

THE IMPACT OF DESERT ORIGIN DUST ON ALGAE BLOOMS

A.C. SAYDAM^{1,2}, I. POLAT², S. GİRGIN², S. GİRGIN² and O. ALGÜN²

1. Institute of Marine Science (IMS) Middle East Technical University
2. TÜBİTAK BİLTEN Ankara

The unexpected and patchy distribution of algal bloom over the marine environment especially during the spring and summer time is one of the hot issues amongst the many subject attitudes during summer season. Cemiliana Theory put forward by Saydam (1996) suggests that these blooms are due to wet dust intrusion of iron supplied from desert regions that has photochemically reduced within cloud droplet to +2 oxidation stage . This approach has been tested successively both in Mediterranean and the Black Sea , representing the most contrasting water bodies in the world and it has been shown that the intrusion of wet dust deposition over the sea surface resulted with the bloom of phytoplankton and especially the *Emiliana huxleyi*. This hypothesis also tested for some well documented *Emiliana huxleyi* blooms at Atlantic Ocean. The recent dust pulse originated from central Asian desert on 15 April 1998 and reached to NW USA on 25 April 1998 provided yet another tests case for the hypothesis . The presence of SEAWIFS with specific spectral channels for the identification of *Emiliana huxleyi* will often sible patch distribution of algal blooms along the known path of dust stormover the pacific Ocean . Due to data encryption period of 15 days for SEAWIFS satellite , it was not possible to reach processed satellite data during the preparation of this abstract but the expected positive results will further provided direct support for Cemiliana theory and will also provide important link in the iron - DMS-climate hypothesis put forward by Charlson R. J. and T. M. Wigley , 1994.