

DIVERSITY OF PLANKTONIC DIATOM ASSEMBLAGES IN RELATION TO SEWAGE INFLOW IN THE CENTRAL ADRIATIC SEA

Sanda Skejić, Ž. Ninčević Gladan, A. Jelačić, M. Bužančić & I. Marasović

Laboratory of Plankton and Shellfish Toxicity, Institute of Oceanography and Fisheries

Coastal marine ecosystems are becoming increasingly affected by nutrient loadings from a variety of anthropogenic sources, including domestic wastes and agricultural runoff. The field survey in the central Adriatic Sea that is influenced by sewage inflow was performed through eight year period from 2002 to 2010. Phytoplankton was analyzed from 670 samples taken at six sampling points at different depths. The present study aims to assess the diatom abundances and community structure in relation to season, year and depth with special emphasis on responses of diatoms in two main conditions (before and after activation of water sewage input).

Through the investigation period total of 80 diatom taxa were identified. The majority of diatoms belonged to Centrales group (61) out of which the most common is genus *Chaetoceros*. Among Pennatae diatoms 19 taxa were recorded with *Pseudonitzschia* as most frequent.

Statistical analysis showed differences in diatom communities before and after sewage activation.