

## **Overview of water quality problems in Estonia with the focus on drained peat areas as a source of nitrogen**

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**Abstract** The eutrophication caused by enlarged loads of nutrients from watersheds remains one of the most important problems for surface waters in Estonia. The changes in the agricultural sector of the Estonian economy at the beginning of 1990s led to a drastic decrease in application of mineral fertilizers and also in livestock population. Nevertheless, very little evidence was found that these changes noticeably influenced concentrations of nutrients in rivers. This fact confirms the opinion of some researchers that the impact of agriculture on the pollution of surface water by nutrients was overestimated. Intensive pollution of surface water may be caused by wide-scale soil amelioration. Currently, about one third of the Estonian territory is drained and most of this area is covered by peat soils. Intensively managed peat soils can act as a source of nutrients. In this study, the potential contribution of the nitrogen leached from the peat soils to nitrogen load coming from watersheds was estimated. Data on long-term monitoring, field investigations and modelling have been analysed. The results showed that drained peat soils must be regarded as a noticeable diffuse source of nitrogen in Estonia.

**Key words** water; rivers; nitrogen; drained peat soils; eutrophication