OPTAIN : Kebele and Szentgyörgyvölgyi valley [Hungary/Slovenia]

Year of issue

2025

Summary

HU: The Hungarian part of Kebele catchment with its 209 km2 size is located in the south-western corner of the country, in the West-transdanubian Water Directorate’s operational area, as part of the Drava sub-basin and Mura sub-unit. About 60% of the area is agricultural land, typically with wheat, barley, corn cultivation and pasture management. The Kebele Valley and Szentgyörgyvölgyi stream valley is NATURA 2000 classified. Main challenges identified in the area: management of nitrate-sensitive areas, prevention and mitigation of soil erosion and flash floods.

The Hungarian-Slovenian cross-border water cooperation dates back to 1994.

SI: The Slovenian part of Kobiljski potok (Hungarian "Kebele") is located in the Pomurska region and forms part of a transboundary agricultural catchment shared with Hungary. The area is characterized by intensive cereal production and pig farming, with sections falling under Natura 2000 and designated water protection zones. Key challenges include seasonal droughts, flood risk during heavy rainfall, limited space for buffer strips, and low groundwater availability for irrigation due to extensive drainage infrastructure.

OPTAIN seeks to identify efficient NSWRM to better adapt to extreme events (floods, droughts) and reduce conflicts between agricultural water uses and other human and environmental demands on water in small catchments across Europe in close cooperation with local actors.

Photo Gallery



Location

46.611518, 16.446351

Project

OPTAIN

National ID

EU_01

Sector

Agriculture

Implementation status

Modeled

Contact

HU:General Directorate of Water Managemnet, Division of Irrigation, Peter Molár. SI: Chamber of Agriculture and Forestry of Slovenia – Institute of Agriculture and Forestry Maribor, Gregor Kramberger.

Overview

Location of the project

SI: Pomurska region / Kobilje

Country

Hungary

NUTS2 Code

Dél-Dunántúl

Sponge measures implemented in the case study

Buffer strips and hedges

Meadows and pastures

Crop rotation

Cover crops

Ponds and scrapes

Site Information

Climate Zone

Warm temperate moist

Precipitation

800.00 mm

Temperature (°C)

9.20 °C

Evapotranspiration

600.00 mm

Runoff

200.00 mm

Elevation range

HU: 150-320 m a.s.l. SI: 170-330 m a.s.l.

Slope range

HU average relative relief: 26 m/km2.

SI: Average slope: 10–12%

Soil type

Cambisols

Gleysols

Luvisols

Groundwater level

2-4

Vegetation class

HU: arable land, grassland, meadows,forest

SI: arable land, grassland, meadows,forest

WFD Ecological status

Moderate

WFD Chemical status

Failing to achieve good

Design and Implementation

Project scale

Meso

Project area

HU: 247 km2 SI: 306 km2

Project area specifications

HU:The catchment area is predominantly agricultural land use (60%), forest (37%). The Kebele catchment is a Natura 2000 site.

SI: rural, urban (towns)

Policy and Governance

Policy targets

Runoff control

Peak-flow reduction

Groundwater Recharge

Increase Water Storage

Pollutants Removal

Part of a wider plan

Yes

Public consultation

No

Has contractual arrangements

No