OPTAIN

OPTimal strategies to retAIN and re-use water and nutrients in small agricultural catchments across different soil-climatic regions in Europe

CH STUDY SITE: Petite Glâne River Basin

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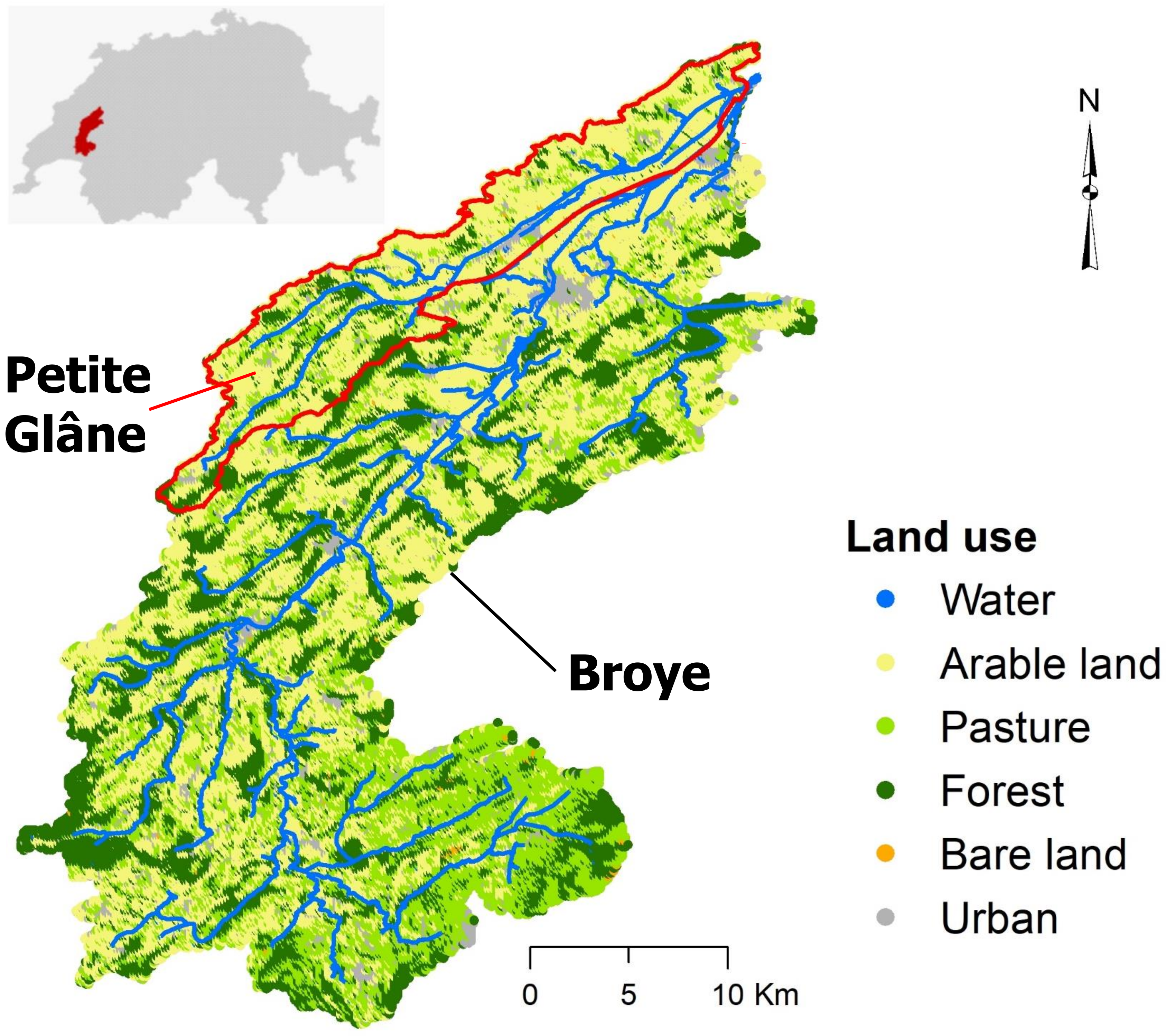
LOCATION & LANDUSE



Source: FSO (2020). Arealstatistik der Schweiz (Spatial Land Use Statistic for Switzerland); Swiss Federal Statistical Office: Neuchâtel, Switzerland.

