officers, taking into consideration the characteristics.

**Key words:** Urbanization, environmental issues, Konyaalti Beach Project, sustainability, waste.

# Environmental Impacts of Building Renewal

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**ABSTRACT**

Areas of low quality and with infrastructural problems are formed as a result of applications that are rapidly being implemented to meet the increasing housing needs caused by the rapid migration from rural to urban areas and therefore the rapid increase in the urban population. Urban regeneration applications that have emerged due to the necessity of transformation, renewal and improvement in accordance with the needs of cities over time are defined as actions aiming economic, physical, social and environmental improvement in order to solve problems. Urban regeneration in Turkey ever since the 80s has attempted to develop through different laws and regulations. Urban applications that have initially emerged with the purpose of improving the slum areas, have gained momentum through the law concerning "Transformation of the Areas under Disaster Risks" that was enacted in 2012 as a result of questioning the earthquake endurance of the existing building stock especially after the Marmara Earthquake of 1999. The aim of the law is stated as, "to determine the principles and procedures for improvement, liquidation and renewal in areas under disaster risk and in lands and terrains housing hazardous structures outside these areas in order to constitute healthy and safe living conditions in accordance with science and art norms and standards". Besides the area-based execution of regeneration applications, there are also parcel-based building renewals. Regeneration application of individual structures is called building renewal. Individual transformations have numerous impacts on an urban scale to environmental, spatial, social, cultural and economic extents especially since building renewal applications on a parcel scale are carried out frequently and in large numbers in certain areas of Istanbul.

Environmental pollution, resource depletion and environmental sustainability, which are becoming more of an issue in the 21st century, are being discussed deeply in the architectural sector due to the large share of buildings in total energy and resource consumption. Cities, which are the main source of carbon emissions, face environmental problems such as air and water pollution. One approach to solving environmental pollution caused by buildings is the approach of life cycle assessment. The life cycle approach tackles the whole life cycle of the building from acquisition of raw materials to demolition of the building.

Many environmental problems are encountered when evaluating all of the life cycle stages of building renewal applications. The damage caused to the environment during demolition phase of the existing structure, the embodied energy of the products used, the damage to the environment caused during the construction phase, resource overconsumption and poor waste management issues can be compiled as some of the problems. Urban regeneration aims to tackle environmental pollution by taking the values of every social group into account. Building renewal which is being

implemented as a subtype of urban regeneration must take measures on environmental pollution besides providing safety against earthquakes and creating a healthy environment.

The purpose of the study is to determine the environmental problems caused by building renewals within the frame of building life cycles. The research questions of the study consist of what the environmental impacts of regeneration are and in which particular stage of buildings' life cycles these environmental impacts occur in cities that are rapidly transforming. In the study, primarily approaches building renewal applications and life cycle concept, the environmental impacts that the building renewal applications have on the scope of life cycle are presented through literature study, mapping and photographs. The study covers renewal applications on a parcel scale.

The studies on urban regeneration handle the subject by focusing on transformation types on an urban scale. The studies approaching the building renewal topic examine the applications on a parcel scale from the points of actors and process. As for building life cycle studies deal with cycle as product production, construction, operation and maintenance/repair, demolition/recycling; lacking the demolition stage of the existing structure which is also at the beginning of building renewal and has significant impacts on environment and human health. There are no studies in literature that discuss structural life cycle, city transformation through building renewals and consequently emergent problems in conjunction.

According to the data published by the Ministry of Environment and Urbanization, out of nearly 19 million housing in Turkey 6-7 million are in need of renewal or reinforcement. When this data is considered, revealing the environmental problems caused by building renewal applications that are carried out as a branch of transformation practices becomes even more important. The study is considered to be beneficial to practices aiming to determine the issues that need to be tackled when trying to solve environmental problems concerning building renewal.

**Keywords:** Urban regeneration, building renewal, environmental impacts

# The Biggest Urban Transformation Project of Turkey: Antalya

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## ABSTRACT

Urban transformation projects supported by our state in order to prevent distorted urbanization and to build more robust, modern and environmentally friendly structures in the places of slum and unstable reinforced concrete structures, give great damage to the nature, the environment and the living things if necessary measures are not taken. Urban transformation has great prospects in terms of city planning. This transformation makes it possible for people to live in more robust, more comfortable structures. However, the most important issue that should be ignored in this turn is the environmental transformation to be implemented with urban transformation. For this, it is necessary to use the debris and materials which are going to be urban transformed in the first place (the structure to be demolished) to be used in the new construction, and to transform the natural environment into a more livable environment, even more carefully. The real motivation of urban transformation is humility. Human beings are in need of nature. Urbanization does not mean concrete. Protecting the natural environment while urbanizing use recycled materials in the use of natural resources or using the worst materials that can be recycled has great proposition for us and the next generation.

The contractor firm of Antalya Metropolitan Municipality started a project in Antalya in agreement with Antepe and Sur Yapı company. The project, which started construction in the Kepez district Santral district, draws attention with its proximity to the city's attractions. Sur Yapı company allocates a budget of 8 million pounds for this huge project with an area of 1 million 300 thousand square meters. In this context, it is Turkey's largest urban renewal project. There is also a first in Turkey to realize the importance given to environmental conversion. The rubble, which is the concrete and the brick broken out from the demolition of slums and risky structures, is being used as filling material in sewerage, rain water, drinking water and road constructions and 1800 tons of rubble material is being crushed every day. Approximately 600 tons of scrap iron is separated from concrete and recycled. An estimated 800 tonnes of scrap iron is expected to be released in the project. It is also stowed for use in landscape work of vegetal soil from old roads and from the excavations. 114 tons of wood material coming out of the demolition area is also distributed to the needy as fuel. The natural environment from the old settlement is being preserved. In this context, both fruit trees and hundreds of years of monumental trees are preserved in the area. For this purpose 5 thousand 135 olives, 2 thousand 888 citrus fruits, thousand 767 pomegranate, including a total of 10 thousand 764 trees were taken under protection in the nursery. These protected saplings will be used for greening inland and landscaping activities of 249 thousand square meters which will be formed later. Stray animals in the Santral area will also receive the urban

transformation. They will be given care to ensure that their new needs are met and that their lives are maintained.

It is hopeful for the future that this and similar projects that sustain the sustainability of our country in the foreground in our country. In this context, it becomes important to raise awareness in order not to cause environmental problems while urbanizing. It is more aware of the damage done to the area rather than the wider housing, and should be designed to be more environmentally friendly when in the project phase. Otherwise, the natural resources consumed for the sake of urbanization, the trees that are cut, and the wastes generated by the wastes that are produced, are likely to damage the quality of life for future generations.

**Keywords:** Environmental issues, urbanization, sustainability, waste

# Design of Shopping Street: Antalya Atatürk Street

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**ABSTRACT**

Shopping is an ongoing process from the existence of mankind to this day. Shopping is changing depending on the human needs that are shaped by the circumstances of the day. Nowadays, shopping has a meaning far from being just an ongoing action to meet the needs. Shopping spaces have become collective living spaces where leisure time is spend, socialization and communication take place and shopping turns into entertainment. By the way, shopping spaces are also in transition. Shopping malls have emerged with qualities responding all these needs. On the other hand shopping streets, try to keep their assets as places to meet these needs.

In addition to being an important component of urban transportation, the streets are one of the most significant elements of the city, where daily life passes and the synergy of the community becomes visible. Especially shopping streets integrated with public spaces in the city center, presents lifestyle and facilities for individuals to socialize. Streets; even if it is used by users like bikes, transit users, private vehicle owners, street vendors, commercial stores / business owners, etc., the most important users of shopping streets are the pedestrians. Effective use of the street, along with the criteria of pedestrian safety, comfort, accessibility, etc., increases the social interaction.

Because shopping streets are not designed according to the appropriate criteria, they can't provide the necessary facilities like comfort, security, accessibility, etc., and it is difficult to maintain its existence against shopping malls. For this reason, it is necessary to consider the shopping streets in the framework of appropriate design criteria and public space quality, in order to contribute to the quality of urban life. In order to guide the design of the streets, the Global Street Design Guide was prepared at the initiative of experts from 72 global cities in 42 countries. This guide aims to encourage executives, inform practitioners and engage communities in the streets. The guide, which forms a new global basis for designing streets, recognizes that cities are places for people, develops the criteria of designing urban streets including access, security and mobility for all users, environmental quality, economic benefit, public health and overall quality of life (Global Street Design Guide, 2016).

In this context, the topic of this study was defined as "shopping streets", which is one of the most important public spaces of the cities. The aim of the study is to determine the criteria to be considered in the design of shopping streets and to evaluate Antalya Atatürk Street in terms of these criteria. Atatürk Caddesi is one of the oldest and most important streets of Antalya which separates Kaleiçi and Haşimişcan neighborhoods in Muratpaşa. The street is located in the heart of "City Center Tourism Area" where social life is alive. Kaleiçi is located in the west of the Street. Atatürk Street is a large shopping street which is in transition in order to respond the user requests.

Shopping streets are losing their importance and vitality against shopping malls. With this study, it is intended that shopping streets will be developed and kept alive within the scope of design criteria. By this context, first of all, conceptual explanations about shopping streets will be given. Secondly, design criteria for shopping streets will be set forth. Thirdly, the present situation will be evaluated using the CAD and GIS programs in terms of the changing process of the shopping street and the design criteria of Atatürk Caddesi from the based on this street. Finally, the design proposal for Antalya Atatürk Caddesi will be listed under the headings of Pavement, Street Furniture, Green Area and Landscape, Accessibility and Transportation. The study will be completed by suggestions for the design of shopping streets.

**Key words:** shopping street, transition, design criteria, Antalya

# An Empirical Research on the Sacrifice of Tokat Karşıyaka Region to Real Estate-Focused Growth

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## ABSTRACT

The spread rapidly in Turkey largest city in the period after 1980, following years in other provinces also creating new areas of demand in the emerging real estate sector, the rapid growth of primarily urban centers, the agricultural areas surrounding the city have caused to be pulled into the city over time. This effect has led to the abandonment of agricultural production by those who produce mainly agricultural land. Later, he created a small group of people who turned their land on their hands into a ransom. These groups were not satisfied with this, and they made attempts to open up their sphere of interest by looking at the industrial areas based on agriculture. The region's agriculture-based industry and the agriculture sector have caused serious problems, as well as the deterioration of the economy linked to the cotton yarn of the city, and the biggest effect is undoubtedly over the people living in that region. The contraction of areas of activity based on agriculture has caused many problems such as immigration, housing prices and excessive rent increase, rapid decrease of green areas, decrease of agricultural production, especially in unemployment.

Although Tokat province is considered to be one of the most important provinces of agriculture and agriculture in the region, it is seen that the favorable agriculture fields are consumed rapidly and that the city has an economic development policy based on housing instead of agriculture and industry. In particular, it is important for Tokat to become a region in which more than half of the Tokat central population resides, while the region where the Tokat Karşıya district is located is an area where about five percent of Tokat's central population lived in the 1980s. This change in 20-30 years has brought about many economic, social and environmental problems.

In the study covered in these questions, primarily the growth of real estate, which is the source of the problem from a conceptual point of view, and the influence of this grower on the city and environment will be mentioned in small scale cities. We will then try to analyze the effects of these problems on people living in these areas and discuss the transformation process of the Karsiyaka region, which hosts more than half of the Tokat central province today, which is five to 20 years ago. In this context, it will be emphasized how quickly the areas that have been left untouched from the favorable land used as vineyards in the Karşıyaka region years ago, rapidly transformed into houses, and even the innovations of the houses built for the first time in the context of urban transformation turned into high-rise houses and rapidly destroyed green spaces. In this transformation process, the increase in housing prices will be tried to be analyzed and analyzed

from the interviews of the urban, environmental and social problems faced by the people living in this region, especially the housing, to the people living in this region.

In this frame, it will be tried to be revealed empirically by revealing the basic socio-economic and environmental problems of this region and the level of awareness and influence of the residents residing in Karşıyaka region. For this purpose, the answers to the following questions will be sought;
What is the impact of the growth of real estate focused on cities?
How is the effect on people living in small-scale cities such as Tokat where you grow up with a real estate focus?
How does real estate-driven growth bring about change in the city and its surroundings?
What are the effects of real estate devoted growth on the city, environment and society?
In the past, opening up the vineyard areas and attracting real estate-oriented growth has affected people living in the region. What do the people of the region think about this issue?
The answers to the questions will be sought.

**Key words:** Real estate focused growth, Tokat ties, urban problems, awareness, transformation

# Determination of Urbanization Pattern and Socio-Economic Variables in Kırklareli Province

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## ABSTRACT

As a result of the increasing anthropogenic activities parallel to the world population, the urban development in our country is accelerated similar to the world. Increasing urban development pressure over constrained natural resources makes it difficult to maintain ecological equilibrium and degrades sustainability. The province of Kırklareli has great importance in terms of ecological and natural values. Within the provincial borders; there are longoz forests, which are one of the important natural values of our country and the world, many endemic flora and fauna species and fertile agricultural lands. This work consists of two stages. In the first stage, the temporal change of the urban areas within the boundaries of the province of Kırklareli was determined using remote sensing and Geographic Information Systems technologies. In the second stage, the amount of urban development and socio-economic variables; population, number of vehicles, amount of migration, amount of agricultural and animal production, income level, labor force and tourism statistics thought to affect urban development were investigated together. As a result of the study, possible causes of urban development in the province of Kırklareli, which contains important natural values of our country, were determined and evaluated in line with sustainable urbanization and sustainable development principles.

**Key words:** Spatial Development, Remote Sensing, GIS, Kırklareli

# Right to the City Notion by Henri Lefebvre and David Harvey in the Case of İzmir Bayraklı Urban Transformation Project

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## ABSTRACT

Cities have dynamic characteristic features that host changes through time. These can be physical, social, political, economical or governmental. This kind of evolution can take place naturally, in a long period of time or it can be realized by fast and forceful interferences in an artificial way in a short period. Especially in Turkey, it is seen that the recent settlement examples which is settled in scope of urban transformation projects, show this dramatic changes so the cities lose their special features completely and the new city spaces occurs through these interferences.

As it is mentioned, urban transformation projects in Turkey do not only change the physical environment, they also create differences socially. Under normal circumstances, the purpose of the urban transformation project is to provide qualified, healthy living environment for each part of the society. But in Turkey, mostly seen that, urban transformation projects cause new environments that filled with unqualified buildings or they turn into the projects that cause gentrification. This kind of gentrification has also negative effect on the type of living and spaces that is produced by the people or the daily life activities.

Cities are considered as living organisms which involve living social spaces that can evolve, grow and die. In this case, it is always forgotten during the preparation of the projects, Lefebvre's conceptualization about the space considered as living organism with daily life activities and space production parameters in the cities. In that situation, without comprehending the social space and city concepts in urban transformation projects, all the value of the spaces in the cities began disappear for the sake of creating spaces that bring income. Space in capitalist world defined as "puss in the corner of the capitalist economy" by the Harvey. It is exactly show that spaces in the cities become commodity and urban transformation projects become the tools that realize this theory. At this stage, Lefebvre's right to the city notion come into the prominence. He insist that value of the space is determined according to the exchange value instead of use value and if the dwellers cannot afford, the failure exist in right to the city notion so the dweller lose its right to use the city. İzmir Bayraklı Urban Transformation Project is an striking example that create these kind of changes in socio- cultural aspect because of purpose of designing new gentrified society.

İzmir Bayraklı Urban Transformation Project, made for the Bayraklı region. It has different spaces that created by diversified type of livings. Bayraklı region has the highest number of squatter houses in İzmir. But in recent situation, Bayraklı tried to be turn into the new center of the city with new typology and living standards. Purpose of the İzmir Bayraklı Urban Transformation Project is to provide new living environment for the new center. It will cause the losses of the use value of the existing environment.

In the scope of study, Fuat Edip Baksı, Cengizhan ve Alparslan neighborhoods involved in İzmir Bayraklı Urban Transformation Project, examined in the concept of the right to the city, social space production, daily life critiques and social justice by Lefebvre and Harvey. The purpose of the research is to show the inapplicability and possible negative effects of project within the philosophical background of the space. Study aims to create critical thinking about the effects of İzmir Bayraklı Urban Transformation Project on the use value of the existing spaces.

**Keywords:** İzmir Bayraklı Urban Transformation Project, right to the city, Production of Space, Henri Lefebvre, David Harvey

# PEYZAJ

# POSTER PRESENTATIONS

# Comparative Analysis of Energy Efficient Building Design Guidelines and Recommendations for Turkey

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**ABSTRACT**

The increase in energy consumption brings with it a lot of environmental problems, and the structures that make up the physical environment are the main source of these problems. This situation deeply influences, changes and transforms the architectural design, the art of building production. The fact that a large part of the energy consumed in the world is being used in construction makes the studies about energy efficiency and efficiency to be done in architectural design important. Such studies are referred to as 'sustainable architecture' or 'ecological architecture'. Sev (2009: 31) argues that sustainable architectural coverage should not only benefit from solar energy and geographical data but also reduce the impacts on ecological systems, efficient use of energy, materials and water resources, life cycle design, waste recovery, people's physical and mental health and comfort (Sev, 2009). Lakot (2007, 7) argues that the ecological architecture is holistic and realistic, is concerned with real conditions, and creates in an effort to perceive and concentrate on idealistic environmental problems. (Lakot, 2007).

The development of ecological awareness has led to numerous studies in the building sector aimed at reducing the negative effects of buildings on the environment. The building sector has been oriented towards building environmentally friendly, ecological buildings in order to reduce negative effects. At the beginning of these applications, the evaluation of the applications of the structures related to ecological, energy and environment has come to the agenda. For this reason, the reduction of energy consumption in buildings has become important, and in many countries of the world, new buildings and existing structures, such as providing energy efficiency and reducing energy consumption, have begun to be implemented in frameworks determined by standards and regulations. While the measures that can be applied in the design phase for new buildings are determined, the necessity of developing systematic approaches for energy efficient improvement of existing structures is gaining importance (Günaydın & Güçyeter, 2010).

In this context, in the geographical areas where countries are primarily located, legal arrangements have been made for the efficient use of energy, affecting the design of the architectural design scale, taking into account the characteristics of its own countries, and this effect is rapidly spreading to all developed and developing countries. There are also legal regulations on energy efficiency in our country. These are: 1. T.C. Ministry of Environment and Urban Planning dated 05.12.2008 'Energy Performance Regulation of Buildings', 2. 'Energy Efficiency Law No. 5627 approved on April 18, 2007' and 'TS 825 Thermal Insulation Rules on Buildings' issued on May 3, 2008.
In this paper, Energy-efficient Building Design Guides of 5 countries including Asia (China), Europe (France, Germany), America and Australia were examined. In the context of this study, which contents information is given for each country, it is aimed to determine what kind of basic headings are in the guides (1st Area Analysis, 2nd Building Positioning, Orientation, 3rd Building Spaces and Distances, 4th Building Design and Construction Phase, 5th Landscape) and details of what the

information contained is. These legal arrangements made by the countries were made taking into consideration the regional geographical features. As a result of the study, the necessity of establishing guidelines and enforcement of Energy Efficient Building Design Guidelines for different countries and even local administrations has been emphasized and suggestions have been developed.

**Key words:** Energy Efficient building design guidelines, architectural design, energy efficeincy, legal regulations, design guidelines.

# Establishing Energy Production Models in Residential Areas by Using Active Solar Systems

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**ABSTRACT**

Today, in order to meet the rising energy demand, mostly non-renewable sources such as fossil-based coal, petroleum or natural gas have limited reserves so that environmental pollution reaches dangerous dimensions. The supply of renewable energy sources is crucial to reducing environmental pollution and creating sustainable living environments. Solar energy, a renewable energy source, is an endless energy type and can provide a solution to meet the energy needs of residential areas. Solar energy efficiency will be determined on the basis of europa science hub data and analysis in the study area and technical calculations will be done with pvsyst software. With the installation of roof-type solar panels planned with measurements and calculations, the use of renewable energy in the field will result in an environmentally sustainable planning.

**Keywords:** Renewable energy, solar energy, active solar systems, photovoltaic energy, sustainability, sustainable housing areas

# Measuring the urban vulnerability to heat stress; A case study of İzmir

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**ABSTRACT**
Measuring urban vulnerability to heat stress is getting further attention from the various research fields since increasing exposure of the heat stress leads to the emergence of the issues such as less quality of living environments, and loss of life across the world. The concept of vulnerability is a degree that refers to adverse effects of any defined natural disasters including extreme events based on climate change and the ability or resilience of the system to cope with the effects of the disasters. This study analyzes the İzmir city metropolitan area by approaching the vulnerability as a time-varying and spatially based process. Measuring the vulnerability plays an important role since it helps to generate strategies about urban planning against to the natural disasters. In this way, the study uses urban morphological variables including characteristics of the built-up areas in three dimension which is neglected in the literature. It is widely recognized in the literature that the heat stress concentrates on the urban areas (hosting urban heat stress), but it is not stable in terms of space and time with changing intensity. With this regard, this study aims at answering the questions (i) how the vulnerability to the urban heat stress spatially distributed across the city? (ii) how spatial and morphological variables affect the vulnerability (iii) could the vulnerability shows spatial autocorrelation in the city. The variables Land Surface Temperature (LST), Normalized Difference Vegetation Index (NDVI), Normalized Difference Built-up Index (NDBI), densely vegetation cover, compactness index and volumetric compactness index are selected. The dataset for urban heat stress, measured with LST in the study, is derived from remotely sensed data. For this dataset, 12 (Landsat 8 TIRS) satellite images from each month of the summer period (June, July, August) of the years between 2013 and 2017 are used. The other variables are derived from satellite images of 2017 (Landsat 8 OLI) the city map of İzmir. 120m x 120m grids are used for the spatial scale of the study. In a methodological sense, the vulnerability is calculated by using the principal component analysis (PCA) and the spatiality of the vulnerability is tested by using Moran I, Local Moran I analyses in order to capture spatial concentration patterns of variables.. Additionally, space-time cube analysis is used for capturing space and time-dependent patterns of urban heat stress across the study area. The majority of the literature has used the equal-weighted linear sum of the vulnerability components approach to measure spatially of explicit vulnerability. This approach results in neglecting interactions between the variables and reducing the value of vulnerability to a single score leads to complication for the decisions of the policymaker. Thus, PCA is used to calculate the vulnerability in this study for overcoming this reduction problems and better-capturing interactions between the variables.

