

Obolewski, K. Using Macrozoobenthos to Assess the Ecological Condition of the Estuary Lake Jamno. *Ochrona Srodowiska* 2009, Vol. 31, No. 2, pp. 17–24.

Abstract: Qualitative and quantitative analyses of the macrozoobenthos structure in the Jamno Lake were conducted in the summer seasons of 2005 and 2006. The sampling sites (15) were chosen so as to enable the determination of the benthic fauna structure in particular basins (Jamno Małe, Jamno Centralne and Jamno Osieckie) and in the horizontal profiles (northern, central and southern), taking into account the influence of saline waters from the Baltic Sea. The results obtained have revealed that the ecological condition of the water region is very bad. The biodiversity of the benthic macrofauna in the Jamno Lake is poor, consisting of nine taxones only, where Oligochaeta and Chironomidae larvae (represented primarily by the genera *Chironomus* and *Procladius*) are dominant. According to the BMWP-PL index, the lake water quality is generally very low, except for that in the central zone of the Jamno reservoir. The value of the OQR index obtained (<1.9) indicates that the basins of the Jamno Małe Lake and Osieckie Lake include waters of very low quality, and that the quality of the Central Jamno Lake water is slightly higher owing to the inflow of saline water from the Baltic. The widest biodiversity of the macrozoobenthos was found to occur in the Central Jamno Lake, as well as in the central horizontal profile, and the poorest biodiversity in the Jamno Osieckie Lake and the northern profile. The highest concentration of macrozoobenthos organisms was detected in the Jamno Małe Lake and the central profile, and the lowest in the Jamno Osieckie Lake and the southern profile. Biomass analysis has revealed the highest values in the northern zone and the Central Jamno Lake, and the lowest ones in the central profile and the Jamno Małe Lake. It is recommended that the application of any revitalization methods should be preceded by detailed hydrobiological studies in order to protect the restoring ecological formations.

Keywords: Lake Jamno, estuary lake, biomonitoring, macrozoobenthos.