

BALANCE AND CIRCULATION OF NUTRIENTS IN A SHALLOW COASTAL LAKE
GARDNO (NORTH POLAND)

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Summary

In 2002 the circulation of nutrients and their balance was studied in a large, shallow, eutrophic Lake Gardno. It was determined that throughout a year 1516 Mg of total nitrogen and 155 Mg of total phosphorus reach the lake. Approximately 67% of nitrogen and 87% of phosphorus reaching the lake flows out of it, the rest remains in the lake. About 45% of the total loss of nitrogen results from denitrification, and about 53% from sedimentation. The greatest effect on the circulation of nutrients in Lake Gardno is exerted by the mixing of water caused by strong winds resulting in the upward movement of the surface layers of bottom sediments. This causes increased resuspension and sedimentation, which mask similar processes resulting from the outer load of nutrients and from autochthonic processes and products, which are one or two orders of a magnitude smaller.