**Keywords:** Urban vulnerability, Heat stress, Spatial autocorrelation, Urban morphology, İzmir

# Detecting Urban Heat Island Effect and Change Using Landsat 8 OLI/TIRS Images: A Case Study of Bursa, Turkey

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## ABSTRACT

The impact of climate on the natural environment is quite high. Climate is an important environmental factor in the formation of the earth, in the determination of the living forms and quality. Climate change occurs at a global and local scale, especially because of human interventions that have negative consequences for nature. As a consequence of this, the average temperature of the world has been consistently increasing since the late 19$^{th}$ century. Increasing temperatures and drought are affecting our country negatively like the whole world. Although the temperature increase is generally seen in all land use/cover types, this situation is even more severe in urban areas, which are often subject to rapid and uncontrolled urbanization. The studies performed particularly since the end of the 1980s, have shown that the urban areas are warmer than the surrounding rural areas, and this is called "urban heat island effect". Urban heat island effect studies can basically be divided into two parts. These are studies that investigate the effect of surface urban heat island using remote sensing data and studies that examine atmospheric urban heat island effect using meteorological station data. The use of remote sensing data is advantageous in terms of cost and time, and allows large areas to be worked comfortably if desired.

In this study, it is aimed to determine the urban heat island effect for the summer seasons of 2013 and 2017 and to analyze the change in this 4 year period using only Landsat 8 OLI/TIRS data. The Bursa metropolitan city, which is the 4$^{th}$ biggest city of Turkey with a population close to 3 million, has been selected provinces. In the study, Landsat 8 OLI/TIRS multispectral and thermal images of 30 July 2013 and 25 July 2017 were used. The Landsat 8 OLI/TIRS images that belongs to the summer seasons were preferred because the surface Urban Heat Island effect is stronger in summer and daylight. For the study initially, DOS-1 Atmospheric Correction was applied to selected Landsat 8 OLI / TIRS images using QuantumGIS software. Then, Normalized Difference Plantar Index (NDVI) and Normalized Difference Build-up Index (NDBI) were calculated from Landsat 8 OLI / TIRS multispectral images to determine urban and vegetation areas from these images. While NDVI provides relevant information on the density and quantity of vegetation cover in the study area, NDBI is sensitive to the build-up areas and provides information on settlement areas. NDVI images are calculated using Near Infrared (B5) and Red (B4) bands. On the other hand, Short Wave Infrared (B6) and Near Infrared (B5) bands were used when calculating NDBI images. After that, the determined thresholds were applied to the 2013 and 2017 dated NDVI and NDBI images to detect the urban areas and vegetation areas in the study area. In the next step, land surface temperatures were obtained using Band 10 from the thermal bands of the Landsat 8 images. In the last phase of

the study, mean surface temperature values for urban and vegetation areas were calculated for 2013 and 2017 and the urban heat island effects of Bursa was investigated.

According to the results, in 2013 the average land surface temperatures were computed as 38.51° for urban areas and 28.72° for vegetation areas. In 2017, the average land surface temperatures were calculated as 39.18° for urban areas and 28.63° for vegetation areas. When the surface temperature changes of the urban and vegetation areas in the four years period are examined, it can be said that the urban area is increased by 0.67° and the vegetation areas are almost unchanged by a decrease of 0.09°. The urban heat island effect values of Bursa were calculated as 9.79° and 10.55° for the years 2013 and 2017, respectively and it was found that there was an increase of 0.76° in the urban heat island effect during this period.

**Key words**: Urban heat island effect, Landsat 8OLI/TIRS, NDVI, NDBI

# A ROAD MAP FOR CLIMATE FRIENDLY: CLIMATE CHANGE PLAN

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**ABSTRACT**

As an addition to urban development strategies, environment and climate change have to be added to urban policies. The development of climate change action plan for preparedness and resilience of cities to climate change which will put forward the necessary components.

At national, international and metropolitan scale reviews are made. C40 cities climate action plans and EU Green Capital Award Measures are analysed at metropolitan scale. Survey was made with the sample municipalities.

The findings comprise solutions and as a result of comparison to investigation of possible methods.

In consideration of metropolitan scale of the city developed and preventing climate change is necessary to establish the climate action plan. Urban policies while creating a climate Action Plan by considering climate change needs to be developed.

**Keywords:** Climate change, action plan, ecology

# Energy Efficient /Sustainable Design Approaches in Architectural Design Education: Examples from the World and Turkey Architectural Schools.

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## ABSTRACT

One of the most important problems of the contemporary world is inefficiency in the use of energy and resources and the resulting environmental problems. Since the second half of the 20th century, these problems have begun to attract considerable attention, especially on the agenda of countries, documentaries and films have been the subject of much debate and are still being discussed and solutions are being produced on international platforms. As some of these solutions, we can show national and international based environmental organizations, conferences and agreements.

The environmental issues such as the increase in people's influence on the natural environment and the rapid depletion of natural resources are the main topics of discussion in the world's day. The fact that the energy consumption in the world belongs mostly to the buildings is the center of this problem in architectural discipline. Thus, the architectural discipline plays an active role in the solutions required for resource and energy problems due to its position. Discourses such as sustainability, ecology, which aim to solve these problems, have become the most discussed topics. Developments in science and technology are trying to create new materials and production systems and allow for less energy use. In addition, it has begun to be remembered that a traditionally produced understanding of architectural practice, that people can produce structures in harmony with nature and without harming it. All these developments and changes deeply influence the profession of architecture and develop different perspectives and practices.

In this study, energy efficient design and sustainability issues in the architectural education to adapt the curriculum has succeeded in largely operating in different parts of world architecture, educational institutions, with their architectural education institutions in Turkey is aimed to study the program structure at the undergraduate level. These comparisons, located in Turkey and with a method of determining the course and offering sustainable design and content associated with the ecology of the architecture department aim of the current status of the license for the program to be determined in the world were presented. This method, six in Turkey was implemented under the United States and six undergraduate teaching university architecture programs in Europe. These lessons are evaluated in terms of content and method. Based on this information, a classification was carried out covering the graduate curricula of the criteria related to sustainable design and ecology of the 12 universities surveyed. With this classification, it is foreseen to be regarded as a method that will form the basis for future work. Consequently it was made to reveal

the dynamic and flexible character of architectural education and the development of architectural education in Turkey and in the name of establishing a structure that can respond to the current needs advice.

**Keywords:**Energy Efficient design, architectural design education, sustainable design education, ecological design education, architecture undergraduate education.

# Energy Conversion on Facades

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## ABSTRACT

Buildings have an important share on the constitution of a sustainable environment in the 21st century. In parallel with the advancing technologies, solutions have been developed for buildings to consume less energy and contribute to energy production through innovative approaches. In order to provide energy efficiency in buildings, trends towards renewable energy types and energy efficient designs have been increasing. In this context, facades, playing a distinctive role between the interior and exterior space, have taken on new functions in terms of energy production. Therefore, building facade systems come into the practice as double skin, photovoltaic or photobioreactor facades. Double skin facades, forming the buffer zone on building surface, reduce energy losses at least and decrease energy consumption. Photovoltaic and photobioreactor facades actively use solar energy, photovoltaic panels generate electricity, photobioreactors produce biomass. In this way, building facades as multifunctional building elements in the design of energy efficient buildings in addition to produce energy, as well as constituding an important potential for reducing environmental problems. In this study, the working principles of double skin facades, photovoltaic facades and photobioreactor facades integrated with the building and the conversion of energy on these facades will be discussed. First of all, the construction and formation of the facades, then contributions in the context of energy and environment will be examined through examples of applications.

Double skin facades are formed by adding a secondary glass facade in front of the building's main facade. This secondary facade, occurring an air gap whose width changing between 20 cm to 200 cm creates a buffer zone. Thus, the application of double skin facades, which are especially common in office buildings, in addition to provide natural lighting, by obtaining passive gain from sun and reducing heat losses during heating periods, increases energy efficiency in the building. Furthermore, ventilation is an important part of building energy consumption and natural ventilation can be achieved in the buffer zone, located in the double skin facades, by using the air flow modes which can vary according to seasons along the floor height or building height. Moreover, double skin facades come forward with qualities as sound insulation, night ventilation, solar control and increased environmental interaction through high transparency ratio.

Photovoltaic facades are composed by the application of photovoltaic panels to the building envelope that these panels convert solar energy, a kind of renewable energy, into electricity. The electrical energy generated by the photovoltaic panels, is used in the buildings and can be

transferred to network. These panels, with the exception of building facades, can be placed on roofs as well as applying shading elements. Modules having very different colours and transparency, can create light/shadow effects along with providing natural lighting into the interior. Photovoltaic systems generally make buildings energy efficient and contribute to be decreased carbon footprint of buildings.

Photobioreactor facades have been studied and developed for last few years. Photobioreactors which are transparent and sealed closed systems applied as double skin facades or curtain wall systems to the buildings, enable the production of renewable energy by providing cultivation of microalgal biomass on facades. Bioenergy obtained from the chemical transformation of the produced biomass, meets the electricity and heat requirements of the buildings. In addition, photobioreactors applied to facade, provide high thermal and acoustic insulation, create a shadow effect to the building. Besides, microalgae fed by carbondioxide ($CO_2$), exhibit an environmental approach and reduce carbon emissions, so energy efficiency of buildings increases and buildings come close to zero carbon.

Consequently, above-mentioned facade systems provide energy efficient design of buildings by converting solar energy passively and actively to heat and electrical energy. Thus, with the use of renewable energy sources, the construction of buildings that are environmentally sensitive, using energy and settled area effectively, protecting people's health and comfort, approaching zero carbon, will play an important role in the sustainable urban environment.

**Keywords:** Energy conversion, double skin facades, photovoltaic facades, photobioreactor facades

# BREEAM: A Review on Malmö-Switzerland and Mediacity- England in terms of Basic Categories in Urban Settlements as a Green Certification System

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**ABSTRACT**

Nowadays particularly large metropolitan cities are rapidly growing and reshaping. Within this period human health negatively such as the disappearance of the natural environment, increase of energy consumption, climate change, excessive precipitation, high temperature, oil crisis, environmental problems, alongside influencing factors that especially because of limited resources the livability and sustainability of urban settlements and building types that green certification systems have been developed. BREEAM certification system is one of the most recognized used and preferred certification systems worldwide. A number of criteria has been identified for the identification of sustainability in this certification system. As a green certification system BREEAM aims to create awareness in the perception of sustainability and its key criteria are influential in urban settlements. This certification system promises to be sustainable by creating greener, sustainable, healthy and livable environment with these criteria reformed in various headings.

BREEAM Communities is a standard that helps local governments and design teams develop and document the sustainability of at the neighborhood scale and beyond. BREEAM rating system supply issues such as housing, transportation networks, social facilities and their economic, environmental and social impacts. BREEAM certification system aims to ensure that new developments are planned and produced to provide high quality communities that are safe and environmentally friendly.

This system covers the three main environmental, social, and economic criteria that make sustainability like other certification systems and comprises 6 categories (management, social and economic well being, resources and energy, land use and ecology, transport and innovation). When we evaluate the general purpose and explanations of 6 main categories of this system; Governance, Promotes community involvement in decisions affecting the design, construction, operation and long-term stewardship of the development. Social and economic wellbeing, Local economy: To create a healthy economy (employment opportunities and thriving business). Social wellbeing: To ensure a socially cohesive community. Environmental conditions: To minimise the impacts of environmental conditions on the health and wellbeing of occupants. Resources and energy, Addresses the sustainable use of natural resources and the reduction of carbon emissions. Land use and ecology, Encourages sustainable land use and ecological enhancement. Transport and movement, Addresses the design and provision of transport and movement infrastructure to encourage the use of sustainable modes of transport. Innovation encourages the adoption and development of innovative solutions within the overall ratings.

Achieving the desired standard of living and upgrading the quality of life in urban settlements necessitate the implementation of sustainable and green planning strategies together and It has

led to the emergence and spread out of documentation systems to the need for a number of tools to achieve the aim. Especially with BREEAM certification system a reference point with qualified and clear standards to be applied in order to increase sustainability for urban settlements has been constituted. BREEAM Green Certification System is widely in developed countries is explore field of application. This study aims to reveal and evaluate what kind of sustainable and green strategies are proposed by the system in settlement scale on the basis of the Developing Countries. Within this framework, what kind of planning strategies are prioritized and focused by BREEAM certification system for urban settlements will be assessed through Advanced Country examples. Differences in implementation practices between these countries and implementation results will be confesseded within the framework of the structural characteristics of the countries.
In this study as sample case studies Mediacity UK project include the project in Manchester Salford (England) located on an 8-hectare site in a coastal area and the Masthusen, Västra Hamnen , Malmö settlements that obtained the BREEAM communities certificate outside the UK and projects will also be reviewed on the basis of the main categories that constituent the BREEAM certification system.

**Key words:** Urban communities, BREEAM, green certification system, sustainability

# An Ecovillage Study in the Context of Spatial Design Principles

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## ABSTRACT

With the influence of modernism, cities are growing, weakening the relation between human and nature, restricting human and nature, leading people to alternative forms of life. Ecology is derived from the Greek oikos (house) and logos (science). The word “ecovillage” is the abbreviated use of ecological village definition. Ecology now has meaning equivalents such as closeness to nature, reconciliation with nature, integration and sustainable healthy life on this. The village is the habitat in which all the relationships among people, physical-psychological, natural-artificial balances are more naturally shaped, usually different from urban fiction, intertwined with nature. Contrary to the city, it is a settlement with its own unique structure where there are no complications and problems created by environmental pollution, noise pollution and intense human circulation. The relationship that the village establishes with human beings differs in many ways from both physical and psychological aspects of the city. The concept of ecovillage is an alternative way of life that is developed against modern city life that develops together with modernism. The basic characteristics of this alternative way of life are sustainable, participatory and satisfactory in the close relationship between human and nature. Among the components of this lifestyle are; ecological architecture, ecological and organic agriculture, animal husbandry and socio-cultural values. In the emergence of eco-villages, social trauma and wars have played a role of concerns about the concepts of justice and rights. The concept of solidarity, exchange, and common use, which is not often seen in consumption-oriented societies, is very common in ecovillages that emerge as the result of the "Back to the Land Movement". The first example of ecovillages are common in the 1930s, especially in the 1960s and 1970s, it began to be seen more often.

Ecovillages existed as a reaction to the social communication between the current accumulation of building and structure, rising from the sky and the nature and the earth. Ecovillage philosophy is a model of settlement organized by individuals who want to make a place "in nature" in a distorted and troubled urbanizing world, keeping communication focus with each other. There are some specific principles and features that can be observed in the formation of this settlement pattern. The fact that all activities on the physical scale are in human scale and that all activities are carried out in harmony with the nature and in integrity with nature and that the material and the functions are sustainable are the main features. In addition to their common spatial features, cultural and sociological common values adopted in ecovillages shape the way of life.

The aim of the work is to identify and discuss spatial design principles that are common to ecovillages. Common architectural features carried by ecovillages have been evaluated in terms of user, function and space. Research questions that guide the study; "Do ecovillages have common characteristics in terms of spatial occurrences? "Are there common features in terms of spatial use?," What are the common features and preferences of the users? "And" Are there similarities in the design and structure of the spaces?" For instance, "participatory space organisation" is observed in the design and arrangement processes of spaces. The concept of participatory space among ecovillages is found in different forms. Some examples are entirely user-designed and some seem to have been designed with semi-structured semi-user control. In addition, examples that do not reject the use of technology in the construction process, but which have the principle of participant shaping of places are also observed. In the scope of the study, information about ecovillages was collected by literature survey. Examples of ecovillages viewed; Iceland - Solheimar (1930), United States - Drop City (1965), United States - Ithaka (1996), Germany - Ökodorf Sieben Linden (1997), Scotland - Findhorn (1985). The information obtained is interpreted in terms of qualitative point of view and evaluated within the discipline of architecture and design.

In the findings of the study, some principles regarding the spatial formation and functioning of ecovillages have been determined through the samples studied and the ecovillage readings in the literature. When these principles are determined, it was focused on spatial characteristics and user behaviors common to ecovillage settlements. As a result, in terms of architectural and design discipline that ecovillages have, a framework was created around the concepts of "human scale", "close relationship with sustainability and nature", "use of social and interactive space", "participatory and democratic space creation".

**Keywords:** Ecovillage, urbanization, sustainability, modernism and urbanization, participatory space

# Green Apps Shaping Awareness Via Virtual World

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## ABSTRACT

The Earth began over 4.5 billion years ago; however, according to scientists, the future of this planet may only last another thousand years due to the constant environmental abuse by human activity. Adverse effects of humankind on earth have been rapidly sprawling all around the globe since the beginning of industrial revolution. This stress are getting worse day by day along with capitalist technological progress, but there are also green technologies try to emerge a new era of consciousness. Fortunately, as we move further into this technological era, the rise of environmental entrepreneurs and green technologies makes a sustainable future possible.

Mobile phones used to be all about making calls, but now mobiles can do so much more. The range of new touchscreen smartphones allows to access the internet, use social media, get live news updates, play music and video, etc. They almost universally use touchscreens for control, however, which can be a challenge for people new to the technology. Many people have smartphones or tablet PCs nowadays, therefore application world has been enlarging with unpredictable speed. So, it can be used for raising awareness among people about living greener. Application developers have discovered that demand and create some useful and intiutive applications for mobile devices.

Remembering to live green can go further than setting a reminder to put out the recycling, buying organic, and saving all your peelings for compost. Apps for environmentalists, it turns out, are actually a new frontier for green lifestyle, both for sustainable crusaders with all their local organic food stalls memorized, and those of us who've just woken up to the whole living-green thing. The diversity of green apps out there reflects the fact that there are many ways in which to eco-fy your daily grind, from commuting choices to shopping decisions to energy consumption. Most of those apps just focus on tracking your actions and suggesting how to make them a little greener — like taking public transport, or switching off the clothes dryer. Others are collections of ideas for improvement, or data about different places and companies.

There is no doubt that the huge and growing green apps market is making a significant contribution to the welfare of the planet and its inhabitants. Technology may not be a panacea to solve the climate crisis, but green applications (or according to some articles “eco-apps”) are helping to drive awareness and foster responsible action. There was a time when eco-apps did little more than provide lists of so-called “green” products and services. Now green-themed apps have turned mobile devices into portals for environmental education and sustainable action. The smartphone market share is now estimated to be more than 40 percent in the U.S. Around the world, smartphones are proliferating and green apps are growing along with them. Eco-apps can help people be more efficient and reduce their energy consumption.

There are a wide variety of energy apps including those that monitor efficiency and consumption. Apps help with things like recycling and other aspects of green living. Mobile and tablet based smart energy applications help consumers to optimize their energy and water consumption, monitor their appliances, water heater and other electronics. These apps can also monitor and operate HVAC (Heating, Ventilating and Air Conditioning), grey water (from rain), automated windows (shutters and blinds) and lighting systems. They can even provide information about renewable energy conversion and variable price grid management.

Ecologically oriented apps are organized around a number of categories including air and water quality, transportation, energy, education (games), consumer information, food and visualizations and chemicals. In this study, these applications have been detected through Google Play Store and AppStore – for both iOS and Android devices and information gathered about their aim, use and rates on stores.

**Keywords:** Green applications, green technology, nature-friendly technology, eco-apps.

# Ecological Solutions for Temporary Shelter Desing for Low Income Communities

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## ABSTRACT

In underdeveloped or developing countries, the shelter problem poses a gradually increasing problem in urban areas due to inconvenient living conditions and population increase. There are billions of people who live in different geographies around the world and do not have healthy and adequate shelter conditions. As a result of the combination of various destructive factors (wars, disasters, epidemics, economic, environmental, and political factors, etc.), communities have living space inadequacies and problems at high rates. It continues to increase each passing day. Particularly the overpopulation and its unconscious, uncontrolled, and unhealthy rise also increase the rate of impact. The living space inadequacy and problems minimize the standards of living in health, social and cultural terms and produce many negative effects. In order to eliminate this inadequacy, there are initiatives to meet the needs of particularly poor and low-income communities. Governments, non-governmental organizations, designers, volunteers, and users, who are struggle for the shelter problem, one of the most important vital necessities, have been searching for solutions. As a result of searches, the optimum shelter design becomes one of the important targets in order to meet the needs of maximum people in a minimum period as a result of the increasing population growth and inadequacy of living spaces. Due to the limited resources, self-sufficiency and utilization of natural sources are valid for all designs. Also, under these conditions, design solutions are made by utilizing natural sources due to the limited resources.

An ecosystem-friendly and holistic architectural practice is, as a matter of fact, used for a common purpose by using different terminologies such as green, sustainable, or ecological. The concept of Ecological Architecture emerged to provide solutions for environmental problems. Taking into account the current topography, climate data, and natural environment characteristics, the optimum level of efficiency and to be healthy, qualified, respectful for nature and local are looked after in design. In designs, many design parameters such as the proper land settlement and trend, selection of the material and construction system, implementation methods, and the prevention of overconsumption of resources are determined and are turned into the main target.

It is aimed to evaluate data such as the population, income distribution, lifestyle, and culture in countries with varying characteristics in terms of quality and quantity in different geographies and evaluate the analyses of living shelter solutions through the selected countries, and to make suggestions for Turkey. In accordance with this purpose, after the evaluation of analyses, comparisons will be made, and suggestions will be made for Turkey. Countries, which have a low

economic level, high population density, and have faced disasters (such as earthquakes, floods, spates, epidemics, drought, wars, etc.) or have a high rate of facing them and are under the risk of facing them, have been selected for analysis and evaluation. Temporary shelter design samples applied to the ecological design approach designed and applied for communities struggling against disasters, war or epidemics are examined in countries with different climate, culture and geography, which are low income, economic and social conditions are insufficient. The samples are evaluated by analyzing the ecological design parameters such as positioning, materials and construction technique, ventilation, illumination, water consumption, heating and cooling system analysis, and cost that are determined after general information.

The study mentions design approaches for the communities which are socially and economically inadequate and struggle against disasters, wars, or epidemics. The literature review related to the concepts of ecology and ecological design is included and general information about ecological design parameters is given. Designs in selected countries are evaluated by being analyzed through ecological design parameters. As a result of the evaluations performed, deductions are made for suggestions of designs that can be made for Turkey.

