

Phosphorus release risk from re-wetted peatlands – a case study of “Lake Košno” Reserve (NE Poland)

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High amounts of phosphorus (mainly soluble form) are transported to aquatic ecosystems and are leading to eutrophication of lakes, rivers and other water bodies, which is a problem in most European countries. In Poland approximately 95% of lakes are under eutrophication process. Peatlands play important role in release of phosphorus. Most peat soils were drained by various drainage systems all over the world to obtain fertile land for agriculture. Many of these soils have become re-wetted, which led to leaching of large amounts of nutrients, including soluble phosphorus, released in leaching processes. The study carried out at Lake Kosno Reserve showed that surface and subsurface horizons of soils located further to the lake contained more total and soluble forms of phosphorus than the soils located closer to the lake.