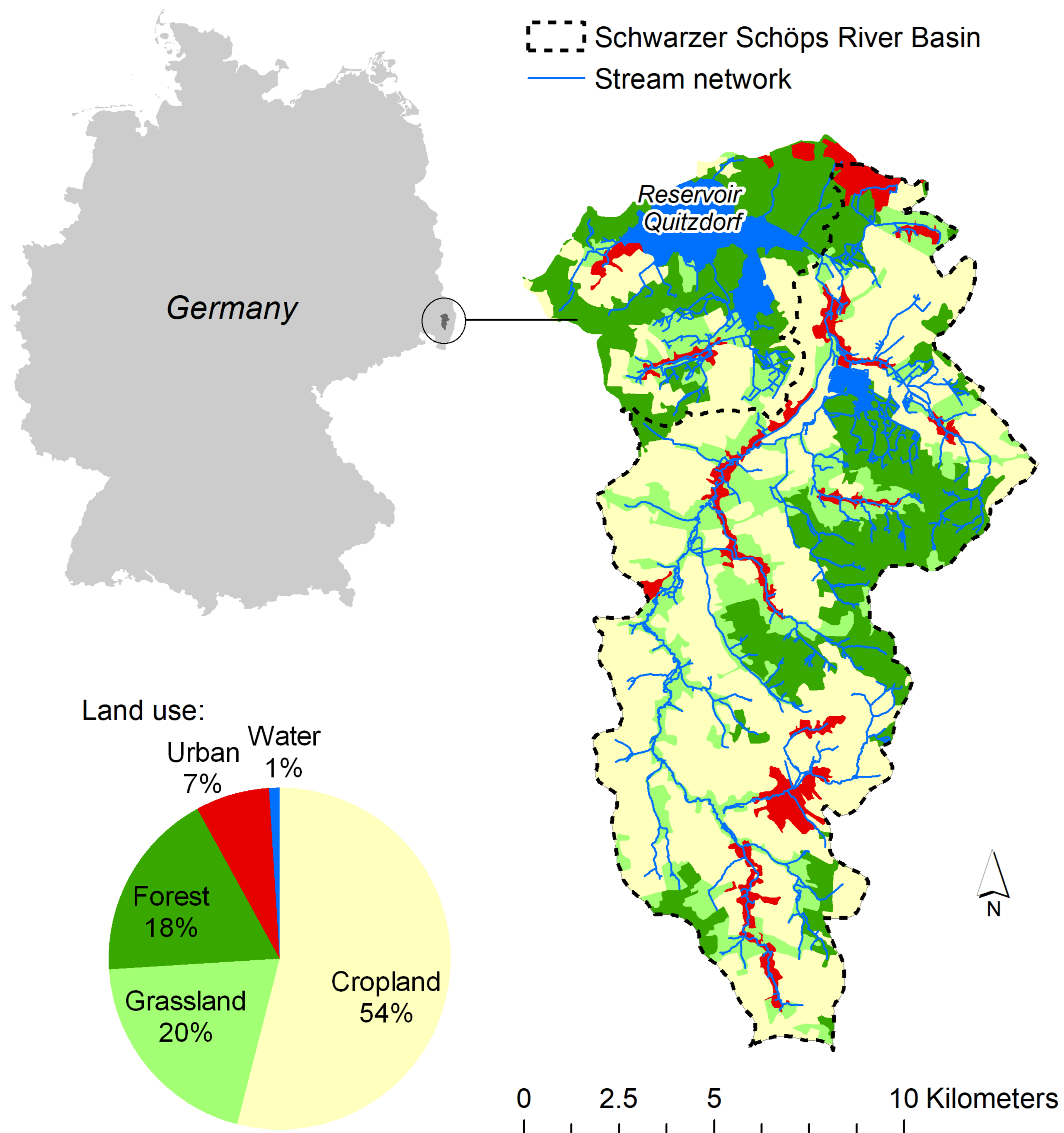


UFZ STUDY SITE: SCHWARZER SCHÖPS RIVER BASIN

Michael Strauch, Felix Witing, Martin Volk

LOCATION & LANDUSE



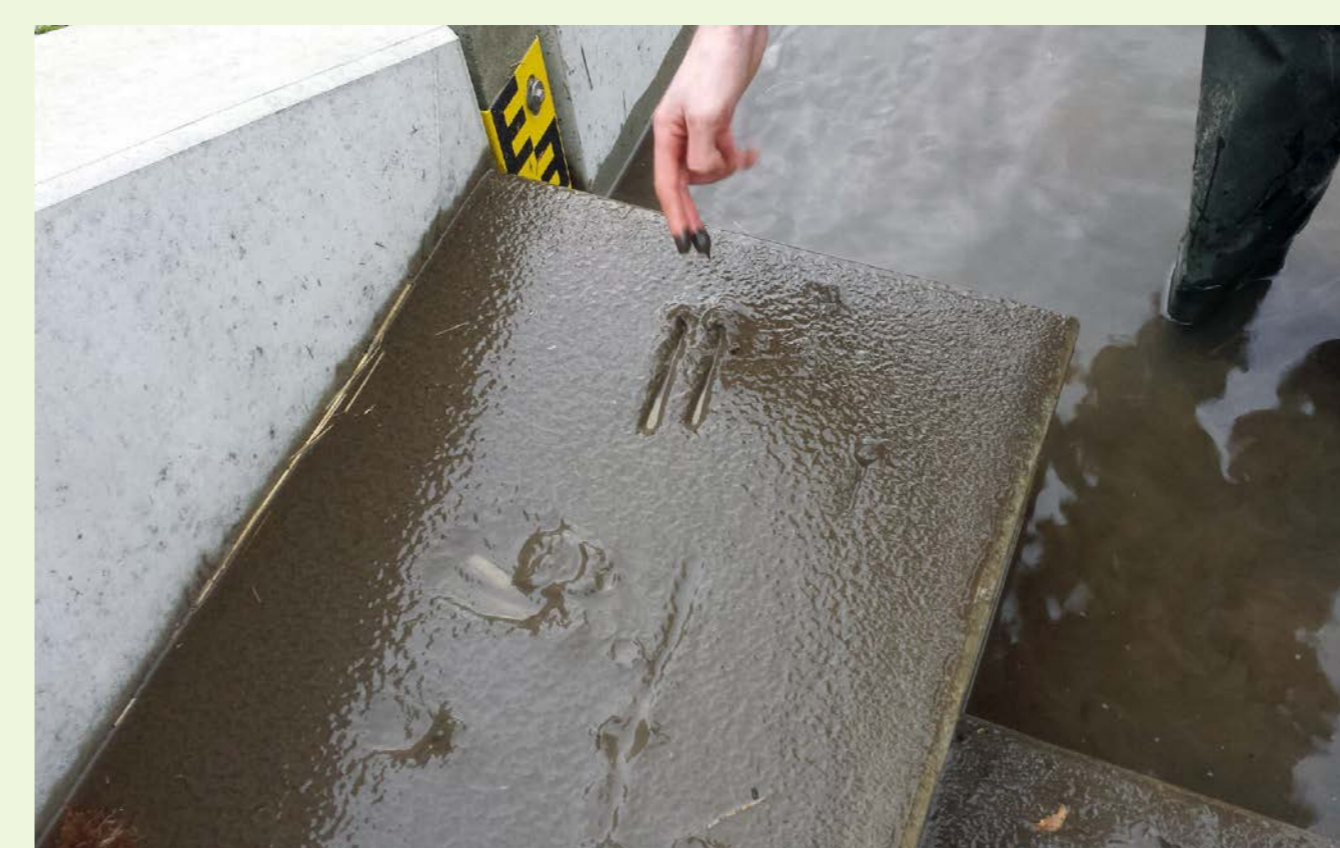
GENERAL INFORMATION & PROBLEMS

- Catchment area: 136 km²
- Elevation range: 449 – 160 m a.s.l.
- Precipitation: 670 - 830 mm/a
- Dominant land use: agriculture (74%)
- Increasing occurrence of severe floods, soil erosion and droughts
- Drainage into Reservoir Quitzdorf which is used for service water supply, downstream flood protection, increase of downstream low flow, recreation, nature protection
- Reservoir Quitzdorf suffers from high P pollution (evidentially caused by agriculture) => strong eutrophication => poor ecological status and failing to achieve good chemical status according to WFD, swimming warnings due to blue-green algae blooming



▷ Excess surface water due to defect tile drains*

Soil erosion after snow melt* ◁



▷ Sedimentation at a stream gauge after snow melt*

Gully erosion on large fields despite contour farming* ◁



▷ Reservoir Quitzdorf with blue-green algae and extremely low water levels in summer months

Source: Sächsische Zeitung, 9.8.2019, © André Schulze

EXISTING NATURAL/SMALL RETENTION MEASURES



▷ Retention basins (this one is often filled and should be emptied more often and equipped with an outlet to increase its effectiveness)*

Cover crops (here Phacelia)* ◁



▷ Conservation or no-till (here direct seeding of corn)*

Permanently grassed waterways* ◁



▷ Riparian buffers (here on both sides of the stream)*

STAKEHOLDERS

Participation already confirmed via support letters:

LANDESAMT FÜR UMWELT, LANDWIRTSCHAFT UND GEOLOGIE



▷ Saxon State Office for Environment, Agriculture and Geology with two Departments: 44 – Surface Water, WFD, and 72 – Crop Production



▷ State Reservoir Administration of Saxony, Works Spree / Neiße



Sächsischer Landesbauernverband e.V.

▷ Saxon Farmers' Association

We also seek for local farmers and stakeholders in the field of landscape maintenance and conservation.

* Source: LTV, 2018: Report on Phosphorus pollution and mitigation measures in the catchment of Reservoir Quitzdorf