In conclusion, as a result of the analysis, evaluation, and comparison performed on designs made for countries with different climate and culture and as a result of this study, it is aimed to create a discussion environment for studies on solutions for temporary shelter designs that can be made and are suitable for the country conditions for low-income individuals in our country and with optimum properties.

**Keywords:** Ecological Design Parameters, Low Income Communities, Temporary Shelters.

# The Role of Designers on Sustainability to Direct a Positive Transition of the Globe

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## ABSTRACT

The continual transitions and transformations experienced in the ecology and the economy of the globe have brought some notions alongside. Even though the sustainable design is considered a relatively new notion, the concern for the environment goes back far in time and is not something new. The first observations on the impact of humans on the natural world stretch away to the 13th century. German theologian Meister Eckhart is one of the first researchers to identify humans' negative impact to nature. In the ancient times, while people see themselves as an integral part of nature and experience more direct relationship with this natural systems, today nature became an external entity for people. A direct separation between human and nature has become inevitable in the super sanitized very modern environments of the 21st century.

When the ecological changes/transitions started to appear and their immediate impacts on human health, prosperity and happiness "sustainable design" became the stage in the literature. Moreover, climate change and increases in energy and material cost have become a point that it cannot be ignored any longer. Within 50 years a lot of strategic approaches and applications to sustainable design have been developed and deployed with varying degree of success. Although there are many strategic approaches to sustainable design that make key contributions to the discipline, there is still an enormous quantity of matter waits to be explored. And it is still one of the most important questions that how much designers are aware of ethical responsibilities and roles in the context of sustainable design.

The aim of this research is to analyze the responsibility of designers on the sustaining the resources and the approach of creating awareness which would be a very important drive for a positive change in users behavior. A comprehensive research has been conducted to indicate important issues that need to be considered by designers from the first phase of the design process. The research question of the study, which is "what extent we are as designers aware of and adopt sustainable design methods in the transition of world and user habits?", is evolved around the role and ethical responsibility of designers. The study method that is adopted in this research is a comprehensive literature review. Arizona State University's library and online resources, e-books and articles constitute the background of this research. Arguments from various point of views about the sustainability and different thoughts on the role of designers and sustainable methods of design will be analyzed in this study with the purpose of raising consciousness for designers on sustaining the ever-evolving world and society for a positive transformation.

Do designers have a hand in destroying world habitat? The ways we designed the world for people causes wasting enormous quantity of matter and energy in our daily life. Therefore, designers need to seek more knowledge, so that their role could be more effective. If we have knowledge of resource use, land use, respect to the life of every creature, the world would be better place to live.

Designers have the opportunity to rethink the guiding philosophies of design and develop ethical and sustainable design approaches to minimize the adverse impacts on society and environment.

The rate that we are consuming the natural sources and damaging the planet is alarming. The design professions need to look for and work on creative and innovative design solutions which would lead a positive transition process for a better world. The ethics and environmentally friendly solutions should be the guide in this transition process are indicated in this study to encourage the awareness of design professionals and students.

**Keywords:** Transition, transformation, designer, and sustainable design

# Design of Green Infrastructure System in Eskisehir Province

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**ABSTRACT**

The area we are studying is the Eskişehir province with the land in the Central Anatolia Region, the Aegean Region and the Black Sea Region. If we are going to recognize Eskisehir province, the area we are working on; Eskisehir province is located within Sakarya basin boundaries. The topographical structure of Eskişehir province is formed by the plains of Sakarya and Porsuk basins and the mountains surrounding them. About 22% of the mountains are formed by the plains with 26% of the cities and 52% of the plains. The ArcGIS program was used for the analysis of the area of Eskişehir where we are working. Satellite image processing with ArcGIS program, Rainfall flow analysis and Controlled classification operation and interpretation studies. Data collection, Digitization, TIN and DEM map creation, Green area map, School map, Transportation network map, River and Lake map creation procedures and Controlling classification methods are used.

A questionnaire survey was conducted by interviewing 56 neighborhood headmen. To the 56 district headman;
• Make sure that you do not have green areas, parks, etc. in your neighborhood. do you think that the fields are enough for the residents of the neighborhood?
• Is it easy to switch between areas such as parks and green areas in your neighborhood?
• Are the attitudes of the local authorities (municipalities) regarding the maintenance, repair and management of green areas positive?
• Rain, snow, etc. does the infrastructure system create a problem in case of a precipitation?
• Is there anything you would like to add about the green areas in your neighborhood?

I was asked their questions. As a result of these questions, 60% of the Eskişehir people see the green areas as inadequate and unconnected. Prior to the determination of the core areas and green areas which are the components of the green infrastructure system, land classification was made in the whole of Eskişehir province. This classification was made for 2010 and 2017 and compared.

- According to these comparisons made between 2010 and 2017;
- 3.7 km² increase in residential areas,
- An increase of 1171.3 km² in agricultural areas,
- 1986.9 km² decrease in naked land,
- 806.8 km² increase in green areas and km
- An increase of 5.1 km² was observed on the surface of the water.

It is a good thing that green areas and agricultural areas are increasing, but they are inadequate. It is the ecological framework necessary for environmental, economic and social sustainability. This is the green infrastructure required. There are many areas that will support the green infrastructure system in ecological, social and usage area in and around Eskisehir city center. These areas are classified as Green core areas and social core areas.

- urban parks, ecological preserve areas, afforested sports and play areas, green core areas,
- historical buildings, squares and cultural facilities are defined as social core areas

Eskisehir city center; buildings, green spaces, roads. For this reason, green roads are proposed, but instead of a new axle proposal, the potentials of the existing roads are evaluated within the framework of the determined criteria.

These criteria are;
- Slope grade
- Proximity to water surfaces
- proximity to social areas
- proximity to green areas and
- proximity to schools.

The impact values were calculated by the Analytical Hierarchy Process (AHP) method for the specified criteria. In the AHP Scoring method, the criteria are divided into meaningful intervals and the score ranges are determined. The options can be ordered by calculating the total points according to the range of points they are in. The existing routes are classified and scored according to the classes of the criteria. According to these given points, the routes converted to raster format are processed with effect values with Raster Calculator tool. The links of the resulting paths to the kernel areas have been examined and interpreted. Afterwards, the most appropriate routes were chosen. While the Yeşilyol system was constructed, the system was constructed in two different classes. These classes are;
- Main axis: An asterisk covering the main roads around the city center.
- Side axles: A system consisting of intermediate roads in the city center.

On the side axle system; the axis connecting the social and green areas, which are partially outside the city center, is added. If these axes continue, the green infrastructure system that is being constructed will not be closed in itself but it will be transformed into a system connected with the environment.

**Key words:** Green infrastructure, AHP, Core area, corridor, green road

# Experiencing Rural Life in the City: Ankara Altınköy Open-Air Museum

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## ABSTRACT

By the last quarter of the twentieth century, it is observed that the globalization process, impacts of which are felt in every field, has led to many changes and transformations in economic, social, spatial, administrative and cultural fields. While the effects of the process are felt intensely in the cities, the cities offering new life styles and spaces changing together with local values within the context of globalization and localization are indications of this change and transformation. As the cities are considered as places where modern life is offered/exhibited, the approaches bringing local values to the fore have started to make the traditional and local cultural spaces attractive. In this period, in which cultural industries are on the rapid rise, it is also seen that the museums being the exhibition areas of cultural and local values gain increasing significance and provide and exhibit extraordinary services in various ways. The museums where these values are exhibited are spaces which enhance the interaction between past and future generations and reflect and preserve the common cultural heritage of societies. Cultural heritage that provides sustainability that is taught and transmitted to future and perceived as worth to conserve constitutes a unity with tangible cultural heritage (monuments, buildings, cultural and natural conservation areas, and the like) and intangible cultural heritage (oral traditions, handcrafts, and the like). With the concept of conservation, in the museums it is necessary that the cultural values transmitted from the past to the present day sustain their original characters and that appropriate environmental conditions are provided while merging them with the changing values.

In this study, it is discussed that rural areas which are addressed within the framework of rural-urban dichotomy as representatives of the traditional and the modern are on the rise with the globalization process along with their local values, the importance of rural areas and rural way of life is increasing and the reasons of the emulations for the rural life in this period in which rural-urban relations are being consolidated are explained. Presentation of rural life to the visitors both through visits on-site and through exhibition and enactment activities in the museums in cities lead to conclusions towards its increasing importance also with the influence of the change in cultural and recreational activities.

'Village museums' which aim to introduce the rural life to the urban and get them together within the busy living conditions of the metropolitan cities and to recount the social and cultural history of the people constitute the subject of this study. By departing from a conceptual discussion on different museum approaches in international and national literature, the study firstly attempts to

explain these spaces where rural life is presented, and evaluate the these spaces, which have started to be amongst the contemporary changing cultural activities within the preferences of the urban users, through the sample of Ankara Metropolitan City "Altınköy Open-Air Museum". In the study, how these spaces are evaluated by their users is presented with respect to the Ankara Altınköy Open-Air Museum example. These analyses are made on the basis of the data acquired from on-site observations, examinations and face-to-face interviews with the users. As a result of the study, it is concluded that within the life cycle from the countryside to the city and from the city to the countryside, the desire for living in sites of natural life will continue to increase day by day.

**Keywords:** Countryside, city, museum, globalization, transition

# Philosophical Inquiry on the Relationship between Nature-Design-Human in Consumption Society

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## ABSTRACT

Nature is an entity that has its own laws and dynamics. TDK defines nature as the power that constantly re-creates and changes itself apart from human activities, in the most general framework. The concept of 'natural' derived from the word 'nature' bears the meaning of self-made, not man-made, or anti-artificial. At this point, Aristotle (cited in Collingwood, 1999) pointed out that nature is a living world and corresponds not to inertia, but to a structure characterized by spontaneous motion, process, development, and change.

In this context, the design is not regarded as an act that is revealed intrinsically in nature. It should be known that in the investigations within the scope of design research, the design is not considered as a spontaneous act in nature but conceptualized as a human-specific act that is not performed by other living beings other than the human. In this context, Hesket (2002) defines design as a *'human-specific'* ability to form and create our environment, serve our needs and add meaning to our lives in ways that are not in nature, and Mitchman (1995) expressed that design has not always existed historically. Because the design process does not occur in nature. According to the modern science, nature is born either blind determination or random change. In the words of Papanek (2004), all natural templates rich in pattern, order, and beauty which is not the result of the decision-making process of humanity go beyond the definition of design.

As a result, the design is basically a human activity and it should be known that it does not exist in the character of nature. It is thought that the creation of this awareness can make it possible to come to roots of many environmental and vital problems. It is seen that most of these problems are revealed by the action of designing and that the human phenomenon has become the main actor of both problems and solutions. Today, it is remarkable that the concept of "consumption" lies in the basis of the environmental problems created by human and which they are obliged to solve. Nature which does not contain human-specific activities has become in a debate about the human in the context of Environment-Design-space in today's consumption society.

In the words of Fischer (1990), "human beings are the first to oppose the whole of nature as an effective subject; while without a human subject, nature has become an object for man." While other living beings in nature accept the conditions as they are and only benefit from nature, a man

intervened the nature in accordance with the needs, desires, and wishes, changed it to his own benefit and mostly transformed it into a consumption object.

At this point, it is worth remembering that Baudrillard (2008) expressed that consumption society needed objects to exist. The concept of consumption and its effect is defined as using, destroying, eliminating, breaking, wasting, or consummating in essence. It is remarkable that all these actions used for explaining the content of the concept of consumption need human beings again to take place. It can be said that consumption does not exist in nature, as design, but it appeared with the existence of the human phenomenon. Marx (1857) stated that each production activity basically was a consumption activity at every stage, and pointed out that production was the agent of consumption and created physical elements of consumption (cited in Descola, 2013). At this point, consumption is basically dependent on human and the design action that has become a means of production. The present study aims to display the point of nature-human-design relationship in the consumer society through philosophical questions in line with all these theoretical perspectives. By reminding designers where design and consumption began, it is aimed to create an awareness of the nature and responsibilities of design action. It is thought that inquiry of nature-human-consumption and design relation will contribute to developing a critical view on the nature-human relation.

**Key words:** Consumption society, nature, design, human

# Study of Human-Centered Design and Legal Framework in Urban Space

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## ABSTRACT

'Urban space'is physically accessible to all individuals which is the common public use area of society. When studies on literacy urban accessibility are examined, concepts such as 'design for all', 'inclusice design', 'user needs design', 'real life design', 'life span design' are encountered. In reality, there are a number of approaches and designs in these concepts, such as the hidden subject 'human' and the subject matter of which is comfort, security, participation, sustainability accessibility. The fact that people can easily access different uses in the urban space, move around, travel and use the space independently are both a fundamental right of citizenship and the necessity of social life. Therefore this requirement can be provided in an enclosed frame by the internalization of the 'human-centered design' approach, where the identification of the different physical and other characteristics of the person and, accordingly, the needs of the person when moving in urban space, Otherwise, in the definitions made by one side and the perceptions created, people are divided into groups such as 'disabled', 'disabled', 'disadvantaged', 'healthy', 'unhealthy', 'normal' or certain users, many people are hampered by the use of public spaces by cities, and places where functioning movement, gathering, or communicating can turn people into isolated places.

As the most basic users of urban space are made up of individuals moving at certain distance intervals and bearing many different characteristics (age, physical, sensory, handicapped, etc.). People who use public transport, bicycles or cars also have to move from pedestrian area to pedestrian area until the end of the journey after leaving the vehicle or reaching the vehicle. It can be a permanent or continuous physical or sensory movement restriction. For example, people may have permanent barriers or constraints after birth, such as speech, sight, walking, hearing, or some part of their life due to a certain reason. On the other hand, pregnant women, elderly people, children, people carrying baggage-cargo or temporary disability may experience temporary, temporary or limited movement after a certain age. As a comprehensive viewpoint, the concept of 'human-centered design' can be guided and assisted in the production of spaces that support the pluralism in which individuals can find their place in the determination of the characteristics of the people and their needs accordingly without accepting the individual diversity in the urban space. As a matter of fact, universal design approach also depends on dynamic variables such as many health problems, accident, loss of skills after a certain period or a certain period of life of all people, including healthy individuals, instead of limiting the occurrence of disability as innate, permanent,

permanent constraints of certain groups it is possible to experience environment-related obstacles that can be restricted by the movement of the environment.

Nowadays, the solutions produced for the limitation of movement are continuing in the form of annexes to the existing built environment. Regulatory obligations that must be added to projects that are meant to be drafted or regulations that are regarded as standards to be followed do not go beyond creating 'obstructed spaces'. From the designer to the supervisor, the worker who practices with lack of information is ignored for everyone's accessibility of everyone in different specifications.

The main purpose of this study is to bring together the human-centered design approach with justifications and to establish the relationship of this approach to the legal dimension. In the introduction section; the concept of human-centered design will be examined and the relationship with urban pedestrian spaces will be established. In this study, a perspective that sees the problem in the space and in the process of space production is nourished by the inclusive and exclusive role of the space. It will determine the impact of different characteristics of people on their behaviors and needs to be met. In the second chapter; universal design concept that accepts 'disability' for all the individuals because of reasons such as age, language, skill, etc. According to architect Ronald Mace, universal design is the design of products and surroundings that do not require adaptation and feature design that appeals to as wide a audience as possible and can be used by all. According to universal design criteria ,as an environment designed ,ensures that all people use without any additional support. To ensure that the design is normal and perceptible without stamping any user group, it means a universal design from the unimpeded design. The interest of human-centered design and universal design will be revealed in this context.

At the following chapter, situation will be evaluated in terms of legislation and laws in Turkey. Arrangements for the designing of accessibility and accessible places for disabled people, elderly people, children and pregnant women, together with healthy individuals, in the open and closed urban areas in our country; TC 1982 Constitution, Disability Law, Local Administrations Legislation, Reconstruction Legislation. The UN Convention on the Rights of Persons with Disabilities is also ratified in our country on 3 December 2008 and with the Law No. 5825 and with the decision of the Council of Ministers dated 27 May 2009 and 2009/15137. The Optional Protocol to the Convention on the Rights of Persons with Disabilities has also been signed by the UN General Assembly.

As a result of this study, for the institutions with the above mentioned credibility, the free and easy participation of every part of the society in the use of the city is the main aim. n order to avoid discrimination in society and in the physical space, it is necessary to design without distancing from the human oriented design concept. There are standards and sanctions that will provide this necessity. However, adhering to these standards alone does not help all people to use the city. Both the implementation and appropriateness of these standards and the design of the physical environment should be ensured by the participation of institutions and opinion stakeholders representing people from all walks of life. This study supports the establishment of appropriate relationships and the improvement of the current legal-managerial dimension in this sense by revealing different forms of needs and behaviors of the person.

**Keywords:** Urban space, human centered design, universal design, legal process

# The Return to the Nature and Environmental Consciousness in the Movie, Village of Intellectuals vs. Village of Efe (2012)

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**ABSTRACT**

Made in 2012, the movie, *Village of Intellectuals vs. Village of Efe* tells the story of a group of people, who has fed up with the city life and has decided to settle in an Aegean village in order to return to the nature and to old life style before the Industrial age. They want to realize their ideal of establishing a utopic village, where they stay away from the technological devices and use only natural things in order to survive and to start eco-tourism in their province. If we take the villages of Intellectuals and of Efe as a microcosm of the whole World, they represent the dilemma of contemporary human beings all over the World as to whether to follow materialistic benefits and capitalism or to follow environmental friendly life-styles and principles within the context of "nature and urbanization". At this point, the movie functions as a mirror by urging the audience and the societies to criticize themselves and by reflecting the dilemmas of the modern people/age. Thus, in this study, the issues of the return to the nature and environmental consciousness will be analyzed and the question of to what extent it is possible to lead a utopic life (as it is illustrated in the village of intellectuals) will also be discussed with reference to the scenes in *Village of Intellectuals vs. Village of Efe.*

**Key words:** *Village of Intellectuals vs. Village of Efe*, the return to the nature, environmental consciousness, environment friendly life styles, materialism, inner conflicts and dilemmas.

# Urban Archaeological Site: Dara Ancient City

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## ABSTRACT

Cities, which are living spaces throughout human history, have many civilizations as they are from the time of their emergence until the day. These civilizations are reflected the ones that nourish and shape their own selves to the lands they live in; like a culture, tradition, custom, and social forms of life. These can sometimes be architectural works, written or visual documents, sometimes verbal music, poetry. Archaeological heritage sites are at the forefront of these values, which are of great importance to protection and survival. These areas, which have taken their formations for a very long time, are limited resources that are reaching to daylight and are impossible sources of renewal. The geography we live in is rich in archaeological monuments and remnants, and contains layers of thousands of years past. The settlements that have been inhabited in the historical process and which still maintain this feature and which have traces of layers underground and on the ground are known as 'urban archeology area' or 'multi-layered city' in other words. It feeds on traces belonging to different cultures, enriches the cities and forms a whole by associating with these layers. However, urban archeological areas are characterized by anthropogenic risks, which are located in ever-changing world order: physical changes, sudden ecological changes, urbanization pressures, infrastructure activities, administrative and institutional activities, economic and political activities, and are exposed to climatic changes. This situation makes it difficult to protect and manage the urban archaeological sites. For this reason, it is important that urban archaeological sites are protected and managed not only in technical terms but also in a sustainable manner with spatial planning processes that can guide and control urban development.

Dara Ancient City, considered as a study area, is one of the most important settlements on the eastern borders of the empire during the early Byzantine period within the borders of Mardin province. It is possible to see the historical layers belonging to the Late Roman, Early Byzantine, Seljuk and Ottoman periods in the ancient city of Dara, which is known to have witnessed the historical process extending to the Babylonian and Assyrians, which was also hosted by the civilizations before the Eastern Roman Empire. Dara, which is a multi-layered city, has city wall remains, gate, agora and columns, historical bridge, cisterns. The ditch outside the wall, which is used in the war with the Persians, contains the necropolis area and the cube structure in the cemetery area. It is thought that only one-fourth of the ongoing area of daily excavation work was reached in 1986. Today it is known that the whole area of the settlement area, which is known as Oğuz Village, is being developed as an archeological site for the protection of monuments underground and overground. However, a holistic conservation and planning system could not be developed, measures were not taken for the risks that the urban archaeological sites are exposed

to, and integration with the built environment was not ensured. Additionally, routes and presentation facilities and informational services are inadequate for the incoming sights. This work focuses on their solutions.

The method used to carry out the research is of three stages. In the scope of the research including evaluation of literature data, field survey-analysis studies and synthesis of these data, the present situation was discussed by making general historical research structure evaluations about Dara Antique City urban archeological site area and suggestions for Dara were developed.

As a result of this work, the social, cultural and historical layers of the Oguz Village have been developed and the development of the urban identity has been revealed and the problems of the area and the risks and possibilities peculiar to the area have been determined. Urban archeology has attempted to create innovative approaches to the management and orientation process by addressing not only the past but also the needs to be taken into consideration by urban development policies and plans, as a multidisciplinary field of study.

**Keywords:** Urban archaeological area, risks, Dara, conservation

# Disaster Sensitivity and Sustainability Problems in Urban Transformation Implementations

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## ABSTRACT

It is noteworthy that in recent years the number of disasters has increased in our country, especially in urban areas. In this context, "Urban Transformation Laws" have been issued in order to create new living spaces by taking into account the safety and sustainability principles that come to our minds and to facilitate the relocation of disaster-affected areas in urban areas. The appropriateness of the implementation of the transformation laws that have been used as a tool for reducing disaster risk, will be assessed in the historical periods on the Greather Municipal areas of Istanbul, Bursa and Ankara Metropolitan cities. The main objective of the study is; to realise and find out the imoportance and at what level the terms; “disasters and sustainability” taken into account in determining the process of urban transformation areas.

Essential questions to be answered during the study are; what level of disaster risk exists for urban areas and the major structures exists out of urban areas in our country? Is our existing / domestic disaster legislation sufficient to reduce the risks? What are the situations that are not enough? Whether the existing risky buildings which have been made illegally have been brought to amendment due to the abandonment of the disaster by means of the urban transformation laws? Does the proximity of the urban transformation areas to the city center, reduces the risk of urban disaster? To what extent is the sustainability principle taken into account in the urban transformation projects? Etc. In the context of these questions and their answers, the physical and social problems of the urban areas will be discussed through implemented projects. Urban transformation project implementations in different cities will be evaluated within the framework of relevant legislation, implementing regulations and general rules on urban transformation and will be evaluated by supporting the literature on the theoretical basis of disaster risk reduction and sustainability.

