

CHEMICAL OBSERVATIONS IN THE SEAWATER AND SURFACE SEDIMENTS OF THE AEGEAN SEA

N. FRILIGOS and E. KRASAKOPOULOU

National Centre for Marine Research, Gr-16604, Hellinikon, Greece

ABSTRACT

This work presents the results of the investigation on the nutrient content of the water column and on the carbon and nitrogen of the surface sediments, sampled in the Northern Aegean Sea during September 1998. Variations of temperature and salinity are essentially restricted to the upper layer. The low surface values of salinity in the northern part are due to the influence of the less saline surface water coming from the Black Sea. The distribution of nutrients follows a normal pattern for Mediterranean waters. In the euphotic zone nutrients are practically depleted by the phytoplankton uptake. The oxidation of organic material induces a progressive enrichment with depth of the water column in reactive phosphate, nitrate and silica. Attention is drawn to the N:P and Si:P ratios and their possible deviation from the theoretical values. The organic carbon and total nitrogen content in the sediment surface appear to be within the same range in all stations. Ratios of organic carbon to nitrogen are high related to the relatively high values of organic carbon compared to the corresponding very low nitrogen values, due to the oligotrophic character of the Aegean Sea, and/or to the higher turnover rate of nitrogen relative to carbon.