ResearchGate

See discussions, stats, and author profiles for this publication at: http://www.researchgate.net/publication/258257874

Turkoglu, M., 2012. Hyper-eutrophycation and Intensive Foam Formation in the Dardanelles, Turkey. OMICS Group Conferences, Hydrology & Ground Water Expo, Hilton San Antonio Airport...

CONFERENCE PAPER · SEPTEMBER 2012

READS
111

1 AUTHOR:



Muhammet TÜRKOĞLU
Çanakkale Onsekiz Mart Üniversitesi
99 PUBLICATIONS **155** CITATIONS

SEE PROFILE

Available from: Muhammet TÜRKOĞLU
Retrieved on: 26 November 2015

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference on
Hydrology & Ground Water Expo

September 10-12, 2012 Hilton San Antonio Airport, USA

Hyper-eutrophication and intensive foam formation in the Dardanelles, Turkey

Muhammet Turkoglu

Canakkale Onsekiz Mart University, Turkey

Abstract

This study focus on heavy eutrophication in the Dardanelles which is a part of Turkish Straits System (TSS). Eutrophication is a syndrome of ecosystem responses to human activities that fertilize water bodies with nitrogen especially inorganic ones such as NO^{-}_{2}, NO^{-}_{3} and NH^{+}_{4} and PO^{-3}_{4}, leading to changes in phytoplankton activity and thereby in all marine life of the system. Over accumulation of these inorganic nutrients in the Dardanelles may cause very intensive algal blooms. There is evidence that eutrophication does play a very important role in the story of the foam in such coastal systems. The foam is degradation products and exudates from these algal blooms. Thus, extremely tiny phytoplankton such as cyanobacteria and dinoflagellates and diatoms can have a great effect on foam formation in the Dardanelles. The intensive accumulation of organic materials consist of intensive algal blooms drifted by common wind systems in the coastal systems which are poor in view of depth and then biological degradation of these organic materials by various bacteria and fungi. However, some phytoplankton species excrete large quantities of mucilage during these blooms that is whipped into foam by wind mixing and washes ashore, making undesirable images in the beaches for tourism. One species (*E.huxleyi*) among coccolithophorids, 4-6 taxon among dinoflagellates and 6-8 taxon among diatoms control phytoplankton species diversity in the Dardanelles rich in nutrient, especially PO^{-3}_{4}. Control mechanisms decreasing species diversity such a eutrophication phenomenon and thereby intensive algal blooms in such semi closed systems are more forceful than other systems.

Biography

Assoc. Prof. Dr. Muhammet TURKOGLU has completed his Ph.D in the 1998 from Ege University, Turkey. Currently, he is an associate professor of Fisheries Faculty at the Onsekiz Mart University of Canakkale. His research has involved studies in Ege, Black Sea and Dardanelles. He has been interested in micro plankton, especially phytoplankton species distribution and ecology in coastal habitats. Moreover, he is interested in harmful algal blooms known as HABs in coastal systems of the Turkish Seas. He has nearly 100 scientific studies published by various reputed scientific journals and others.