A very important part of the urban transformation areas are close to the city centers where the land exchange value is high. Urban transformation practices were hardly ever done In areas where the urban rent is low but disaster risk is high. Tough not very detailed. there was adequate legislation in the issues of disaster risk reduction and urban transformation in Turkey. Although the existing of disaster related legislation, contradictory structures have been realized. Deficiencies in supervision and construction practices in the urban areas of the last fifty years, constitute the present risky building stock. Recently updated and new published legislation, which makes it easier to forcibly confiscate, brings forgivness to illegally constructed buildings, facilitates the sharing of rents but, insufficient in terms of risk reduction and creation of sustainable living spaces.

**Key words:** Urban transformation, disasters, sustainability, site selection, urban rent.

# Spesific Cities that have been Changing/Transforming at the Urban Design Scale

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## ABSTRACT

Since the date of the first settlements, these cities have become attraction centers that offer optimum living life requirements. Today, as a result of advances in developing industry and technology, cities have become the only means of accessing certain needs. The variety and attractiveness of the city's unique functional areas and the possibilities provided by cities in every sense cause the city's population to increase at a speed that can not be slowed down, even if it is not stopped. Therefore, modern cities of today correspond to a living change/transformation organism that grows and moves on almost natural areas. In addition, the effects of the process of modernization and globalization accelerate the transformation of the original values that represent the city. Progress made in the framework of all recent ongoing sustainability debates has not been able to divert cities from the structure that uses our basic inventory of natural and urban environments as unsustainable. This resulted in increased human influence on the natural environment and the danger of rapid depletion of natural resources.

The British physicist and philosopher David Bohm says, "nothing remains constant in nature, everything is in a constant state of transformation, movement and change." Since cities exist, they are constantly changing in line with the fundamental power and guiding dynamics that influence them. This change manifests its effects both socially and abstractly in both physical space and social life. From this point of view, changes and transformations in urban space affect the quality of physical space and social life in a positive way, while at times it shows itself with deterioration in physical space and social quality.

Countries with a national level planning understanding of the production and control of urban physical environment, depending on the planning system performs and manages. From here, change/transformation planning in cities is managed by means of discipline. The emergence of the original values of the city is also directly related to the efficient use of the same tools. There are different planning tools in the world and application methods vary according to our country. All of this general effort is to eliminate the damage caused by planning and to prevent possible urban and natural environmental problems. In the planning process, which continues from upper scale plans to urban design scale in our country, the shaping of urban constructed environment is generally directed and supervised by solid and precise development plans. This makes it difficult to create a framework for the management of change/transformation in urban space and, consequently, on the quality of social life. As a result of all this, change in our country, "zoning plan change", transformation with the recent increasing discussions in many disciplines into the interest of the field and in many ways negative criticism of the "urban transformation" is perceived as. In addition, the loss of city-specific values and urban identity, which are often dealt with in conjunction with

the urban transformation process, is a result of this perception. This wrong perception delays the right steps to be taken to improve urban life quality and protect the destroyed natural environment through the means of change/transformation and originality. In some countries, the concept of urban design management is adopted in terms of solving these problems and in contrast to our country, rather than building one Parcel, design integrity is tried to be obtained.

In this study, changing/transforming cities through planning discipline and the original values of these cities will be discussed on the urban design scale in planning. The aim of this course is to produce solutions to the current or potential problems of urban and natural environment through evaluations made within the scope of urban design.

**Keywords:** Change/transformation, specific, planning, urban design, environment

# The Role of Local Administrations in The Process of Industrial Expansion fom The Metropolitan City to Neighboring Settlements in the Example of Tekirdağ

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**ABSTRACT**

In Turkey, all urban plans except for those that had been made by the "State Planning Organization" during the period after 1960 which is called as the "period of planned development" have been made/commissioned and approved by the Ministry of Development and Housing of the time until 1985. Although the new zoning law number 3194 which took effect in 1985 endowed local administrations in spatial planning, the central administration has always held the legal powers which allowed it to be involved in plans. Through these powers they have been involved from time to time with project based or extensive plans to the extent that would influence the future of the settlements. In spite of this involvement, generally speaking municipalities have emerged as the most significant actors in the process of planning settlements after 1985. The municipal law as well as the zoning law have facilitated the establishment of municipalities in settlements with a population of 2000 and more and allowed these municipalities to make/commission and approve plans despite all their shortcomings such as in capacity, budget, funding, technical staff, knowledge, material etc. At the same time, functions that spread to the country's metropolitan cities to their vicinities, particularly the industrial function, have caused significant changes and developments in neighboring settlements. Thus some settlements have been forced to face such demands for growth and development as they had not since their establishment, without sufficient preparation. This article discusses the plans made by district and township municipalities from a quantitative aspect within the scope of area and population, in order to understand the nature of the role assumed in this process by local administrations in Tekirdağ, the western neighbor of Istanbul.

**Key words:** Municipality, democracy, planning, participation

# Hamburg City Desantralization Process

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**ABSTRACT**

Decentralization has become a planning strategy with the reflection of urbanization problems and the effects of globalization on the urban organization of the city. Decentralization is seeking solutions to urbanization problems in developing cities and organizational problems in metropolises.

The aim of this study is to examine the decentralization process of the city of Hamburg, Germany by evaluating the changes in the spatial structure of the city in the historical development process, the problems of decentralization and the projects applied for these problems.
Research has been carried out on the question of how the spatial structure of Hamburg's development process changes, what spatial organizational problems are, and how these problems are resolved.

In the method used in the study; various articles, books, magazines and official internet pages about the general information about the city of Hamburg, the historical development process of the city, problems of space organization problems and solutions for these problems and decentralization policies will be examined. In this direction, the spatial development of the city will be explained with supporting schemata, pictures and maps.

Hamburg A castle with 500 inhabitants took the model of the global city from the city to the medieval city, then losing the medieval city feature completely in the nineteenth century. Due to the first world and especially the second world war, the city has been seriously destroyed. Housing problems caused by 19th century industrialists, air pollution, negative working conditions of workers, infrastructural problem. In the cholera epidemic, thousands of people lost their lives and some homes were destroyed due to unhealthy conditions. The city of Hamburg was seriously damaged by the great fires of 1842.

Due to its location in the banks of the Elbe river and the fact that it has a significant port of Europe, the city has developed due to the harbor. Due to the fact that Hamburg Alster has a lake inner river and due to the high internal rivers, it shows urban development due to geography. With the destruction of the walls and the establishment of new cities, the city's harbor area is growing in the north as a core, being the core. It has a model of a city expanding in rings from the center of Hamburg (from the core).

With the increase in ship tonnage, the old harbor and its surroundings have become deserted and devastated. The 'HafenCity' project for the old harbor area and surrounding renewal project is planned for sustainability. Another focus of the HafenCity project is to expand the center and

reduce its intensity. The new harbor is located opposite the old harbor and urbanization is increasing in that area.
Reducing the intensity of the center has always been among the targets and sub-centers have been produced for this. In the north of the city, because of the limited urban land, a garden city plan (satellite city) model was applied towards the Elbe River skirts. The new harbor and surroundings also show satellite town features and alleviate the intensity of the center.

Hamburg competes with other cities with sustainable and green city features. Because of these features, the 2011 European Green Capital was chosen. The effects of these projects on the space organization are seen. It is one of the leading cities working on energy efficiency.

To minimize the use of vehicles in the city; There are plans and programs to increase the usage of metro, tram, especially bicycle. Outdoor recreation areas and public spaces are given special importance. Landscape planning projects also come to the fore.

Hamburg is among the cities with the largest number of canals and bridges in the world due to its inner lakes and rivers. These geographical conditions have been decisive in the planning of transportation; there is a transportation plan scattered radially from the center.

Hamburg has recently been hosting European-based offices of brands. He is advanced in aircraft, metal, chemical industry and media. Looking at the locations of the commercial units in Hamburg, it is seen that they are piling up in the center and around the new harbor. It is expected that the city will grow eastward and in the satellite city model because of the limited land and plan.

**Key words:** Decentralization, Hamburg, urban spatial organization, industry city, urbanization problems.

# Call for Morphology in Urban Planning

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## ABSTRACT

Urban planning explores the spatial structure of built environments and their relation to social and economic life. However, there is uncertainty how the change in physical environment according to the planning laws and regulations effects the society and different culture (Tekeli, 2010). There are sudden changes at different scales at certain moments in the development process of the planned cities. The basic approach to planning is to transform the city into a holistic spatial structure on a regular and coherent level. Planning from the upper scale; the city has a big precaution in terms of being organized, preventing health problems, improving living standards. In this context, it is important that the production process of the space is maintained in parallel with the basic principles of urban planning. However, in today's practices, the place is produced by certain people or groups instead of the community (Balamir, 1975). This impedes the effective intervention of planning and urban design. The planning is one of the basic elements of the legitimate guiding effect of the spatial transformation processes. It is the physical reflection of changing and transforming urban spaces, as well as social and environmental dimensions. In this context, there are studies of urban morphology that are examining the physical changes in the cities. With morphological approaches, reading is done on the physical space, and in this sense, significant studies have been done on the urban development process in the process of studying urban texture. This change and transformation is limited in the work on regulatory basis. For this reason, plan tools and laws that can affect urban forms, especially in cities, in the historical process need to be examined from a historical perspective. The morphological indications which will be based on the present planning process and affecting the urban form were first defined in 19th century by a series of legal regulations starting from the Tanzimat period. The legal frame of the modern Turkish urban planning system was established in the 1930s with the comprehensive modernization movement of the Republican Regime. First, legal regulations in the micro-scale were then presented as legal instruments for the development of urban form in macro-dimensions, including urban scale. These arrangements were first followed by a street and building scale followed by a development process covering the urban scale, thus providing legal support for urban planning. In 1930, the Law on Municipal Buildings and Roads was issued. Accordingly, all municipalities are obliged to prepare maps and plans in accordance with the development policies determined by law (Ersoy, 2017: 5, Özcan et al., 1995: 5-9, Baş, 2003: 54). The rapid urbanization phase after the Second World War required a new comprehensive development law in 1957. The new legislation, the integration of master plans, and the modern application ideology have brought forward the concepts of national development planning and development planning (Chief, 2003: 55). It is aimed to determine the basic standards of small-scale implementation plans that control the formation of statutes and individual parcels while aiming to control the macro-structure of cities with master plans.

The purpose of this study is to examine the historical development of planning (laws, regulations, ordinances, plans, guides) in the morphological context, which is the legal basis of spatial change and transformation in Turkey. In the study, national and local scale planning tools that were implemented in different periods were analyzed in terms of morphological content. Existing urban planning system to plan hierarchy in Turkey, planning procedures and construction conditions in the city are very different scale up to scale a detailed structure indicated. Today, there are a number of regulations specializing in the different aspects of planning, even though the Constitutional Law and the final structural (building form, material, building size, etc.) structures are not specified.

The method of the paper; national and local scale planning tools that were implemented in different periods were analyzed in terms of morphological content. Urban morphology allows systematic analysis of the change and transformation in time as a physical field of urban settlements or an area of scarcity of urban structure.

Morphological analyzes are made with structural characteristics such as urban space structure, gardens, building islands, streets, parks and monumental structures. Thus, the physical development of urban tissues can be defined as the process. In the study, laws, regulations and by-laws issued during the planned period were examined, starting with the early construction regulations. Besides this, spatial plans; the type of plan, scale, scope of the plan, content of the plan and morphological control tools.

The dynamic relationships between morphological layers that make up the urban forms, can be said to be disregarded in the planning process in Turkey. The master plan attempts to adapt all other layers of the urban form, such as the building layout and the green system, to the already given block order through individual applications, after determining the structure of a transportation system from the upper scale to the lower scale. Basically, this is the general function of the Turkish urban planning system today. Therefore, it can be said that a kind of gap filling process is realized in the urban blocks created during the formation of urban pattern.

**Key words:** Planning history, urban morphology, legislations in planning

# Use of Geographic Informatıon Technology for Urban Transformation Area Determination: Bozüyük City Center Case

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**ABSTRACT**

Urban transformation offers a new model for urban areas that can not be solved by development plans, but projects that are fully implemented still result in an intervention requirement. However, as in planning, urban transformation should be the first step of this process by analyzing urban areas based on their problems. With Geographic Information Systems (GIS) and Analytic Hierarchy Process (AHP), each problem can be classified and layers can be created. In the study, it was aimed to determine the area of urban transformation using AHP together with GIS's weighted overlay, spatial analysis and visualization capabilities. For this purpose, in Bilecik Bozüyük, 2500 hectares of urban area were analyzed in various ways and four main layers and sublayers of these layers were formed. The first step of the work is to identify the area of urban transformation that is the aim of the AHP. For this purpose, each criterion, and sub-criteria are set forth. Then, alternatives are determined for each decision problem and the decision problem is solved.

The first criterion of the AHP is the problem of earthquake risk, which is added to the AHP model foreseen in the district. The lower layers of the earthquake risk layer are weighted overlay predominantly with the values obtained by the AHP. As a result, earthquake risk layer was calculated and applied as 36% settlement suitability layer, 7% , number of building floors layer, 7% structure construction layer and 50% structure construction layer respectively. In the Revision Development Plan made in 2013, despite the increase in the population, the urban reinforced areas were included in the urban fringe. Hence, the main criterion of urban facility has been added to the AHP model together with the sub-criteria of education, health, and green area, considering the distance of access to existing facilities. This layer obtained by the overlay analysis has a weight value of 10% with AHP. The result of application of weighted overla y method of 11%, 26%, 63% values of green area, education services, health facilities layers obtained by AHP, the final criteria of the AHP model was obtained. Another issue that has an important share in urban transformation is the state of restructuring. In the study, layers of concentration and unlicensed restoration were established under the criterion of restoration. In the AHP model density is divided into two sub-layers as construction density and population density. The layers were obtained by kernel density method in GIS. Structuring another sub-scale urban transformation in Turkey and sought solutions in the world is the problem of unlicensed construction. Euclidean distance and block statistic method were used to obtain the unlicensed layer of restoration and weighted overlay method was used to obtain layer of structure density. The main layer structure was obtained by weighted overlay using 71% and 29% values obtained by AHP respectively.

According to a development plan made in 2007, the working area can not reflect the elements of urban identity as competently. Historical buildings and Höyük hill have been added to the AHP model under the name of urban identity. By applying Euclidean distance and reclassification, historical structures and geographical formation sub-layers were created and weighted registration was applied to these layers with 75% and 25% values. The main layer of urban identity has been obtained as the result of weighted overlay. The weighted overlay analysis applied 49% for earthquake risk, 10% for urban constructions, 12% for construction and 29% for urban identity and ve and the result layer of urban transformation has been created. To find alternative solutions to the problem, values below 30% are not suitable, 30-55% less suitable, 55-65% suitable, 65-75% more suitable, 75-83% best suitable. The best sutable site selection is shown in the maps. In most of the applications examined within the context of urban transformation, it appears that there is a gap in the stage of generalizing problems in a city. It is aimed to fill this gap with this work done.

**Key words:** Urban Transformation, geographic ınformation system, analytic hierarchy process

# Evaluation of Eskisehir's Urban Agriculture with Geographical Information Systems and Contributions of Urban Agriculture Practices to Urban Landscape

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## ÖZET

Urban agriculture is an integrated process, which involves livestock raising and crop farming in or around the cities with the aim of providing both income and fresh food, as well as other activities such as necessary input production, delivery, crop processing and marketing (Yılmaz, 2015). Besides, crop farming activities within the urban parks, gardens, balconies and other similar environments can also be evaluated as urban agriculture.

Urban agriculture, which has become quite a popular activity all around the world recently, provides an environment for training, experiencing, socialisation and rehabilitation for the individuals from various age groups who live apart from nature and rural experiences in the cities. According to United Nations Development Program (UNDP), 800 million people are engaged with urban agriculture activities all over the world. Moreover, 15% of the world's food need is met from urban agriculture. After 10 years of development in Cuba, half of the Havana's food has been provided from urban agriculture lands.

Negative effects of rapid urbanisation on the climate, intensive migrations from rural areas to the cities and fast growing industries cause environmental pollution, which also give harm to agricultural lands. Urban people are mostly isolated from nature. This situation causes various problems for these people, who spend most of their spare times in closed areas such as shopping malls, because of different reasons like transportation difficulties, physical and monetary inadequacies. Increase in the obesity, psychological problems, and socialisation disabilities are the common problems encountered especially among the children.

Today, appropriate spaces for agricultural activities are reserved in the newly constructed skyscrapers, and garden storeys are usually designed. Thus, it is aimed to establish self-sufficient vertical cities. Besides, some researches and studies highlight the necessity to increase urban agriculture practices to provide food as a solution to urban health problems. The studies show that it is possible to spare various areas in the cities from roof gardens to urban spaces to create urban agriculture areas for food production.

Within urban agriculture practices, various agricultural activities and experiences are performed in a wide range of environments from neighbourhood parks to roof gardens, and from hobby gardens to common use areas in the residential sites. Through the dissemination of urban agriculture activities, individuals can both provide some of their food from these micro agricultural lands and contribute to urban landscape as well. Agricultural practices, which are performed in the roofs, balconies, gardens and public green areas support the urban open and green systems. Thus, urban people can spend qualified time and perform recreational activities. Besides, agricultural gardens/lands help increase the biological diversity and support habitats in the cities. Moreover, urban agricultural activities in different levels and scales may offer employment opportunities for many people in the cities, which promise advantages in decreasing poverty and unemployment.

Most of the people in Eskişehir reside in highly constructed urban areas and so are usually in need of experiencing rural and natural environments. To fulfil this need, urban parks and hobby gardens are constructed by the local authorities. Besides, due to the citizens' positive perspective on the environment and nature, it is most probable that Eskişehir can becomes a pioneer city in the field of urban agriculture practices. Considering that the urban rehabilitation has become a major issue in the country lately, it is also of great importance to consider the urban agriculture activities and needs, which become widespread in the world, during the planning and designing stages of the urban rehabilitation processes in Eskişehir. Within this context, urban agriculture concept, practices and examples worldwide have been investigated in this study. Accordingly, void lands in Eskişehir where urban agriculture activities can be performed have been determined using geographical information systems (GIS). The contributions of the plants/crops to be grown in the appropriate lands have also been discussed.

**Key words**: Geographical Information Systems (GIS), environment, Eskişehir, urban agriculture, landscape

# The First Plot Area Example of Urban Transformation: Zeytinburnu

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## ABSTRACT

We can define urban transformation as an action plan in which economic, social and environmentally sustainable solutions are produced in areas of decay and decline in general. In other words, we can define urban transformation as a transition from one state to another. There has been a rapid increase in the population of cities due to the increase of industrialization and social and economic developments in the world and in our country. Due to the immigration that the cities had taken, the skewed buildup and slum increased and brought many problems together. Due to the fact that our country is located on the earthquake zone and the increase of urban problems, it is necessary to transform these areas. The concept of transformation started to be discussed in the 1980s and in 1984, the Law No. 2981 on "Transactions to be Applied to the Constitution contrary to the Regulation of Housing and slum Law and the Law on the Amendment of a Article of the Law No. 6785" played an important role in the transformation of the squatting. In the 1990s, following the preparation of his legal status, the municipalities had taken the urban transformation agenda and started to consider projects for the slum areas. When we look at the results of the Marmara earthquake that took place in 1999, it is seen to cost 35 billion dollars and cause hundreds of lives loss. It is predicted that Marmara earthquake will occur in our country and it is estimated that the results will be more. Istanbul, one of the immigrants of our country, lives on these problems. One of Istanbul's heavily immigrated mosques is Zeytinburnu, which is known as Istanbul's out door. Throughout history, Istanbul has grown in an uncontrollable position in the western part of the historical peninsula. As a result, areas lacking technical and other infrastructure services that are incompatible with the development of the city have arisen. The easiest and fastest way to transform these areas is through urban transformation. Local governments play an important role in this transformation. Zeytinburnu province was chosen as the pilot area for urban transformation for Istanbul and the area was determined by a joint study of metropolitan and district municipalities. In this study, the urban transformation project made in Zeytinburnu province was examined and tried to make various determinations and suggestions. Selecting a pilot area in Zeytinburnu district boundaries Sumer neighborhood transformation projects have been declared the first earthquake in Turkey. It has been determined that a significant proportion of the structures, such as 47% of buildings, are at risk and 90% are used actively. In addition, the permits status, ownership status, residence status of the constructions are examined. As a result of these studies, it has been decided that the region should be renewed urgently. One of the most difficult steps in urban transformation is to persuade the people of the region. It has been understood that negotiations with the people of the area in the area, which are considered to be urban transformation, have started and it is not possible to participate without a concrete project. On top of this, the first 15.400m² empty area in the conversion area has been started. Individual interviews were made with 250 families in the project area and 80% positive responses were obtained. As a result of the work done, 75% of each independent section and independent parking unit and 1 car

park have been undertaken free of charge. After the project phase, big agreement was reached with the floor owners and started to the project.

Using the public resources, the project provides the opportunity to choose the apartments they desire with long term and low interest opportunities. The project was completed in 2013 and 455 apartments and 29 business locations were delivered to the beneficiaries. In this study, transformation projects Istanbul Province examining the first earthquake that occurred in Turkey made in Zeytinburnu district has emphasized the importance of urban transformation. It is explained that urban transformation is an important opportunity for our country and it can be done regularly with the coordination of related institutions.

**Key words:** Urban transformation, Zeytinburnu, earthquake

# Monitoring Urban Sprawl in Antalya with Sleuth Model

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## ABSTRACT

In recent years, rapid population growth, technological developments in Turkey, and progress in construction and road sector are affecting cities and urbanization considerably. These developments are threatening for urban sprawl over natural areas such as agriculture, forests and pastures. The growth of the cities and the increase in the population living in the city all over the world is greatly affecting the human and natural environment. In order to provide urban development in the most accurate way, it is very important to understand the spatial structure of the city, to plan land use and to produce growth projections for provide the appropriate urban development in the future. For this reason, so many urban growth models have been used in cities to ensure the correct identification of the growing up of the future, as well as the growing of the day. In this study, SLEUTH urban growth model was used for Antalya province which is very rich in terms of tourism resources and rapidly urbanized within this scope. The pixel-based SLEUTH model is a widely used urban growth model in recent years. With this modeling method used, future growth scenarios are estimated by using information obtained from past satellite images.

