

Remedial measures have been proposed to decrease the intake of phosphorus into the reservoir.

The Proposal of Management of Bathing Water Reservoir for Elimination of Eutrophication

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INTRO

- Waters that are overloaded with nutrients are altered (eg from oligotrophy to eutrophy).
- The main focus of the study is to identify the pollution sources of reactive phosphorus and nitrogen forms in the sub-catchments,
- Identify suitable remedial measures to achieve good ecological and chemical status of surface water in the catchment of the Hostivař Reservoir.
- The reservoir catchment is significantly built-up with a dense network of transport infrastructure. The most of remaining catchment area is intensively farmed.



METHODS

- Point and non-point sources of nutrients were determined by field research and implemented in Soil and Water Assessment Tool (SWAT) model.
- Scenarios are being prepared, all with different alterations
- Improving waste water treatment plants (WWTP), building new WWTP, crop rotation change, fertilizers reduction,...
- Revitalization of streams, building new dams and constructing wetlands



RESULTS

- Intake of phosphorus is now 10 g/m²/yr and P concentration is 0.1 – 0.2 mg/l.
- P concentrations should be 10x lower – 0.015 mg/l

DISCUSSION

- The main changes should be in WWTP upgrades (building new and upgrade old – eq. phosphorus precipitation)
- Big amount of phosphorus is captured in ponds
- Agricultural land is intensively farmed and the amount of fertilizers should be lowered
- Difficulty in getting crop rotation and fertilizer amounts from farmers
- Who would pay the cost for realization

