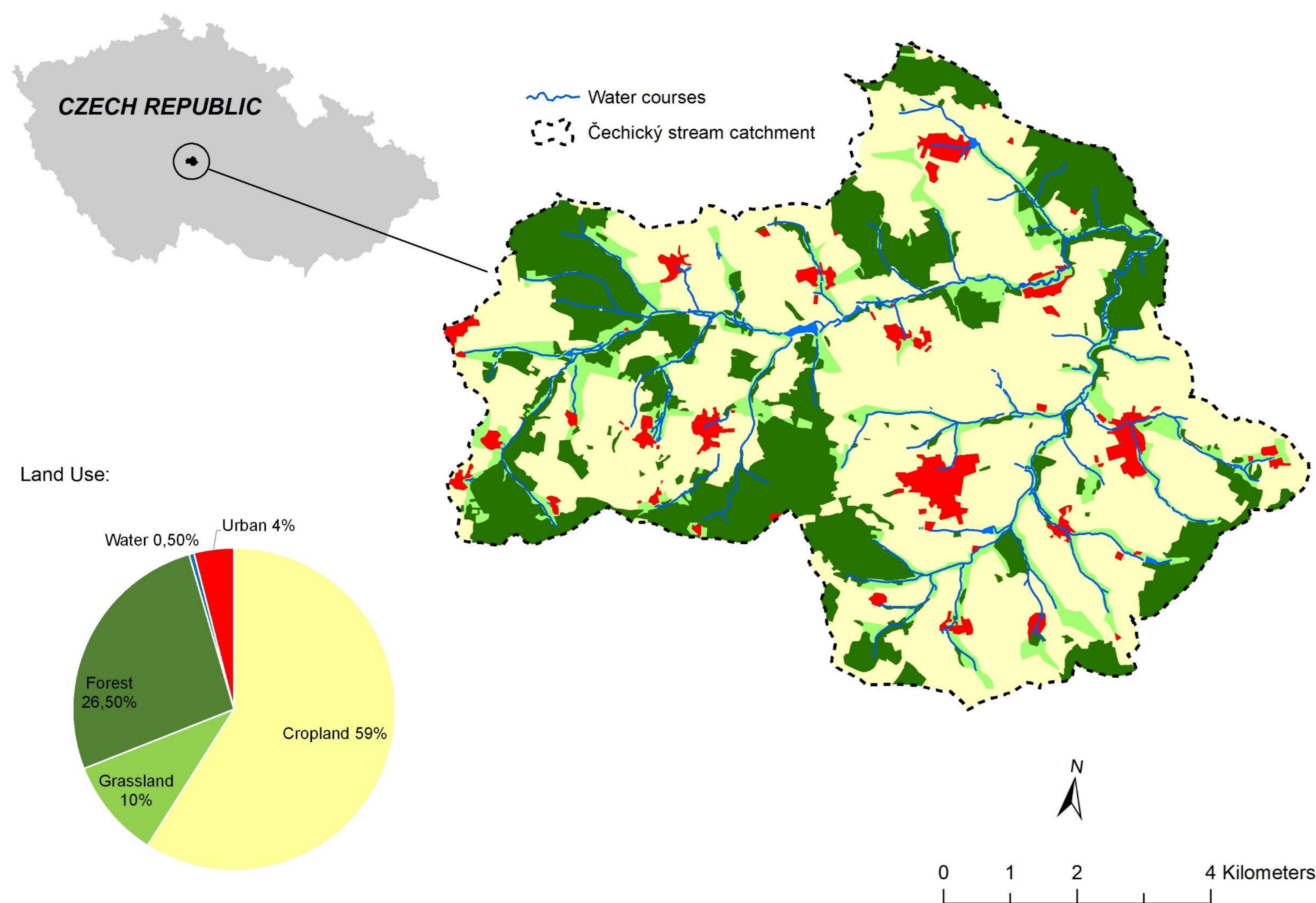


VUMOP STUDY SITE: Čechtický stream catchment

[Petr Fučík, Antonín Zajíček, Štěpán Marval, Renata Duffková, Tomáš Hejduk, Markéta Kaplická, Veronika Sítková]

LOCATION & LANDUSE



GENERAL INFORMATION & PROBLEMS

- Catchment size: 72 km²
- Elevation range: 390 – 610 m a.s.l.
- Precipitation: 660 - 780 mm/a
- Dominant land use: Agriculture (69%)
- Ongoing soil erosion on still large field blocks; endangered soil quality (dehumification, soil compaction); increasing periods with drought
- Dense tile drainage systems, still functioning, but with increasing problems – technical status, failures, undue runoff, worsened water quality
- Čechtický stream catchment – a part of the Želivka river basin with Švihov drinking water reservoir. Unstable water quality (N, P, pesticides).



◀ Straightened and deepened small waterways



Soil erosion on large field blocks, even on gentle slopes



◀ Overland flow from snowmelt and due to neglected maintenance of land drainage, wrong management and large filed blocks

EXISTING NATURAL/SMALL RETENTION MEASURES



VUMOP experimental denitrifying bioreactor for treatment of tile drainage water. In 2019, the old wheat straw substrate was replaced with a mixture of gravel and birch woodchips (10:1). Not in use commonly in the catchment; a measure with a large application potential.



Some farmers apply conservation tillage, especially for maize (no-till, strip-till)

At some sites - grassed wet soils and waterways. End-of-field grassed buffers.

STAKEHOLDERS

Participation already confirmed via support letters:

- Ministry of Agriculture of the Czech Republic; Department of Water Policy and Flood Prevention



- Central Bohemian Region, Department of Water Management

Středočeský kraj

- Povodí Vltavy, State Enterprise, Vltava River Basin Management Authority



VUMOP cooperates with several local farmers