In the study, 30 m spatial resolution Landsat satellite images of the province of Antalya on August 26, 1987, September 9, 2004, August 25, 2010 and August 28, 2017 were used. When satellite images are provided, attention has to be paid to the fact that they are in the same or near term and that there are no image disturbing elements such as clouds and fog on the working area. The study was carried out in three basic stages. In the first stage, radiometric and atmospheric corrections were made on satellite images. Then, in order to process Landsat satellite imagery, land cover classes in Envi software were determined by supervised and unsupervised classification methods. This classification has been examined in five classes, namely agriculture, forest, artificial surfaces, water surface and other areas according to the Corine Method. As a result of the accuracy obtained in the classifications, controlled classification method is preferred for this study. In the second stage, data on the inclination, shadowing, road, city, land use and urban growth excluding areas required for the determination of urban development were established. In addition, urban settlement and land use status layers were produced from satellite images. Transportation data layers showing the main transport network were created as a result of digitization from Landsat satellite images of 1987, 2004, 2010 and 2017 years. In addition, percentage slope and hill shade maps were created using digital elevation model (DEM) to be data on the sleuth model. In order to

operate the SLEUTH model, all the data obtained firstly are converted to the same projection (WGS 84 UTM-36N) and the same spatial resolution (30m). This data was then subjected to a two-step SLEUTH analysis, Model calibration and estimation in the ArcGIS. As a result of the analysis, it is predicted that east-west growth of Antalya will slow down due to land use, in the northern direction of the city will be a very rapid growth, the urban form will spread northwards and the population will rise in the northern regions. In the final stage of the study, the produced scenario was evaluated within the scope of urban planning criteria and proposals for the future were developed.

This study is an original aimed at obtaining a simulation with Remote Sensing (UA), Geographic Information Systems (GIS) and Cellular Automation method for a better understanding of the future urban development of Antalya which is the fifth largest city in Turkey. The results of the work will be a source for all relevant disciplines, especially planning, within the framework of the establishment of healthy urban policies for the city of Antalya and taking the necessary measures for future possible land uses.

**Key words:** Planning, SLEUTH, urban modeling, simulation, RS and GIS

# Discussion on the Zoning plans of Changing House Understanding On Adıyaman Province

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**ABSTRACT**

Housing is a social and economic reality in cities where we live with problems and potentials. Each city has its own approach to housing in terms of changes in the process of housing, demographic changes, technological developments, prestige needs or economic necessities.

Adıyaman has become one of the most important settlements in the region, which are rifted with and embraced by many civilizations throughout history, due to the rivers and streams, especially the Euphrates, and the cold water resources, which are suitable for shelter and protection. In the past, the city of Adıyaman, which has been mixed with the cultures of various civilizations day by day, has joined the Ottoman lands during the Iranian campaign of Yavuz Sultan Selim in 1516.

Turkey's 1950s movement began in the rural-urban migration has also manifested itself in Adiyaman province. From 1955 to 2000, the rate of urban and rural population growth did not follow a regular course. It can be said that internal and external migration gave its first sign in 1960. Considering the population growth rates in provinces, it is revealed that the population growth rate of the cities is consistently higher than the population growth rate of the rural areas. This suggests that the rural area has a constant migration.

The increase of the population of the city center from 100.045 to 212.475 in 1997 is based on the Atatürk Dam. Due to the Southeastern Anatolia Project, internal migration occurred due to flooded places in the city of Adıyaman during the construction of Atatürk Dam and the number of population migrating from the city to the city increased.

The growth of Adıyaman province in the process, concentration of population is realized among the lines limited by zoning plan which is developed with the creation of new urban spaces. Adiyaman changing with urbanization rate of housing construction in the province proportion of the population living in newly built homes although below the average in Turkey is higher than other populations. The population of Adiyaman city center has shown a serious increase especially in the last 30 years with the immigration, which resulted in a rapid restoration in the city center. The number of neighborhoods increased from 31 in the 1990s to 33 with the increasing population and urbanization, and the city's central population is 290.382 compared to 2015 data. The difference in development between the eastern and western neighborhoods of the city has created a situation that separates the city from the social angle.

It is an indisputable fact that the city is a direct influence of zoning planning in the formation of the city, and it is the first document to be applied when urban spaces are formed. The cities are shaped

by the zoning plan and show their development in this direction. In the 1/1000 Scale Implementation Plan Explanatory Report prepared in 1996 in Adıyaman province, 2015 year Adiyaman city center urban population is estimated as 290.000 and Adıyaman will become one of the centers of attraction in Southeastern Anatolia Region (Implementation Plan Explanation Report, 1996: 3 ) expressed. However, considering the planning of the city today, it seems to be behind the prepared zoning plan. Along with the increasing population, however, new housing needs were born in the city, and as a result, housing concept developed in new urban areas. This changing housing concept brings a different aesthetic understanding to the city.

The aim of this study is to investigate the effects of urban development on urban system, relations with urban systems, social impacts, urban effects and urban development in the city of Adıyaman considering the effects of urbanization on the dwellings.

The paper of Murat Sevik named "Kent Kimliğinin Korunması ve Kentsel Gelişimin Sağlanması Bağlamında Yerel Yönetimin Önemi: Adıyaman Örneği," and the paper of Tolga Şentürk named Kentsel Dönüşüm Sürecinde İmar Planı Ölçeğinde Tasarımın Önemi İstanbul Fikirtepe Örneği helps us to prepare this paper.

Study literature and information through observation, collection is created with the analysis and synthesis method, the following steps were followed in order to achieve the goal mentioned above in the study: Investigation of work related to the topic: Turkey and abroad as scientific books and articles on the published topics, scientific organizations symposium, panel and conference notes organized by After the researches, the development of housing structures in the historical process, the factors affecting the design of houses, the interaction between housing and urban life have been examined. Later on, in the light of the information obtained, the development plans made after 1996 of Adıyaman were examined and the effects of the reconstruction plans on the understanding of housing planning were examined.

**Keywords:** Adıyaman zoning status, housing change, urbanization,

# Transforming with Urban Projects: An Evaluation on Kayseri City

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**ABSTRACT**

Today's practices are produced by neoliberal discourses, and the cities affected by these developments are accepted as strategic nodes in the name of economic growth and development. Globally, neoliberal urbanization strategies such as "competitiveness", "attracting investment", "brand cities", "urban marketing" and "gentrification" are at the forefront. Supply-oriented urban policies aimed at regeneration of the capital come to an active position in long-term strategies and planned development plans that guide cities. This process that is active all over the world is also happening in our country, and cities become production and "more than" consumption centers. It is competing to attract capital, internationally qualified labor, cosmopolitan elites to the city, changing and transforming with economic, cultural and spatial projects.

Urban project process; it is aimed to develop a project that aims to develop in a transparent process with spatial planning, which includes strategic decisions, which forms public sector shares, which enables private and public sectors to participate together, develops "competitor advantages" in the urban structure, enables participation of different social groups as stakeholders. However, in today's conditions, especially in our country, the plan-project dialectic, which increases the benefits of rents beyond the benefit of the society and the benefit of the effective urban systems, becomes a structure driven by fragmentary regulations of the space.

Anatolian cities also experience this process at different speeds, types and network of relations. He is trying to manage the process with prepared or unprepared in different urban trajectories. Kayseri city emerges as a city that is differentiated by its own dynamics in this process. With the vision of world city, tourism city, industrial city, which is adopted recently, it is imagining itself in the future and it is being reshaped rapidly with the projects realized in this direction and it is being renewed with urban transformation projects.

Especially after the 1980s, there was an increase in the demand for regions which is near the center and having the advantage of location. The slum neighborhoods, which have an advantageous position in terms of transportation networks close to the city center, have begun to change rapidly. For this reason, the most important development on the agenda of the city has been the urban transformation projects.

In this direction, it is aimed with the study; to define the urban transformation projects produced with a project focused approach and evaluate spatial and social fragmentation of the process of formation and to explain the underlying dynamics them together with their effects in Kayseri city. Because of this new condition has brought a fragmentation on the whole city pattern in Kayseri City that developed in accordance with the plan since 1944. In the beginning, the conversion activity, which is experienced by the contractors on the parcel basis, has reached a great speed in the last

period. In the Kocasinan District, Cirkalan Quarter, Ziyagökalp and Yenidoğan Quarters, Seyrani Quarter, Ahi Evran Quarter Yunusemre Quarter, Argıncık Quarter Yeşil Quarter Kuşcu Quarter, Oruçreis Quarter, Mithatpaşa Quarter, Yıldızevler and Uğurevler Mahallesi Urban renewal areas have been declared under the conditions set in Article 73 of the Municipal Law No. 5393. Along with the slum areas, neighborhoods with a historical background around the city's central business district such as Sahabiye Mahallesi, Küçük Ali Mahallesi, Battalgazi Mahallesi and Karacaoğlu Mahallesi have been declared as a renewal area.

In the province of Melikgazi, the projecting process was mostly completed with the conditions determined in Karabekir District of Kazim, Anbar District Karabekir District of Karabekir District 6306, Concerning the Conversion of Areas under Disaster Relief, and implementation studies started.

This new project-focused transformational fiction, which is frequently discussed in our country, will be evaluated primarily with the plan project dialectic which will be covered in the context of spatial, economic, social values and effects in the urbanization practice. The methods of structuring the realized projects will also be examined together with the legal dimension (contractual agreements, privileged protocols, zoning regulations, etc.). These discussions and findings, like Kayseri, will provide an important experience in metropolises that are living in a fast-paced manner.

**Key words:** Neoliberal urbanizations, urban transformation, urban project

# Urban Renewal and Urban Development Applications with Faces Renewed: Investigation Sample Izmit in Kocaeli Province

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## ABSTRACT

Along with industrialization, many elements of life on earth have begun to change. There is a transition from a traditional and local life to a globalizing life today. Depending on the developments in industry, the industrial facilities that started to be established centered on the formation of the cities and the movements of the people who want to work there have caused migration movements. Starting from the nearest cities, immigration on the scale up to foreign countries has been experienced and is experienced. In the places where immigration has taken place, the city has begun to form with the residential constructions that occur nearest to the factory. The industrial buildings that formed the center became to define the city entrances. However, the past continues to shape the world of economy and working life, and the priorities of the country are changing. Covered factories are either being demolished or transformed, and the areas that are brought together with the growing population are directing the areas of construction to other functions. New factories continue to be established to serve the current needs. Along with the new zoning regulations, the fields devoted to the industry are expanding.

The purpose of study is to examine the transformation process of the central village of Izmit in Kocaeli province. Kocaeli province of Turkey, which is among the most popular immigration is a city that has preferred development direction of the industry. The factories have directed urban planning. The province, which changed its face according to time and application preferences, continues to change. Due to its geographical position it is a linear city, which makes it a place where the city will develop. Kocaeli province needs increased population and housing, shopping center and so on offered to them. Service is constantly changing with the buildings. The loss of urban memory can ruin feelings of belonging. As of the date known in Kocaeli, BC VIII. The settlement began with a Greek colony named Astakoz. It is necessary to be asked what can be done to keep the cultural process which is very old, Kocaeli province's central district of İzmit today is constantly changing with the increasing population, the construction sector which wants to answer their housing demands and get their earnings, accumulation, and new applications to relieve transportation.

As a method, literature review and architectural observation will be done. The changing face of the city constitutes the present day of the city. The most important change for the Kocaeli province was the closure of the Seka Paper Factory. For Izmit, the key words such as lifestyle, belonging, culture, family, bread door, and so on, Seekers and Seekers strive to protect their relations with the groups they form in social media in order not to forget those days. From the Seka factory, the park, paper museum and public service buildings were removed.

The subject that will lead to work is belonging. It is necessary to feel that it belongs to one place, to transfer that settlement to tomorrow, to protect the past to show the present to the people who came to the occasion; values, rudder points, urban memory elements. For Kocaeli, what are these values still, are they continuing the same value? Their question is important.

How did the urban transformation practices that took place with the laws apply to Izmit? What is demolishing and what is being built? For example, how did the demolition of old buildings, along with the new State Hospital building, change the urban interface? What do the newly built shopping malls offer? How is the city's rapid change of face treated in the literature? In the work to be done with the questions, it is surprising that what the present state of the city is actually known tomorrow what will happen tomorrow.

Many concepts such as neighborhood, trust, protection and sharing, which are cultural elements, are also lost when the concept of the neighborhood is transformed into closed housing settlements in housing projects. In Izmit, the cooperative houses, which were the housing construction system in the 1970s and 1980s, have been transformed over time and some of them have been damaged in the 1999 Marmara earthquake. While the construction of demolition parcels, which is a popular method of construction in the city, is on the one hand while the construction of new zoning islands and the industrial zone, it continues its development in the determined direction. The immigration of Kocaeli province is a big influence in that the memory value is not taken seriously and efforts are not made to protect it. It comes from the "hometowns" that come to mind, so there are many different originated associations about the place where family ties exist. It takes a great effort to be able to pass on a city with its values to tomorrow and to be able to create an identity belonging to it. To love and feel belonging should not be limited to just being in education or working in a job there.

As a result, cultural heritage, social heritage, social environment, and life that concern all the world cities is to protect life. All other efforts must be a good assessment of the factors that will lead the individual to a happy, healthy and peaceful life, but with the hands-on and mind-set, righteous practices will leave heritage today.

**Key words:** Kocaeli, urban memory, change, transformation, building

# The Reflection of Neoliberalism in Urban Space: An Analysis of the Urban Transformation in the Case of Trabzon City

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## ABSTRACT

Today, cities are in the process of change, transformation and restructuring in physical, social, cultural and economic direction. These changes, which we can see in the urban areas more actively, are the result of a global process. "Urban improvement" and "urban renewal" in 1960-70, "urban redevelopment" in 1980s; During the period from 1990 to the present day, "urban renewal" and "urban revitalization" projects have become intermediaries of urban interventions. Urban transformation projects, which are also included in the post-2000 legislation; is being developed in the guidance of high-scale neoliberal policies and it lives in urban space. In this developing process; a new structuring process has started with differentiated particle interventions produced by transformation projects in urban areas; the projects have caused the cities to change functionally and formally.

Urban transformation, which is one of the most basic and concrete indicators of globalization and neoliberalization in the spatial structure, is defined as a transition from one state to another. The concept of transformation in urban scale is framed on five main purposes. These are related to the physical condition and social problems; aims to find suggestions for the problematic area by linking the cause of social degradation to urban depression areas. Second, it aims to meet the physical, social, economic, environmental and infrastructure needs of a growing, changing, degrading built environment. Another aim is to develop strategies that support economic development; physical and social healing as well as economic viability. The limitation of urban growth and expansion and the reuse of existing, idle sites are among other purposes of urban transformation. Finally, it aims to meet the needs of different actors' participation in urban politics.

Along with the processes of globalization and neoliberalization, urban transformation projects have been developed in 2000 under the name of different content projects that have accelerated as a solution to the problems that have arisen on the structured space. It is seen that urban renewal is not a spontaneous phenomenon when these projects, which are increasing day by day, are affected by urban macroform, and it is necessary to intervene in the city plan with social, economic, cultural and political aims in order to be realized. Also; urban transformation projects conceptually aim to improve the living conditions of the city and the city. It also creates negative consequences on the

economic scale such as "dispossession", physical "dispossession" such as "coincidence" in social, urban space such as "getting out of the place".

The study was conducted as a solution to physical and social problems; micro, meso and macro scale applied urban transformation projects and the effect that they created in the city.

As a study area; Trabzon city, which is supported by national (private / public) and international investments in recent years and whose housing, transportation and transformation projects are increasing day by day, has been chosen.

This study;
• When did the urban transformation projects in Trabzon occur?
• In Trabzon, where are the regions where the urban transformation projects are concentrated?
• How did the city's reflections of the transformation processes in the city of Trabzon become?
• Who are the winners of the Trabzon urban transformation process and who are the losers?
the answer to your questions is sought.

Scope of work; information about the history, spatial dimensions / purpose / nature / type of the transformation projects, the actors and legal bases that are effective in the process, how the process works, how the implementations are carried out and their present situation will be given and the obtained information will be spatially visualized and the city's urban transformation maps will be created. After that; the effects of these fragmented interventions on the spatial development and change of the city will be evaluated in terms of planning discipline.

Study data; urban transformation and Trabzon urban development process, municipality and TOKI official internet sites, local press reports, observations, photos and photographs obtained from the field trip.

**Key words:** urban transformation, urban renewal, neoliberalism, globalization, Trabzon

# Urban Transformation Process and Sivas Applications

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**ABSTRACT**

In the study, urban transformation processes and practices in the central district of Sivas province were examined in outline. Sivas is an important historical city both in the past and in the Central Anatolia. In recent years, it has come to the agenda first with the regulations of the historical city square. Restoration and environmental regulations have been criticized with both tender procedure applications and flaws. In some cities in our country with the 2000s, primarily the transfer of old industrial sites was brought to the forefront. However, this process, which is reflected in Sivas, is also blocked in the judiciary due to the increasing rent in the environment and the ongoing attitude of the municipality. Subsequently, high-speed trains and some urban construction projects have created controversy. The station was searched for space before and even the university campus could have come under the spotlight. Later, however, it was noticed that such a rapid access to the settlements was not at all appropriate. Then the historical station position was preserved and a design contest could be reached. Sivas has also attracted speculative interest with the TEM project like the high-speed train. With the saving of TEM, the demand of the city was demanded and it was bought and sold quickly. With some of the priority projects under the influence of the national agenda, the Municipal Council decided to move the old stadium for a while. Rapid decision agendas that encourage the construction industry in our country after the 1999 earthquake have been decisive in this process. The city has also been a candidate for an important and rapid change with the announced urban transformation areas. This historical city, Sivas, which is still an immigrant, is not the first city in Anatolia to become a candidate for change with the eagerness of return of invesment. Extremely fast and semi-irregular urban transformation process has taken its place in the agenda of the country with its negativity. The example of Sivas seems to have not been able to draw any lessons, even from the regulations of the historical city square, which has recently been criticized in the recent past. In fact, in those days when shopping malls started to become widespread, there was also a failure in Sivas, the construction of an AVM project have been stopped. In this project, it started rapidly and eventually it was realized that the facts close to the end were discontinued. In recent years, this city has chosen to be pushed towards the marketing strategies of the contractors who have been in such a rant appetite and the consumption society line. In fact that it is knocked down by rural demographers struggling with their internal migration for many years. After 2010 Environmental Regulation Plans settled in the country agenda but before urban change at 1/5000 scale quickly and wildly triggered. Such a change can be felt in a striking dimension of the last 17 years' story of the city that has been left open and the historical memory loss

that it has lived. Sivas should continue to maintain its place on the agenda as a city of interest with its many urban identities and artifacts in the future, too. But even so, this debate making about the city should be necessary with many those disturbing elements: The neglect of the sociological dimension in construction investments, a marked and rapid increase in urban injustice, the visible state of some idle investments, industrial heritage that has been dismantled and destroyed with the lives of lost and forgotten families, also disappearing together with the silhouette of the old city. Otherwise, the city is being dragged into a situation that is too bad to be remembered with its history.

**Key words:** Urban transformation, urban regenaration, environmental plan, provincial revision plan, high-rise settlement, local governments, Sivas.

# Choose Your City Design Your Dress

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## ABSTRACT

When assessed from the top frame, cities are trying to integrate themselves into the global network by constantly changing themselves in competitive processes and are shaped by the influence of actors such as capital. From this point of view, spaces that are increasingly similar to each other are created, and this leads to far-reaching applications from point-to-point decisions. This situation changes the patterns of the cities. On the one side there are structures that are presented as technological and prestigious, on the other side there are protected areas and poverty areas.

It presents us different compositions formed by different times and different representations located at the border of each other. This eclectic structure leaves today's cities in their original form and leaves them in the midst of change. The most prominent elements here are intangibled and reflected on a different discipline both to emphasize the effect created by this spatial segment and to present a different experience to those attending the workshop in formatting.

Ascending residences alongside slum areas, opposing and threatening spreads surrounding natural resources or contradictory-and sometimes monotonous, constructions that destroy urban silhouettes… Each one can be fictionalised in workshop as part of this demonstration with colors, shapes and patterns. Designs taken inspiration from these contrasts will be a reflection of these contradictions in the cities. Along with changing mainstream politics, the transformation of cities and planning show itself in places and structures. In recent years, cities have become a venue for demonstration, as trends are preferred and emphasized in urban decisions and visions and these features make them contestant. The aim of the workshop is to provide the environment for designing these changes and transformations in the cities together with dresses over the memory and iconic structures.

Workshop coordinators are expected to give ideas about how the concepts of change-transformation and originality can be associated with the city. Also coordinators are expected to direct participants about choosing a city or city part and inform about abstraction and basic design principles, and to control the duration of the workshop. In the first phase during the workshop, participants are expected to observe choiced cities under the concepts of change-transformation and authenticity and define the "status determination". Participants could choose the city where

they live in, or one of the other cities or city part that has a place in their memory. Participants should prepare a brief summary of the "status determination" in this first phase. In the second phase, participants are expected to abstract these determinations using design elements (point, line, plane, volume, shape, form, direction space, color, texture, pattern) in basic design education. In other words, status determination will be made by making the abstractions by the help of the design elements in the first stage. In the third phase, participants are expected to transform the abstracted case-findings into clothing design using basic design principles (Repetition, Rhythm, Contrast, Harmony, Unity, Balance-Symmetry, Koram, Hegemony) on a model diagram given to them.

As a result of all this process, changes in cities are distinguished in places. In a similar fashion to the clothes that are part of the fashion show, cities will be a presentation of this change in ways that take place in the designs. After workshop, a small colloquium will be organized in which the outputs are discussed, and the layouts will be displayed with the backgrounds created with the stories.