GENERAL INFORMATION & PROBLEMS

	Petite Glâne	**Broye**
Catchment area	94 km2	602 km2
Elevation range	429 – 820 m.a.s.l.	429 – 1513 m.a.s.l.
Precipitation	940 mm/a	
Dominant land cover:		
Agriculture	74%	66%
Forest	13%	23%
Artificial surfaces	11%	10%

Source: FSO (2020). Arealstatistik der Schweiz (Spatial Land Use Statistic for Switzerland); Swiss Federal Statistical Office: Neuchâtel, Switzerland.

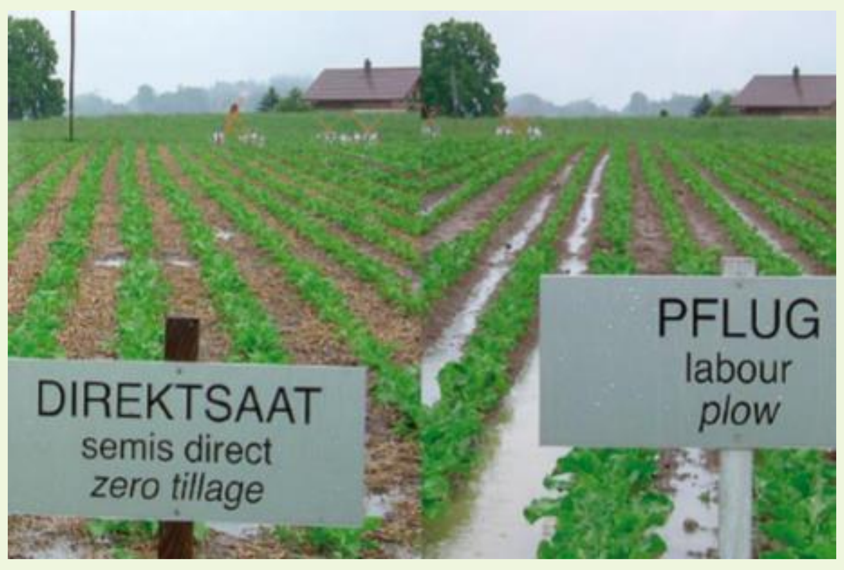
The soil and climate in the Broye catchment are highly suitable for arable production. Nevertheless, the area is experiencing a **water shortage**. The water availability from the Broye or Petite Glâne streams is often insufficient for irrigation and farmers are considering other options to mitigate increasing drought events. This project investigates the potential **of natural small-scale water retention measures** to mitigate drought stress in the future.
Although the focus is on the Petite Glâne, the case study is extended to the entire Broye catchment for modelling and stakeholder involvement.

Irrigation activities in the Broye Catchment
Photos: M. Fischer (LID), J. Fuhrer (Agrascope), Gabriela Brändle, (Agroscope)

EXISTING NATURAL/SMALL RETENTION MEASURES

▷ Cultivated stripes with stripe mill cropping, grass should grow between the stripes
Photo: Thomas Ledermann (WOCAT)

No till / direct sowing ◁
Photo: Andreas Chervet (Agrarforschung)



▷ Riparian buffers
Photo: Pascal Vonlanthen (Aquabios)

STAKEHOLDERS

Possible Stakeholders to be involved:

- Authorities of the Agriculture Sector
- Authorities of the Environment Sector
- Farmer associations
- Local farmers
- NGOs

Stakeholder involvement coordinated with:

AGRIDEA
The Centre for Agricultural Advisory and Extension Services

agridea

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