**Keywords:** Elements of design, Abstraction, Transition, Transformation

# The Depletion Story of a Collective Memory Place: Maltepe Bazaar, Ankara

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## ABSTRACT

Today, the two concepts, which appear when the dynamics of the urbanization phenomenon are discussed, that is urban change and transformation, leave behind an environment in which the concepts of urban memory, identity, culture and belonging become more questioned and problematic. Sometimes the memory places that are displaced during this transformation cause the dynamics between citizens and city to change, allowing the concepts such as urban culture, urban belongingness and everyday life practices to be taken from different perspectives. Public spaces in the cities is a subject of multifaceted study including many concepts such as social, economic, cultural and spatial concepts. These concepts include a multidimensional and interdisciplinary dynamic that can be dealt with in different fields such as architecture, urban design, urban sociology, urban culture, urban history. In this context, urban formation, spatial organization, space-user relations, interactions between users, behaviour of social groups are examined. Daily life practices of urban dwellers also shape urban public spaces as well as their maintenance. In this relationship, architectural space and its users are in a constantly changing and transforming interaction. Because architecture is influenced by changing cultural and social processes, it constantly changes the language of communication. Individuals live within the system of values they belong to and they have certain cultural norms and social relations. Practices of everyday life reproduce the space within these norms and values. This production allows the formation of urban memories and cultures over time. Preserving and sustaining this formation may only be possible by maintaining a system of meanings that determines city identity. Space loses its features and functionality when the system of meanings and needs are disappeared. If it does not respond to urban dweller's needs, it must now either disappear or undergo potential transformations for different uses. Unused spaces that are not suitable for community life; loses its vitality in time and eventually becomes exhausted. If this inevitable transformation creates traumatic interruptions, breaks and social amnesia in the relation of the city and the urban dwellers with space, then, it is an unnatural transformation. Such transformations are the situations that affect the city dweller's sense of belonging, urban responsibilities, citizenship awareness and culture negatively and set the stage for future urban problems. In this study, a memory place, which is disappearing today, is examined through the relation between consumption and space and the failure of the social practices to reproduce themselves as a result of 'displacement' is discussed. In this regard, Maltepe Bazaar, which is one of the most important commercial places of Ankara, is a public area that has been depleted and now being forgotten. Until 2006, it was located in the south-west neighbourhood of Maltepe Mosque, known as Demirtepe, in Çankaya. On the advantage of being located on the Tandoğan-Kızılay route, the bazaar place has been used as a place to shop while traveling. Maltepe Bazaar, which has been greatly embraced by the citizens of Ankara, has been a centre of attraction for social needs of citizens and a place where any item needed could be

found in the 1990s, when there was not much choice for shopping. But in spite of the intensive use and shopkeepers' loud objections and resistance to the police, the bazaar was demolished. Then, on its site, one of the shopping centres, which exhibit our trade culture, was constructed. Although, the new shopping centre was aimed to revitalize the region and designed to include social hubs such as landscape elements and cafes, it could not arouse public interest and eventually abandoned. On the other hand, almost a year later, Maltepe Bazaar was restarted at the vacant spot which emerged after the gasworks buildings at Celal Bayar Boulevard was removed. After moving to its new place, the Bazaar area could not maintain its function and social significance and finally has lost its significance. Meanwhile, citizens' daily life practices and their interaction with the space have changed. In this study; Maltepe Bazaar, which gives a struggle for survival, has been conceptualized and documented within the context of consumption of space and daily practices. In this documentation study; archives of certain institutions and documents were investigated, and newspaper news and other media news were reviewed. An evaluation has been made as a result of interviews with users and shopkeepers.

**Keywords:** Replace, consumption of space, practices of everyday life, Maltepe Bazaar, Ankara

# Urban Transformation Casted a Shadow upon Bagdat Street

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**ABSTRACT**

Bagdat Street is located in the borders of Kadikoy district, which is one of the central districts of Eastern side of Istanbul Metropolitan Area, and which is situated in the Marmara Side of Bosphorus. It is an important settlement and trade axis not only of Kadiköy, but also of the entire metropolis. According to the sources, the history of the street, which has almost an equivalent past to the roots of Istanbul, goes back to Byzantine era. The street, which steps forward with its quality of being a settlement, building and trade area that senior governors and socio-economically notable people in the city have preferred since Ottoman times, has witnessed a constant change and transformation. As an important trade axis, Bagdat Street has experienced the first strong momentum of change and transformation, with some legal regulations and practices that is discussed after the first half of 19th Century. To begin with, three factors can be mentioned as an example to these regulations. The first one is Ebniye Law (1882), the second one is the opening up of Urban Ferry to business (1857), and the third one is the opening up of Haydarpaşa – Pendik railway to business (1873). Kadikoy settlement, whose change and transformation process started to accelerate with these dynamics, and Bagdat Street in particular, has had a distinguished place in the city with its qualities of being a prestige area and the importance it carried throughout history. As from its axis today, starting from Kurbağalı Dere to Maltepe, with a length of 6 km, Bagdat Street is defined as an important sub-region and identity area for Istanbul Metropolitan Area.

As is the case with the whole country, Kadikoy has also entered in the urban transformation process, which is used as the most popular tool for reproducing the area. The urban transformation process that gained momentum with Law No 6306 About Transformation of the Areas Under the Risk of Disaster that started to be discussed especially after 1999 Marmara Earthquake, and that came into force in 31.05.2012 (R.G. 28309), became a triggering factor also for the settlements surrounding the Bagdat Street.

This study focuses on the urban transformation process in Bagdat Street based on Law No 6306, regarding the practices and the changes and transformations happened in this process. Especially the physical, social, economical and functional transformation in the Bagdat Street at the last 5 years, are analyzed in the light of street-wide field studies and detections. The particular results that this change caused such as the losses in brand values or the decreases in prestige areas are analyzed over commerce areas.

**Key Words:** Bagdat street, urban transformation, prestige aareas, commerce areas.

# Urban Refugees and Social Sustainability - A Case Study on Altındağ, Ankara

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## ABSTRACT

Sustainability remains one of the most important renewable topics in scientific research. According to the sources, sustainability consists of three components: environmental, economic and social sustainability. Furthermore, human well-being is the direct or indirect object of most researches, because of that the term social sustainability is very important and we could see that the concept of social sustainability has been used in the future development visions of some countries and regions. But to date, there are no researches under this topic are seriously implemented, we could say that we have just ideas and expectations that look ahead to the future.

The paper examines the literature on social sustainability and reviews some of its definitions and attempts to identify elements that directly affect human needs. On the other hand, the paper then moves on to talk about immigration and refugees in general, moreover; give us an idea about immigrant types and its definitions. After that, it continues with several definitions, such as refugees, asylum seekers, and resettled persons. All of this will be studied by getting to know more about social sustainability and refugees.

As long as we are talking about society, we must mention the most vulnerable groups in every society, and in our case study, we could say that they are the refugees. It is remarkable that the number of Syrian refugees in Turkey amounted to more than three and a half million, most of them are urban refugees and few of them are living in temporary camps.

The purpose of the paper is to examine the relationship between Syrian urban refugees and the place where they live in, and specifically to study their shelter problems. For example, the reason for choosing the house, the distance between the house and the surrounding services, area and number of individuals, per capita share within the house area, heating system and other factors that directly affect the comfort in the house.

Refugees are concentrated in the northeast part of Ankara (Altındağ district: Siteler, Ulubey and Önder). Therefore, this area was selected for the implementation of the practical study by conducting a questionnaire and interviews with the study cases. The refugees in these areas constitute a fairly semi-independent population enclave so that many local people call the area

"small Aleppo" since most of them from the city of Aleppo. The Syrian population in these areas is estimated at about 40,000, while in Ankara there are about 100,000 Syrian refugees.

This study attempts to take a reliable scientific sample, the sample reaches 5% of the number of Syrian refugees in one neighborhood of Altındag district / Ankara. Due that the researchers speak the Arabic language and understand the Syrian culture, they can communicate with the studied group without any hindrance. Therefore, the error rate in the answers was calculated at 5% and the percentage of reliable answers reaches 95%.

The questionnaire is designed to measure satisfaction rates for qualifications regarding housing and the surrounding, thus, the questionnaire is going to consist the following sections: architectural features, functionalities and quality within the house, the location of the house, the quality of urban services around the house and the social life in the building, which could include the relationships between the neighbors….etc. And the various questions that affect the life of the urban refugee in terms of the characteristics of the house.

All these questions in order to reach the results of the living comfort of the Syrian refugees in Ankara and analyze the special problems, and then propose some possible solutions to address these problems and to achieve real social sustainability of these new communities.

**Keywords:** Social sustainability, urban refugees, Immigration.

# Street use by children in Today's World: Example of Eskişehir

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**ÖZET**

The rapidly urbanizing world and the indescribable development of technology is affecting the social events. This effect is changing and transforming social relations and the spaces and more public spaces that these relationships are taking place. The streets are the places where the mentioned changes and transformations are spreading in the public space. The end of private property and private area are the beginning points where the street starts. In this sense, it is also referred to as a semi-public area by undertaking the role of a bridge between public and private space. The streets which are the areas where social relations first started after being separated from the private sphere vary from society to society, from culture to culture, and from geography to geography. This difference determines street use and street designs.

This study investigates street use by children. The game which is indispensable part of healthy development of children and the relationship established with the street has changed with the development of public space users and technology. While the negative consequences of urbanization, traffic, fear of 'foreigners', hygiene, etc. distract the child from the outside, the development of technology presents both new spaces and new forms of game as alternatives to children. These worries led to the fact that while creating more controlled, preserving areas and games, they actually compromised the child's creativity and freedom.

It is known that the age of starting school in the whole world is inferior. This led to the children move controlled area which is home to another area. And still game does not exist. Thus, for children academic work without game has begun. There is no evidence that starting an academic work without game at a very early age brings a healthy development and success for children. All these concerns have mobilized many educational institutions and civil society to create 'playgrounds' all over the world and to reorganize the relationships that children will make with the streets.

In this context, the 'Calm School Education, Culture and Art Association' was formed by teachers in Eskişehir in 2013. The 'Festive Society', which has been carrying out its work since 2016, is just one of the studies. Festive Society started with the transformation of Songül Street located in Esentepe Quarter, which is located within the boundaries of Tepebaşı District in 2017, to the first works within the scope of 'Living Street'. This study is for children and also works with children. Today, they are trying to transform and change the Kumluk Street in the Bahçelievler Quarter, which is located within the boundaries of

Tepebaşı District. In this study, the transforming and changing streets are examined in terms of children, families, institutions and organizations. In this direction, the study consists of four stages. Firstly, focus group discussion was held with the 'Festive Community' components and volunteers. This focus group interview has been a guide for understanding the purpose and method of study and for the further next steps. Afterwards, it was interviewed with neighborhood residents and muhtars. These interviews focused on street and game relationships between generations, 'resilience' where neighborhood residents and muhtars showed change and transformation. In order to understand after the transformation, street use was observed by being in the street in different time periods. Focus group meetings were held with the children living in the neighborhood, who are individual users of the street. These interviews were accompanied by a pedagogue. In these interviews, space relations, street games and living change and transformation, street use practices were examined. In the last part of the study, opinions were taken from the actors involved in the design.

The study that seeks to answer the role of the spaces in which game and players are considered to be insignificant and 'leisure time', and how they should be designed in the public area confirms the hypothesis that 'abandoned' streets can be reused with children for children today in order to have healthier individuals in the future.

**Keywords:** urbanization, public space, street, children, playground

# Space-Time Convergence as a Result of the Development of Transportation Technologies

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**ABSTRACT**
The technological developments that have taken place along with the industrial revolution have triggered the development of transportation systems and the changing economic policies that bring the labor market and market searches together in global trade have caused the increase of human mobility and transportation demands. Speed and capacity opportunities in the transport sector have increased with the use of motor and oil after steam boats and steam rail technology. Increasing transport technologies have created networks that connect people and settlements, spreading human settlements to distances across the globe. The increase in mobility in this period and the migration to big cities caused many changes in the demographic and spatial context of the cities. Rapid overshooting of distances has transformed human beings and settlements into mobile beings. Spatial interpretation of short distances after rapid transit is defined by Harvey (2003) as "an incredibly shrinking world".

The development of transportation technologies, by changing the relationship between transportation, space and time, results in faster and cheaper access more easily, resulting in "space-time convergence". However, this process, which involves spatial and social inequalities, also affects the accessibility of locations in a different way.
In this study, the concept of "convergence" emerged with the shortening of travel times of transportation vehicles gaining speed thanks to technological developments is being investigated. In this study, where the value of distance between places is measured by travel time, the spatial and temporal results of transport technologies are questioned and the spatial impact of “convergence” is evaluated.

In the study, space-time convergence between Ankara and Istanbul as a case study is being investigated and the following research questions are sought:
• What are the spatial, temporal and perceptual consequences of the development of transport technologies?
• What does the concept of convergence emerging with the development of transport technologies mean in the real world?
• Can the concept of convergence be different in different geographies?
• How does the value of the spaces change with time?
• What has the convergence behavior between Ankara and Istanbul changed in space?

**Key words:** Space-Time convergence, transport technology, Ankara-Istanbul

# Parking Guidence Information Systems: A Case Study for Ankara

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**ABSTRACT**

Since the end of the last century, increases in the automotive industry, advances in transport facilities and population explosions have led to increasing traffic congestion in big cities. One of the reasons for this complication is the parking problem that can not be solved. According to Uyur (2015)" calculations show that , most of the cars are in 2 hours of movement per day, while the remaining 22 hours are under parking. In his work Uyur (2015) emphasizes "parking is indeed a phenomenon that shapes economic and social mobility, rather than where cars are parked, and therefore it interacts strongly with the surrounding environment". According to Taş (2012), Parking Management (PM) is a system in which wider solutions are produced instead of temporary plans and defined as strategies and policies aimed at resolving emerging problems. Gülhan and Ceylan (2010) emphasize that the parking problem should not be seen as only parking lot tariffs, and that the parking management considers the issue as a part of the urban transportation problems. They claim that transportation habits and options affect parking usage, reminding that different applications are emerging in these areas, and that PM is aiming to give a new functionality to the existing system by applying various strategies such as user informing, facility sharing and benefit cost analysis.

Even the cars in the parking lots are considered to be problematic in the city. The cars looking for parking garages in the traffic define a different problem. The cars that do not know the location of the parking garage or who have gone to the parking garage they know but have not found any vacant lot there and returned back to traffic to search for a new parking place, increase the traffic intensity and congestion in the city centers, leading to time and energy losses. A significant part of the studies on reducing traffic congestion in the city centers is about 'Parking Guidance Information Systems'. In this study, the structure and working principles of Parking Guidance Information Systems are explained with good practice examples. As a result of the work, a software developed for parking garages in Ankara city center will be presented as a sample application.
**Key words**: Parking management, Parking Guidance Information System, parking problem, city centres

# The Change in the Social and Physical Structure of the Cities Generated by Automobile

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**ABSTRACT**

Cities are spatial living areas where economic and cultural activities are concentrated. The need for spatial transposition of people has led to simultaneous development and change of vehicle and road technology. The technological structure of the objects referred to as “car, vehicle, mean” with the invention of the wheel has developed, and cargo transportation between settlements has become essential. The emergence of automobiles at the same time as capitalism has influenced the profit motive in production and increased the efforts for the invention of the car (Tekeli and İlkin, 2010). After the invention of internal explosion engine, automobile, which was used as a “wealth and showpiece” until the end of the nineteenth century, has become “a symbol of freedom”. Accepted as an element of modern life, automobile increased its existence in urban space. Additionally, with the impact of the public policies of the automobile industry, automobile has transformed to be the primary and priority vehicle of daily transportation. In this transformation process, the use of automobiles has changed the urban form with spatial arrangements. In the same period, the development of the functional planning approach in urban planning accelerated the social and spatial separation process by increasing the dominance of the car within the city.

The expansion of individual transportation caused the increase in automobile-induced problems (air pollution, traffic congestion, energy and environment problems etc.) and necessitated rethinking the relationship between the automobile and the city. While producing short term solutions for the environmental problems created by the car, on the other hand, approaches and new studies in urban planning and spatial design are being tried and implemented.

The purpose of this paper is to examine the social and spatial problems experienced in developed cities in the automotive axis and to present possible solutions with examples (to enable the public transport network, to reduce the departure times between work and housing, to foresee a compact settlement scheme, cities without cars etc.) The impact of automobiles on urban form will be examined and solutions will be presented.

Technological developments have affected the car's structure; car structure and features have influenced people and caused the formation of automobile culture. Economic policy of countries, industrialization process, historical development, public transportation options etc. led to increased expansion of automobile culture and automobile usage. The effect of automobile use in developed countries is not same as in developing countries. Taking these factors into consideration, cities from developed and developing countries will be selected and the impact of the automobile on the city will be revealed. The impact of automobile on selected cities will be presented as a result of literature survey on pre-car period, car period and automobile period. In this study, the comparison

method will be used to analyse spatial relations in the context of urban forms and types of transportation of different socio-cultural societies in the specified periods. Comparing these periods with the context of public policies, land use, sociocultural relations, ecological values and transportation options, the changes which the automobile creates in the social and spatial structure of the city will be examined.

As a result of these investigations, the expansion of the functional planning approach and the use of automobiles caused the functional fragmentation of the cities and transformed the vitality and function of the living spaces by separating the public and commercial areas from the residential areas. While working, recreational, housing and socialization parts of traditional residential areas were combined in a compact form, the residential areas transformed into only housing and recreation areas with the technological and technical knowledge of today. It has been observed that the location of the settlement areas in the city affects settlement design and social relations. The functional planning approach and automobile usage have transformed cities into an uninhabitable and complex structure in order to improve and make them liveable.

**Keywords:** automobile, city, urban form, change

# New Approach to Determine the Protection Zones for Drinking Water Basins: The Case Study of Kırklareli Dam

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## ABSTRACT

Increasing of human activities parallel with the population has negative effects on the sustainability of environmental resources. Economic development aimed land use change decissions are negative pressure on sensitive ecosystems. However, planning activities within administrative boundaries where natural thresholds are not taken into consideration are not effective in providing protection-utilization balance of sensitive ecosystems. Drinking water basins are indispensable ecological units for urban settlements with large-scale populations. In Turkey drinking water basin planning process carried out based on euclidean distance measurement system. Theredore unique conditions of the region can not be evaluated sufficiently. Within the scope of this study; firstly, the land use changes of the drinking water basin of the Kırklareli City are going to be evaluated for different years by using Corine Land Cover Data. Secondly, a variety of data have produced as an effective decision support tool in the provision of ecosystem services approach and protection-utilization balance of the basin. Finally, primary, secondary and tertiary conservation areas will be determined in the light of the topography of the basin, geological structure, land use situation, vegetation diversity etc. The study will be tried to integrate the euclidean distance measurement system and unique fatures of the region to create sustainable drinking water basin conservation process.

**Key words:** Drinking Water Basin, Ecosystem Services, Protection Zones, Sustainable Watershed Management, Integrated Watershed Management, Kırklareli

# Environment and Energy Efficiency Relationship

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## ABSTRACT

One of the important issues of human life is energy. From the simplest electronic devices to the most advanced industrial facilities and space work, there is a need for energy use. The ability of societies to preserve their existence in other societies, free and independent, depends on the use of advanced technologies. Advanced technology is also possible with energy use. The countries that supply the necessary energy are the ones who have the power to speak in today's world, but the countries that cannot supply are back and cannot have a say in international relations.

Today, approximately 80% of the energy produced is derived from fossil fuels. Fossil fuels are rapidly consumed due to limited reserves, while the other side of the atmosphere is disturbed by the structure of life threatening life in the world. If the consumption of fossil fuel continues at the same rate, the greenhouse gases in the atmosphere will double in the 1850s, and the world average temperature values will increase by 3-6 ° C over the course of this century, leading to natural disasters on a global scale.

For this reason, humanity has to search for alternative energy sources and methods. Reducing energy consumption is on the other hand more and more because of competition and prosperity in the world. There are two options for meeting the needs and reducing the adverse effects. One of these options is to orient the environment to non-polluting and unexploited energy sources. The second is to use the energy more efficiently.

If the energy used is used efficiently, the same works can be seen with less energy, so that the existing resources will be used for a longer time, the harmful wastes released to the environment will be reduced, other expenses will be saved and the national welfare will be saved. In various studies it has been found that the productivity of old industrial plants is as low as 50-60%. Increased energy costs and competition have led to the development of energy efficiency policies by people, businesses and countries. We need to pay attention to the fact that the energy consumption of a mobile phone battery is as low as that of car fuel, that our home is warming up to the electricity that a factory counter can use. In the event that we are weak as individuals and society, we also cause the life of future generations to be put at risk.

**Keywords:** Environment, energy, renewable energy, efficiency.

# Usage of Artificial Wetlands in Domestic Wastewater Treatment: Sivas Example

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**ABSTRACT**
In addition to the classical treatment methods, the wastewater treatment method, especially with plants used for small settlements, contains all the features of other treatment systems. Removal can be achieved physically, chemically and biologically in classical method treatment systems. At least two of these methods should be preferred according to the characteristics and characterization of the wastewater. This means a separate facility for each. Use of low cost artificial wetlands, especially in rural areas, is more advantageous than other known conventional treatment processes. Natural treatment methods used;
• Stabilization pools,
• Field treatment,
• Underground leakage,
• Evaporation pools,
• Natural wetlands and artificial wetlands.

Natural wetlands are known as aquatic ecosystems that occur in nature during its formation. Secondary or advanced effluent wastewater can be discharged into natural areas. However, the effluent from waters from the treatment plant must be at a level that will not destroy the ecosystem.

Artificial wetlands are also a simple and low cost wastewater treatment method that takes advantage of physical, chemical and biological processes that occur between plants and microorganisms. These systems are not only used at the operating stage in the use of energy and chemicals; they are also economical in terms of construction. However, wetland systems occupy more space than mechanically operating plants. Such systems have a very wide application area for small and medium sized settlement areas, commercial and industrial wastewater. Artificial wetland systems are natural treatment systems that do not require the use of external energy to perform incremental processes, except for equipment such as pumps and pipes used in the system's transport of waste, as well as ecological and economical maintenance. The application of artificial wetland systems is very economical, especially where the land is plentiful and cheap.

In this study, the world's research on the use of artificial wetlands and wastewater treatment in Turkey were examined. When literature studies are evaluated; the main wetland configuration of the treatment effluents, the flow characteristics, the characterization of the wastewater, and so on. factors. In general, the initial investment costs are 10-40% compared to conventional treatment systems; operating costs are 20-30% cheaper. successful results can be obtained especially in BOI5,

KOI, coliform, AKM, nitrogen, phosphorus removal in wastewater. In artificial wetlands, economic analysis of wetlands should be done well, especially if water is intended to be reused. Established operations should be carried out for the restoration and rehabilitation of wetlands that are not well planned or are degraded ecologically for different reasons. While designing artificial wetlands, regional conditions, climate, land structure etc. should be carefully examined.

In the scope of the study, a wetland sample in Sivas province and used for domestic wastewater treatment will be examined in terms of performance and application, and suggestions will be made to increase the efficiency of the treatment and system operation.

**Keywords:** Treatment efficiency, Wastewater, Cost, Wetland, Artificial wetland

# The First Step in Protecting City and Environment and Solution of the Problems: Perception Management

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**ABSTRACT**

Technology that are not focused on the goal of sustainable development without losing their universal and original qualities cannot protect people, air, water, earth and cities and city life which are the systemic area of their coexistence. Furthermore, such kind of technology cannot make people and other life stakeholders feel like themselves and trust their future. The backbone of the sustainable development of cities and the environment can be summarized as follows: Economy and ecology inseparability, a healthy and sustainable life, conservation of biodiversity, multidisciplinary and interdisciplinary information outcomes of decision-making processes, National City Information Systems, taking role of local governments, sharing responsibilities by making people participate in decisions, establishing irreversible and organic cooperation of state, citizen and voluntary non-governmental organizations, environmental management systems such as ISO-9000 (total quality management), ISO-14000 (environmental management standards) and EMAS, laws, legislation, incentives and fees. These are universal standards for urbanization, city life and the sustainability of the environment and indispensable steps. However, the basic platform for their applicability is individual and societal perception management.

The past and present of all the civilizations living in the world are the cities where they founded.. The concept we call "scientific and ethical perception based on universal criteria" has been embodied under the subheadings of science, wisdom, rehabilitation and repair, improvement, justice, etiquette. With this method, the perception based on universal general truths has become a basic material in view of the city and its surroundings, the intellectual activities produced in the cities, the foundations for protecting the city life and the environment. Living in a community is of great importance for trust, solidarity, awareness and sustainable development. Ontological reference of our society, the city is entrusted to city governors as called "şehremini". Those who live in the city have taken this perception by means of "hemşeri" which is a very special law and they have become important activists in protecting it in their lifes. These expressions are not a sign of dominance over the cities and their surroundings, but the traces of the world of the mind, whose cities are to be protected, developed and trusted as future entities.

Nowadays, when urban transformations, urban investments, micro and macro environments of urban are shaped very quickly, it is imperative that open minds are established in universal general

truths that we offer as a continuous spine. The management of the training processes in which the perception management is carried out in this way is a good analysis of the city characteristics during the design and planning processes by universities, local governments and civil society organizations should make projections together. The first and most important step of these projections should be on the abandonment of all kinds of misperceptions, and the opening of the right mind to target universal peace.

The most valid method of all kinds of struggle is to destroy it from a fault, a threat or a source of risk. For this reason, sustainable mental and physical health for individuals and societies, which require a change in perception that will minimize life style standards, urban and environmental problems, supported by economic prosperity and a democratic environment. The environment and the city are alive as human beings, and although they come to us abstract, there is a consciousness and memory. People want to live in peaceful surroundings with people to whom they feel happy. this is also the case for the environment and cities where we are our stakeholders. Perceptions that have only an economic point of view are the perceived disturbances that cities want to avoid. The cities and the environment are at peace with the conditions where they feel like themselves. Humans are also at peace in places where they "feel" themselves. The same is true for your friends, your family, your life's stakeholders. If your perception and approach allows them to feel themselves, the environment and the city will be peaceful and secure. All methods to be applied to sustainable urban and environmental development should recognize this perception as an opportunity, and should regard it as the first step in creating and predicting perception.

**Key words:** Sustainable environment, urbanization, perception management, universal general truths

# Conversion of Safranbolu Tannery Site within the Industrial Heritage

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**ABSTRACT**

In the developing life order, technological, sociocultural, economic and functional changes come into play. As a result of these changes, new requirements come to existence. When it is thought that a place or a space is needed to be able to fulfil all the demands and activities, it becomes a necessity and problem to establish certain spaces in the meeting of these newly sprang requirements. One of the common remedies for resolving the problems is to arrange an existing building or area according to newly emerging needs. Attempting to eliminate new requirements in a structure that is active or idle in an existing function often results in the inability to respond to the new function and the existing structure that is designed according to the turnaround and the task. As a result of this situation, there is going to be a spatial arrangement by carrying out renovation works on the existing buildings for new functions. However, when spatial capacities of existing buildings are considered, sometimes it is unlikely that spatial organizations can be made according to the newly requested functions. In addition, the fact that the emerging needs were not considered when calculating the static strength of the existing building, the situations such as exposure to unfavourable outdoor conditions (vandalism, earthquake, excessive rainfall, humidity etc.) and material fatigue come together to constitute a secondary problem. As a result of understanding that new functions cannot be resolved in existing buildings or spaces, the new ones are created for these functions. Over time, the shifting of all activities to newly constructed buildings and areas causes the existing spaces to lose their significance. As a result, these values are abandoned and left out of use, and the nature is left vulnerable to natural and human-induced problems.

It is important to re-evaluate disused spaces in the context of sustainability. At this point, it is a necessity to restore the buildings and areas that lost connection with the city by giving appropriate new functions. In this way, it is ensured that the constellations witnessing a transformation are transferred to future generations by preserving their original identities, and the new spatial requirements are met. So, economic savings are made along with the less environmental harm. While these studies are being conducted, problems such as making unconscious repairs to spaces, giving inappropriate new functions, insufficient consideration of social, cultural and economic components should be avoided. Within the scope of this aim, a proposal study is being carried out for the tannery area in Safranbolu province of Karabük, which is among the UNESCO World Heritage Cities.

Tannery area, where the leatherworking activity was carried out, maintained its importance from the 16th century until the mid-20th century. The leather manufactures are located at the outskirts of the city on the side of the stream, for reasons such as bad odour and waste problems that are the result of work done. The operation of the factories that stayed alive until the 1950s ended due to the reasons that the industrialization and the technological developments in the leather industry were not able to keep up with the developments and the activities such as the labour migration to the Karabük Iron and Steel Factory which was established in these years. In this process, as a result of the rapid abandonment of the premises in the tannery area, this site became a depression area for the city. Some of the industrial heritage buildings in the region are being used as housing by unconscious maintenance and repair, some of which have been demolished and others that have been abandoned.

Factors such as the spatial potentials of the buildings and open spaces in the tannery area, the identity of the industrial heritage, the proximity of the area to the city centre and the deeply rooted existence through the region are important points in the recovery of this area to the city. In this context, it is thought that the re-activation of the region will contribute to the development of the city in physical, socio-cultural, economic and tourism points as well as the solution of its problems. In this direction, suggestions for the re-utilization of the tannery area are presented by the conducted study.

**Key words:** Refunctioning, industrial heritage, sustainability, tannery, Safranbolu.

# Analysis Use and Needs of Green Structure of Hatay Urban Development Area Using Remote Sensing

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## ABSTRACT

The presence of urban green areas is one of the most important factors in determining the living and living quality of cities. In addition to contribute to urban aesthetics value, the green areas also offer active and passive recreation opportunities for urban people. Moreover, it is one of great importance in terms of eliminating the adverse effects caused by the intensive construction and traffic in the city.

The study was carried out in Hatay Metropolitan Municipality central districts of Antakya and Defne. Antakya was the 2 nd largest city in the Roman period and it has hosted many civilizations. It still has different religions, sects and cultures. It is also known as the city of peace and tolerance with its multicultural structure. Hatay Province was taken under the scope of the new Municipality Law No: 6360 and Metropolitan Municipality. The boundaries of the city center, which is Antakya in accordance with the relevant law, have been enlarged and the districts of Antakya and Defne are established. Migration from rural areas into the city center began in the 80's in Hatay. Additionally, after the internal conflicts in Syria, the refugee immigration has taken place there. Hatay is very important area because of ecologically; the city located around Amanos mountain, it also hosting dried Amik Lake and surrounding Amik Plain. The city center has been exposed to population growth, especially in recent years. So, it gave rise to the need for new residential area, new residential areas cause the lack of infrastructure and transformation from natural land to built-up areas. Hence, urban problems have increased in parallel with population growth.

The study aimed to determine the current situation of the green areas in the city center of Antakya and Defne district center and to determine the comfort of the urban areas and to determine the urban green area requirement by calculating the amount of green space per capita. Two main objectives have been identified for this purpose; 1) calculation of the amount of green space in the city in square meters, 2) calculation of the amount of green space per capita

Topographical maps, municipal urban plan for reconstruction, satellite images of Worldview of 2015, up-to-date Google earth images used as the research material. Additionally, Turkey's demographic structure was used for statistical agency data. All previous studies and data about the subject have been evaluated within the scope of the study.

The study was carried out in 3 stages: first stage was obtaining data about study area and literature related study. Second stage was digital data converted from NetCAD to ArcGIS, than these data rectified before processed. Demographic data are tabulated at this stage. Third stage the amount of green space per person was determined, after that, some suggestions were developed.
As a result of the study, the green areas of Antakya and Defne districts were identified, and it was revealed that the amount of green area per person was less than standard.

**Keywords:** Hatay province, green area, urban

# Investigation of the Effect of Green Roof Systems on Carbon Footprint Release

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## ABSTRACT

The prominence of plants in the ecosystem is the accumulation of solar energy needed for life and the availability of this energy for the system. Soil contains natural habitats, nutrients and plant cover. In addition, the plant affects the quality of the air in the city positively. Green spaces, as aesthetically, contribute to the city as well as contribute to a restful and peaceful effect in human psychology. In addition, plants are important elements that reduce dust and noise effects in the city. The green areas are the extensions of the natural surroundings in which the city is situated. Today, cities have no active green areas and natural habitats. It is seen that instead of buildings with low floors and gardens, more multi-storey buildings are built and areas outside the buildings are divided into areas such as roads and parking lots. Population growth, migration from villages to towns, together with the formation of multi-storey building formation. In large cities, this situation develops more rapidly, green in parks and large-scale residential areas are not sufficient.

In order to cope with these problems encountered in urban life, construction has been searched in different ways. Increasing green scale on the diminishing green scale of the city has been possible with green roofs. Green roofs are the meeting point of the ecology with the buildings. Constructions are mini ecosystems; with air, water and soil in their surroundings, and form a whole. For example, constructions attract or reflect light and heat from the sun, collect rain water, assemble and filter it; they use fuel oil or natural gas as energy.

Green roofs are known as roof garden in landscape architecture. Green roofs are the living biological communities of microorganisms and plants that grow underneath the normal weight in the environment. Green Roofers improves the building's energy performance, air quality and urban ecology without the need for additional tools, creating innovative solutions to the problems created by rainwater. All green roof systems consist of plants, soil, drainage and waterproof membrane. Asphalt and concrete coated surfaces, which are often seen on the settlements, do not allow the water to drain sufficiently to the soil. The dark roof tops and pavements reflect the energy of sunlight during the day, the storages and the night. The consequences include a reduction in water resources, large temperature differences between urban areas and open spaces, heat island effects, degraded soil; weather conditions change; and the loss of green leaves in urban areas. The Green Roof can provide solutions to these problems to a large extent. In winter, the soil layer provides additional thermal insulation. Green roof types with thicker soil layers may reduce the heating requirements of buildings. With green roof cladding, heat losses due to wind can be

reduced by 50%. Part of the pollution in the cities is nitrogen compounds in exhaust smoke from industry and traffic.

These compounds can be captured by plants and used as nutrients. If the density of nitrogen is higher than the absorption of plants, it is washed with rain and mixed with surface water and poses a threat to health. Carbon dioxide is considered to be the cause of the increase in temperature in the world due to the property known as the greenhouse effect and it can cause huge problems. Green roof plants, like other plants, use carbon dioxide for their respiration and therefore reduce the negative effects of pollution. One of the most significant effects of the green slopes in the cities is to keep rainwater in the storm and delay its reach to the sewerage system. In structured areas, as more and more areas become hard and impermeable, less water is able to land. This means a greater burden on sewerage and drainage systems. Green roofs come into play here because a large part of the rainfall falls on the roof and stays here, absorbed by the soil and used by plants and then evaporated. The floor never reaches. Often floods are prevented. Electromagnetic radiation is greatly reduced. It is exposed to the weather conditions used in the roof coverings of the buildings and deforms over time. The green roof makes the membrane longer. Energy saves money and leads to less waste. Green roofs; filter beds, rain gardens, bio-storage systems, cisterns, rain barrels. The accumulated rainwater can be filtered and used in garden water and toilets.

Carbon Footprint is a measure of the damage that human activities cause to the environment in terms of the amount of greenhouse gas produced, measured in terms of carbon dioxide. Carbon footprint consists of two main parts: direct / primary footprint and indirect / secondary footprint.

The primary footprint is a measure of direct $CO_2$ emissions resulting from the burning of fossil fuels, including domestic energy consumption and transportation (notably cars and airplanes).

The secondary footprint measures the indirect $CO_2$ emissions associated with the manufacture and eventual degradation of these products from the entire life cycle of the products we use.

In this study, the usage of green roof systems against the carbon footprint which is exposed in our daily life will be examined and examples will be given. From the measurements of carbon footprint emissions from a building, it will be discussed where the building can be controlled using a green roof.

**Keywords:** Green roof systems, material selection, carbon footprint

# Legal Responsibility to Proceed Within the Context of Reliance of Disaster Risks

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## ABSTRACT

Administrative action; is an explanation of the will to bring legal consequences that the administration has done in order to carry out administrative duties given by law. There are two basic features of administrative process: declaration of intention and this declaration has legal consequences. Administrative action is; work, movement, operation and work that change the physical field of the mind. Administrative actions result in legal field, but actions result in physical field effect. Though administrative acts have some legal consequences,they have legal consequences. The 1982 Constitution clearly outlines the rule that no action or process of the Administration shall be excluded from judicial review. Therefore; it is called as administrative liability to compensate the damages given during the related activities. Administrative law has two subheadings of administrative responsibility. These are strict liability and faulty responsibility. Faulty responsibility is explained based on the concept of service defect. Service defect "is defined as a 'disorder', 'disruption' or 'gap' that occurs in the establishment, regulation and operation of the mind. In our law, "no transaction", "late transaction" or "bad transaction" of the service is considered as a service fault and the customer has to compensate the resulting loss. The strict responsibility of the person is accepted as the principle that, in the name of not ruining the rights of the persons, it is sufficient for the person to be held accountable for the existence of a causal link between the administrative act and the harm.

In the areas under risk of disaster and the lands and lands where risky structures outside these areas are located, the authorities of restoration, liquidation and renewal works to constitute healthy and safe living environments in accordance with science and art norms and standards. In this context, Law No. 6306 on the Conversion of Areas Under Disaster Relief entered into force in 2012. In order to determine the precautions to be taken within the scope of transforming the areas under disaster risk, it is essential to strengthen and reconstruct the buildings in these areas after

the determination of the general vitality effect of the said disaster. Criteria are determined in accordance with the relevant legislation. The risky area, reserve building area, risky structure are determined within the scope of responsibility of the administration. Risky area; which is determined by the Ministry or the Administration by taking the opinion of the Directorate of Disaster and Emergency Management and bearing the risk of causing the loss of life and property due to the ground structure or the building on the ground and which is determined by the Council of Ministers upon the proposal of the Ministry. Risky structure; is a structure determined on the basis of scientific and technical evidence that it is within or outside the risk area and has completed its economic life or is at risk of collapse or serious damage. Determination of risky structures shall be carried out by the building owners or their legal representatives, first of all, to the institutions and organizations licensed by the Ministry, and the Ministry or the Contracting Entity shall be informed of the costs and expenses within the framework of the procedures and principles determined by the Ministry. The Ministry may ask the owners or legal representatives for the determination of risky structures. If not done within the given period, the determinations shall be made or made by the Ministry or the Administration. Reserve building area; are the areas designated by the Ministry in accordance with the request of the TOKI or the Administration, or in private, with the proper consent of the Ministry of Finance, to be used as the new settlement area in applications to be carried out in accordance with the law.

This work ; aims to reveal various solutions for "conceptual", "legal", and "managerial" problems by examining the responsibilities of the administrators' duties and authorities within the scope of administrative law within the scope of transforming the areas under risk of disaster.

**Keywords:** Disaster, Risky Area, Reserve Building Area, Administration, Responsibility

# A Study on the Sufficiency of Children's Playgrounds: The Case of Bartin City

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**Abstract**

Childhood includes the period from the birth of a person to the time of reaching sexual maturity. This process generally continues until 10 years for girls and 11 years for boys. This period is the period when the foundation of the development of personality and mental abilities for later ages. Children who are the foundation of our future have played in all cultures throughout history. The game is not only a tool for children to judge their leisure time but also a way of life learning. Children aged 0-6 years who prefer home or close to the house after 6 years of age they prefer children's playgrounds where freely can play. Children's playgrounds are open spaces designed for the purpose of play, where various play elements are located and where children can relax on the outdoors, meet their gaming needs, empower themselves with excess energy, increase their social relations, provide physiological improvements, learn something and contribute to their development. When the space is considered to be a member of the physical environment, the shape of the place in children's playgrounds, the effect on the child is very important. For this reason, children's playground designs should be evaluated accordingly. In addition, playgrounds that part of the open space system, make a positive contribution to the physical structure of the city in terms of providing mass-space balance between the structures.

**Purpose of the Study**

The aim of the research is to determine the deficiencies of Bartin children's play areas in terms of materials and equipment, to comply with the design criteria and to determine their competence and to present the solution proposals by determining the problems in the playgrounds.

**Research Questions**

What are the expectations of children and parents in playgrounds?
How to create appropriate playground designs for children's development?

**Material**

The study area is the children's playgrounds located within the municipal boundaries of Bartin city. The examples of playgrounds from various neighborhoods and streets in the city center have been examined. The literature, maps showing children's playgrounds, oral interviews, photographs and internet surveys were used as supporting material in the study.

**Method**

In the first part of the study, the documents related to subject and area were collected. Afterwards, children's playgrounds were evaluated in terms of quality and quantity. The quantitative evaluation is determined according to standard of the Law on Reconstruction No.3994 as 10 $m^2$ open green area per person and standards for the children's playground as 1.5 $m^2$/person by the Ministry of Public Works. In qualitative evaluation is determined according to the location of children's play areas, the presence of equipment and quality, care, functional and aesthetic qualities of the play elements in the area. The structural elements were examined in two categories as structural and plant. Structural elements, base elements, fountain, toilet and garbage elements, shading elements and seating elements, containment elements, lighting elements, water element, game tools were evaluated. The data obtained from the consequence has been presented as reports and tables and suggestions are given for playgrounds that are lacking in terms of quality and quantity.

**Result**

Most of the children's playgrounds examined in the study were found to be inadequate, neglected and unable to respond to the physical and social needs of children. The play equipment found in children's play areas are simple and uniform. The physical and mental development of the children is not considered in the choice of equipment only the financially cheap ones are preferred and are mostly randomly placed. It has been determined in the observations that after the construction phase of the majority of the playgrounds, the maintenance work was not done adequately. Many game tools have been broken, rusty and unpainted which has reduced the quality of the area and created dangerous health conditions. It has been determined that only 11 of the 23 children's playgrounds have been cared for and 12 children's playgrounds are neglected.

# Effects of Climate Change on Urban Landscapes

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## ABSTRACT

Climate change is at the forefront of worldwide environmental problems in the 21st century. Research in recent years indicates that the greenhouse gas levels in the atmosphere have passed the critical threshold and will have serious adverse effects on societies and ecosystems. There is a mutual relationship between cities and climate change. Cities, on one hand, are the main actors of global climate change due to the greenhouse gas emissions they release. On the other hand, they are also affected from the climate change. Activities in cities cause 80 % of global greenhouse gas emissions and, this is increasing steadily with the growth of urban population.

Sea level rise and its impacts on built environments in coastal cities, increases in diseases threatening human health, potential threats of natural disasters on human life, economic losses, decline in the quality of life, difficulties in access to resources, loss of biodiversity, degredation of air quality, other social and economic problems are among the possible consequences of climate change. In cities, meteorological parameters are changing and causing climate change at local and regional scales due to decreases in green areas and evaporation surfaces and increases in concrete and asphalt-coated surfaces. The climatic differentiation in urban areas leads to “urban heat islands”.

The most important consequences of climate change, being sea level rise and extreme meteorological events at increasing frequencies, constitute important threats to coastal cities. However, the population living in coastal areas has been continuously increasing around the world. The growth of coastal cities in excess of their natural and economic capacities will lead to the increase in the effects of climate change and the associated damages. Many studies have shown that, with climate change, various hydrological and meteorological threats can occur in cities.

According to the Turkish Climate Change Action Plan (2011-2023), which was prepared by the Ministry of Environment and Urbanism, climate change in our country will especially lead to decreases in water resources, increases in floods and forest fires, drought and desertification, and the associated adverse effects such as ecological degradations. Climate estimates realized within the framework of the Program on Improving Turkey’s Adaptation Capacity to Climate Change indicate that, with significant increases in temperatures, there will be significant alterations in precipitation regimes and water cycles, which will fundamentally affect almost all economic sectors, the settlements and climate-related natural disaster risks. According to the results of a study funded by TUBITAK, the areas lower than 10 m. from the sea level will undergo a special threat in the future due to the impacts of climate change in Turkey.

Urban open and green spaces play an important role in the mitigation of "urban heat island" effects that will emerge in cities. A research conducted in Frankfurt, Germany, showed that the green belt in a width of 50 - 100 m. surrounding the city had been reducing the air temperature by 3.5 °C. According to the Turkish Climate Change Adaptation Strategy and Action Plan, due to climate change, the average air temperatures in our country will increase 2.5-4 ° C. With this anticipation and the results of the research in Germany are considered together, it can be concluded that with only well-established green belts surrounding our cities, the negative heat effects of the climate change can be met and, in combination with other green infrastructure applications, it may be provided significant protection from and the effects of heat islands.

In this paper, the possible effects of climate change on urban landscapes will be specified by giving the results of various scientific researches and the measures that should be taken in order to reduce these effects will be given.

**Keywords:** climate change, city, urban green spaces, green belt, green infrastructure

# Greenhouse Gases in Denitrification Process in Agricultural Soils and Its Impact on Global Scale

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## ABSTRACT

Nitrogen is one of the macro nutrients that have a very important place in human and animal life in plant development. Most of the nutrients from the soil plants are less needed. Nitrogen is found in the structure of organic compounds which have important functions such as protein, amino acid, nucleic acid, chlorophyll. It is of utmost importance that plants have nitrogen in the form and amount that plants can utilize in the soil since they do not meet nitrogen requirements in the soil. Nitrogen, however, is the only nutrient element that does not exist in the structure of minerals in nature. While the highest amount of gas in the air is 78% of the air, nitrogen is not available directly from this gas. For the plants to benefit, this nitrogen must be converted into inorganic form. The conversion of the nitrogen in the molecular structure to the organic form is a part of the nitrogen cycle in nature when it is present in high quantities in the atmosphere.

Nitrogen, which plays a very important role in the structure and function of the plants, is in a state of a cycle in nature. In this cycle, the nitrogen source is the gaseous free nitrogen ($N_2$) in the atmosphere and the bound azotite present in the structure of the organic material. The nitrogen cycle in the soil occurs in three main stages. First, biochemically reducing biochemically biochemical organisms (blue green algae and bacteria) by symbiotic or free living organisms by transporting ammonia and nitrates formed by high energy fixation (cosmic radiation, lightning) to the earth by rainwater, which is called free atmosphere nitrogen in the air (ammonification, nitrification and denitrification) and mineral nitrogen ($NO_3^-$and $NH_4^+$), and finally to the mineral nitrogen plants and then to the organic structure again.

As the nitrogen, ammonia and nitrite convert to nitrate through soil organic bound nitrogen, this event ends with nitrate being transformed into nitric oxide through ammonia and organic formation. Ammonium taken by the plants is directly added to the organic structure via ammonia. Therefore, the nitrogen feeding of plants, the mineralization rate in the soil is related to the nitrate and ammonium reduction capacity of the plant species in the soil. Mineralization of organic nitrogen in soils occurs due to many environmental factors. These environmental factors include the structure of the organic matter, the moisture content of the soil and the maximum water holding capacity, pH, temperature, and the amount of nutrients.

Agricultural activities; It is a source for three main greenhouse gases carbon dioxide ($CO_2$), methane ($CH_4$) and nitrous oxide ($N_2O$). The most important greenhouse gas issue for the sector is carbon

dioxide ($CO_2$), while the most important greenhouse gas for agriculture is nitrous oxide ($N_2O$) when plant production is taken into account. Turkey Statistical Institute (TSI), the largest share in $N_2O$ emissions according to the Greenhouse Gas Emissions Statistics, published in April 2018 constitutes agricultural activities. 77,6% of $N_2O$ emissions were from agricultural activities, 12,1% from energy, 6,5% from waste, and 3,8% from industrial operations and product use. When the 2012 data for the same institution were analyzed, 74% of the $N_2O$ emission amount was derived from agricultural activities. It has been observed that the amount of $N_2O$ emissions from agricultural soils increased during these years. Increasing amounts of nitrous oxide ($N_2O$) gas passing through the atmos- phere causes the ozone layer to be damaged. $N_2O$ gaseous unit mass for a 100-year time period specified in the Fourth Report of the Intergovernmental Panel on Climate Change (IPCC) is assumed to be 298 times the global warming potential contribution of $CO_2$ gas as unit mass. Occurrence of $N_2O$ in agricultural soils occurs because microbial process denitrification process is not fully realized due to some factors. These factors include soil $O_2$ content, soil temperature, mineral nitrogen content, soil pH and soil moisture content. On these factors, the impact of land management practices may indirectly affect the levels of $N_2O$ emissions.

In this study, the emission of $N_2O$ gas from agricultural production will be analyzed within the scope of global climate change. The impact of global climate change on the nitrogen cycle will be discussed, particularly the impact on $N_2O$ gas emissions and measurements on the ground.

**Keywords:** Global Climate Change, Nitrous Oxide Emission, Nitrogen Cycle, Denitrification, Agricultural Field Soils

# Plant Design Criteria of Children's Playground in Urban Landscape

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## Absract

People need an artificial environment as well as the natural environment in order to continue their lives. Children's playgrounds, which are seen as a reflection of the missing for natural life in our cities where population is increasing day by day, have an important role in the development of children. A part of children's education for play and playgrounds, are particularly important places for children in terms of social and physical development. The problems of today's urban structuring and inadequate recreation are affecting the development of children negatively. Urban area; the need for children's playgrounds is increasing day by day. In this context, children's playgrounds in the planning of urban green area should also take into account children's definition and exploration of nature. It is necessary to arrange a safe and comfortable area, especially for children, by ensuring suitable and proper use of plants. Compliance with functional and functional characteristics must be ensured by taking into consideration the effect of plants used in the arrangement of the parks on the environment

The purpose of this study was to determine the current situation and sufficiency of plant design studies of children playgrounds in city centres. The main purpose of the study was to give information about elements to be considered in plant design in playgrounds and classification of functions, definition of children playgrounds, by keeping child needs, safety and health as priority.

As a result suggestions have been made taking into account the aesthetic and functional aspects of existing planting studies in children's playgrounds in the city centre.

**Keywords:** Children's playground, Plant Functionality, Urban Green Area

# Temporary Landscapes: European Mobility Week and Bartin City

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## ABSTRACT

People often perceive a landscape as a permanent feature. Like everything in the landscape, due to the design approaches landscapes are temporary. According to Mayo, temporary landscapes are areas that express current events that can or can not be repeated, while Bishop defines temporary landscapes as open spaces that depend on time. Temporary landscapes for cities have great value of which create public spaces that are not costly, by adding a new image to the city, transforming the character of the area into areas where people can sit, relax and socialize at some point in the streets. Basically, provision of temporary landscapes, floods, local businesses and the surrounding community, which consists of a platform that extends facilities such as pavement, seating, landscaping, provides many benefits. Temporary landscapes are areas that provide a city's sustainability with various conceptual approaches. Sustainability is an activity designed to meet the needs of today and protect natural resources and leave a good environment for future generations. It is doubtless that environmental protection based design and planning will bring economic, social, physical and socially developed environments.

The European Mobility Week, an annual campaign on sustainable urban mobility, is organized with political and financial support of the European Commission's Directorate General for Mobility and Transport. The aim of the campaign is to encourage local authorities in Europe to offer and encourage sustainable transport measures and invite people to come up with alternative solutions for vehicle use. This week, the participating towns and cities end their day with the activity of '' Car Free Day '', which is reserved for one day or a few days only for pedestrians, bicycles and public transportation. Since its inception in 2002, the impact of the European Mobility Week has been steadily increasing both in Europe and in the world. The theme of the European Mobility Week of 2017 was defined as “Sharing”, which we are taught when we were children.

Bartın Municipality was one of the leading Municipalities between 16-22 September 2017 celebrating the “Mobility Week- 2017” with various activities. This one-week program is planned to focus on reducing carbon footprints via such as walking, cycling tours, car-free day, temporary

landscape design for traffic-free streets. This one-week process has been a positive step forward for a clean, sustainable Bartin City that can be shared and lived.
This study describes the process of closing the “Bartın public market” area to traffic and the design of the temporary landscaping. Davut Fırıncıoğlu Street in front of women's market in the center Kemerköprü district of Bartın city was selected on Tuesdays and Fridays. On the market days of Bartın due to the density of pedestrian and vehicle traffic and work was done to close the traffic. The 100 meters long part of Davut Fırıncıoğlu Street was closed to traffic and a design area of 1000 square meters was designed. It was aimed to manage the pedestrian and vehicle density with temporary landscaping in the area which is closed to traffic in Davut Fırıncıoğlu Street. In this area, a public space design has been made where people can meet their social needs and socialize.

Carbon emission and noise measurements were made on Tuesdays and Fridays of traffic flow times and during the week of activities. The existing vehicle and pedestrian intensity was analyzed. Interviews were made with the public about the temporary landscape arrangement.

A proposal has been prepared, submitted and accepted to the Provincial Traffic Commission for the sustainability of the area of being closed to car flow on Tuesdays and Fridays. As a result, temporary landscaping, which is proposed as a component with green infrastructure and applied to this area during the Mobility Week, has reduced carbon footprint, noise pollution, vehicle and pedestrian density in the city and this leaded the permanent pedestrian use of the Project area.

**Key words**: Temporary Landscape, Landscape Design, Green Infrastructure, Sustainability, MobilityWeek

# Effects of Planting Design on the Formation of Urban Identity

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## ABSTRACT

Historical processes have affected the topography and ecological structure of a city as well as socio-economic activities. Cities are shaped by the agriculture, forestry or mining activities carried out according to the ecological conditions in which they are located. Even the building materials and the architectural structure that dominate the city are preferred according to the easiness of availability and ecological conditions. For example, in the areas dominated by the Black Sea climate wood is used as building material, and adobe or stone is used in the Central Anatolia region where agricultural activities are intense. Of course, although the main element in the architecture of the house is the traditional structure in the region, agricultural activities in the general planning of the city also played an important role. However, the most important element that completes the texture of the cities is the plants, which are directly selected from the plants that show natural distribution in that region. Although plants are often used functionally, aesthetic features are also considered in urban areas.

However, due to the backwardness of the agricultural activities and consequent rapid urbanization, the notion of city changed form as building organizations that will meet the socio-economic needs of people such as housing, trade, education and health in minimum level by breaking away from the ecological structure. This, in time, has made cities, both architecture and social, irrelevant and unidentified. c

The fact that Turkey has very different climatic characteristics is the most important point in emphasizing urban identity as it is in the historical process. In the works to be done, not only the architectural texture of the city but also the ecological structure of the surrounding area should be taken into consideration. In particular, the plant material to be used in public spaces should be suitable for the locality and even represent that locality. This will ensure a sustainable urban pattern that reduces the costs of plantation and maintenance while making the cities unique.

In the scope of the study, Isparta province was selected as a study area in order to be located in the lakes region which has a rich flora of biodiversity and located in a region where agricultural activities are intense.

The lake region is a very important place in terms of plant diversity because it is located within the Mediterranean region as geographical location and the lakes in the region form a climatological effect. Isparta, located in the lake region, has a total of 1556 species and subspecies, and 64 of these plants are medical and 103 are economically important. The number of endemic species found within the provincial borders is 301.

Isparta, however, is an important transit route between Antalya and Ankara in terms of the highway. As a result, in addition to the public spaces in the city center, the plant design found in the road refuges and the selection and design of plant species will be evaluated within the scope of "urban identity". Whether the plant species used in these areas are natural distribution plants in the region will be determined and positive and negative effects will be revealed to the urban identity.
**Keywords:** Urban identity, planting design, Isparta

# The Place an Importance of Culture Parks in Landscape Architecture

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## ABSTRACT

Enviromental problems resulting from rapid urbanization, has increased the importance of planned urban green spaces and the green areas in question has nowadays become a necessity. The living spaces that people need are resolved by urban areas. With the increase of these urban areas where people live and the increase in urban density, the demand for people to nature and natural life has also increased in direct proportion. For this reason urban green areas, a very important areas for urban macro-form and life in terms of creating natural habitats and creating healthy environments in urban spaces. These areas play a very important role in terms of ecological and urban quality.

One of the great functions about urban green spaces is that people in communities have a shared awareness of community and contribute to the improvement of communication between peoples. In this context, if how much the more they live in urban open spaces, it will even more increase the likelihood of encountering other people. These encounters will play a very quite important important quite role when people adopt a passive lifestyle consciousness of collective active life consciousness.

İn modern society, first definition of planned urban green areas, the American landscape architect Frederick Law Olmsted built the 19th century with the creation of the Boston Park System. This plan in parallel with the approach of moving nature into the city, started with the Central Park in New York pioneering steps have been taken in recreational urban planning. In planning, together with geologists, engineers and public health workers tried to places create where urban people can live more healthily and comfortably. According to Olmsted's description urban park, wider than residential gardens, it should look simpler and more natural, but it should not have a woody texture like a forest. According to these definitions, urban green spaces should be constructed from natural structures, equipments and elements that will enable people to take urban tiredness and get them rested.

Parks, in terms of creating green spaces within the city and ensuring balanced land use between the green spaces and the built environment in addition to having an urban design at the same time public spaces with high social role. As different people encounter, meet, talk, share urban life in terms of meeting social needs and ensuring socio-cultural continuity and development, they can also be regarded as cultural focal points for social communication. These relationships at the social dimension, establishment of effective common use spaces within

residential structure, to use urban space more effectively in social and spatial dimensions and to keep the functions that make up space as vigorous as possible; has a pirivileged in terms of meaning and activity and housing shows the same activity in residential areas.

Cultural parks, it is the first attempt of the planned city park in Turkey. According to the usage patterns today, urban parks, botanical, zoology, entertainment, art, history parks can be listed as. Was not expected to be a specialization in the concept of parking and spatial use as in the case of many areas in the conditions of the period. Cultural parks, a country that is struggling to get itself into the modern world, a new image to their city, urban recreation is the work of giving awareness. This has led many different uses to be included in cultural parks. Cultural parks are not natural parks that literally try to replicate nature. Cultural parks and their cultural function, a place designer; informing and keeping aducational and entertaining activities in the park. It is possible to say that the fairgrounds, zoos, amusement parks, large artificial ponds, eating and drinking units are standard uses in cultural parks.

The purpose of this study, the availability of some observations on the design concept Cultural Park in Turkey, positive and negative aspects will be examined. On this count, large urban parks located in cities ecological and psychological effects on the city will be given.

**Anahtar Kelimeler:** Culture Park, Urban Park, Urban Green Areas

# Sustainability in Recreatıonal Activities of Rural Areas

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## ABSTRACT

Today, industrialization and rapid urbanization in parallel with rapid population growth have brought many environmental problems together. The urban residents, who is trying to maintain his experience in urban areas, has adopted the opening of nature as a form of activity and relaxation by increasing desire to move away from these artificial spaces. As a result of these developments, people started to intervene more and more in nature, and the ecosystem balance is getting worse day by day, and the surrounding environment is rapidly deteriorating and becoming polluted. As a result, it has become a necessity as one of the most important elements to protect the environment and ecological balance that are experienced in both urban and rural planning. The concept of sustainability that anticipates benefiting from natural and cultural resources in the most efficient way is the most important factor in preserving the ecology-economy balance and improving the quality of life.

In this study, analysis and synthesis method was used and the previous studies were used. In this context, the rural recreational activities of the city of Rize with unique natural landscapes and the unique rural areas are described, the influence of these activities on the environment, the current situation determination is examined with the help of literature and field studies. After that suggestions for sustainable rural recreation are developed.

As a result of the research, it is suggested that the planning and implementation studies for the environment, the coordination and cooperation among the professions in the responsible public and private organizations, the public formation for taking measures against environmental pollution and the training measures necessary for creating a conscious society against environmental protection are proposed first. Moreover, it has been seen that sustainability is of the utmost importance in the event of nature, where an approach that seeks to benefit from it in harmony with nature rather than harming nature is to be adopted.

**Keywords:** Rural Area, Recreation, Rize, Sustainability

# Preservation of Historic Cityscapes: A Sample of Safranbolu

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**ABSTRACT**

The expression 'any landscape is a condition of the spirit' by Hendri Frederic Amiel, a philosophy professor, clearly expresses the relation of physical landscape with human soul and it also reveals that the sense of identity and belonging is one of the deepest needs in human sciences. Landscape is not only a place to look with eyes, but a place where our soul interacts with the scene. For this reason, we can regard landscape as a product of our culture, memories and existence. The landscape itself is the richest natural and cultural record for those who know how to understand it. It is a rich and beautiful book that is always open and now we have to learn to see, understand and read it. Otherwise, we will lose everything we have.

Safranbolu located in the north-western part of Anatolia refers to Papalagonia in Iliad by Homer. The Hittites, Phrygians, Lydians, Persians, Hellenistic Kingdoms (Pondas), Romans, Seljuks, Chobanids, Jandarids and Ottomans ruled the region, respectively. Safranbolu was captured by Turks in the period of Muhiddin Mesut Shah, the son of II. Seljuk Sultan Kılıç Arslan. In the historical process, it came under the domination of Chobanids between 1213 and 1280, of Jandarids between 1326 and of the Ottoman Empire between 1354 and 1402 and in 1423.

Situated on the road connecting the Black Sea shores to the West, North and Central Anatolia, Safranbolu has been a settlement area since the ancient times due to its geographical location and became an important center of trade between Asia and Europe especially in the 18th century. This city, an intact example of Turkish urban history, was included in the World Heritage List prepared by the UNESCO World Heritage Committee as one of the rare cities declared as an archeological site with its traditional cityscape, wooden cobblestone houses and monumental constructions in 1994 (TKB). The criteria for acceptance of Safranbolu into the World Heritage List are "cultural" (ii), (iv) and (v). In this context, Safranbolu has been prosperous due to its key role in the caravan trade

for centuries and as a result, it has established standards for general and local architecture that influences the urban development in a wide area of the Ottoman Empire.

Beginning from the 13th century, the city began to become prominent with its important position on the trade route reaching from east to west, and it had been equipped with remarkable historical artifacts since this early period. The preserved historical and cultural values of Safranbolu are based on its involvement in the World Heritage List and these values are related to the developments in the Ottoman period. The richness developed due to the lively commercial life in Safranbolu has led to the emergence of houses and mansions which are the current examples of traditional Turkish architecture reflecting a sophisticated pleasure in city culture. The historical and cultural process has shaped the cityscape of Safranbolu.

In this study, the problem statement is “how can we protect historical cityscapes and transfer them to the future?” and possible answers to this question were searched. By examining Safranbolu, the UNESCO World Heritage Site, suggestions have been made regarding the protection of our country's cityscapes. For this purpose, natural and cultural data constituting the historical cityscape of Safranbolu are revealed and the interaction between preservation of historical cityscapes and sustainability is explored. The study was carried out in 2 stages. First, local and foreign sources were reviewed and then a field survey was carried out in the World Heritage Site. The World Heritage Site was observed and the area was photographed. In addition, face-to-face interviews were made with the decision makers who have the authority on the field (e.g. Safranbolu District Governorship and Municipality, Safranbolu Regional Board for the Protection of Cultural and Natural Assets, Directorate of City Museums, experts, people of Safranbolu, and visitors).

Safranbolu, one of the rare cities that can bring the historic cityscape to the present, is able to play a role model in saving and transferring historical cityscapes of Turkey. Proposals have been developed in the protection and sustainability of cityscapes in our country with the reference to the sample of Safranbolu.

**Key Words:** Safranbolu, Landscape, Cityscape, Unesco.

# The use of geographic information systems in the process of restructuringthe organization of the firebrigade: Sampling in Eskisehir

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In the emergency management, the fire brigade has undertaken an important task. Because we are working in a system that is always ready, educated, experienced and equiped with equipment, waiting 24 hours for notifications at the place of work and aiming to reach in a minimum time. Since history is a very old organization, the accumulation of knowledge is considerable. It is a level that can provide maximum benefit in the event of a disaster as quickly as possible. It has the ability to organize other institutions and persons who are constantly open to innovation. The last metropolitan city law also changed the structure of the fire brigade. As the 2014 municipal elections and the villagers on the borders of the metropolitan area entered the area of responsibility of the big city as a neighborhood, a fire brigade organization in the rural area was also needed. In the current situation, the fire brigade in the municipal municipalities has been transferred to the Metropolitan Municipality along with personnel and vehicles, but it has become necessary to have a very intensive and rapid work to be done so that the personnel are untrained and inexperienced in case of emergency and vehicles and firefighting rescue vehicles and equipment are old and unusable. In this context, new personnel were trained and quickly trained and all the Eskişehir districts and the places where the municipal municipalities were located were organized as fire brigades. It is understood that the fire brigade buildings are provided by the district municipalities or by the leasing method. Particularly, the results of the studies that the buildings supplied by renting are costly together with operating costs have come to an end. It is clear that the personnel working here need to make some arrangements which will reduce the costs according to the current population and risk areas, but not increase the risk and not harm the disaster management plan, considering the expenses, vehicles and equipment costs. When we look at any number of events related to fire brigade organization such as fire, emergency, and rescue in a year, it is understood that the fire brigade located in some of the districts has intervened very little and provides near zero benefit. When we consider all of these, the most appropriate organizational structure that can be done in order not to damage the people and living beings living here in the emergency is middle-decentralized and therefore dispersed settlement areas are analyzed after the

geographical information systems (GIS) , it would be appropriate to provide an optimization according to the transport times instead of a notice from a nearby station. With the help of CBS analysis, it is necessary to develop 'voluntary firefighting', to use hydrants which can be used during the fire, to provide necessary materials for the intervention within the firefighting period and finally to be continuously inspected. In this way, a model to be supported with hydrants and tanks by switching to unnecessary stations instead of voluntarily will be prevented from operating costs at unnecessary costs and most importantly the point of firefighting which does not go out for a long time will become a bulky structure. In this model, with the help of GIS, public and private institutions in the provinces will be assessed to make use of the fire brigade organizations according to the region.
Some of the questions to be answered with the help of geographic information systems in the process of restructuring the fire brigade in the Eskişehir Sampling within the context of this declaration are as follows:

- In the survey, the organizational forms of the fire brigade departments in the Metropolitan Municipalities and the units providing service will be questioned.
- Numerical information of fire brigade and rescue vehicles used in emergency and disaster response interventions and information on existing personnel (civil servants, workers, subcontractors, etc.) and their educational status will be examined.
- In the provincial and district centers, population, public institutions, the number of regularly established volunteers and schools will be examined and the education and training curriculum will be informed about disaster management and fire brigade and how to organize the "voluntary firefighting" application and what legal regulations to be done will be asked.
- In order to support the voluntary firefighting, the intervention ability of the fire brigades of private and public institutions which are close to the local fire brigades will be questioned and if they are deemed necessary, the direction of the central commander and the ways of providing the effective use of knowledge and skills by having vocational trainings will be put forth.

**Keywords:** Fire brigade, Disaster Management, Geographical Information Systems, Network Analysis