OPTAIN: Sävjaan river catchment [Sweden]

Year of issue

2025

Summary

Sävjaån catchment is a lowland mixed land use catchment characteristic of central Sweden. Headwaters in the catchment drain a mixture of forest and agricultural land. Streams draining agricultural land are general deepened and straightened to promote drainage. Localized spring floods are common and summer droughts are increasing. Eutrophication is an issue throughout the catchment.

Photo Gallery



Location

59.83054168118, 17.670219687235

Project

OPTAIN

Sector

Hydromorphology

Implementation status

Modeled

Overview

Country

Sweden

NUTS2 Code

Östra Mellansverige

Sponge measures implemented in the case study

Wetland restoration and management

Buffer strips and hedges

Floodplain restoration and management

Site Information

Climate Zone

Cool temperate moist

Precipitation

639.00 mm

Temperature (°C)

6.00 °C

Elevation range

0–100 m a.s.l.

Groundwater level

< 5 m

Vegetation class

Riparian grasses, wetland vegetation, crops in adjacent fields

WFD Ecological status

Good

WFD Chemical status

Good

Design and Implementation

Project scale

Micro

Project scale specifications

localised ditches and buffer strips in fields

Project area

Varies; local plots to small sub-catchments (0.5–100 ha)

Project area specifications

Rural, cropland, ditch networks

Principles

Riparian areas proximal to streams and ditches that are not in agricultural production can slow the movement of particulate matter and water from fields to receiving waters, thereby potentially limiting peak flow.
Drainage ditches with a "bench" or floodplain can slow the movement of water and retain nutrients, benches function as wetlands when wet.
Wetlands/ponds are created to retain nutrients and prevent drought/flooding.

Policy and Governance

Land ownership

Mixed ownership: individual, company, community/ village; cooperative arrangements with farmers

Policy targets

Pollutants Removal

Requirement directive

Requirement directive
WFD-mitigation of significant pressure

Part of a wider plan

Yes

Wider plan

Wider plan type	Wider plan focus	Comments
Regional	Water	Regional/catchment-based strategy under EU directives

Public consultation

No

Has contractual arrangements

No

Impacts and Monitoring

Monitoring System

Presence of formal monitoring system

No structured long-term monitoring in place

Maintenance

Maintenance requirements

Tree trimming, vegetation removal (annual to every 5 years), sediment management

Lessons Learned

Barriers

Barrier type	Barrier role	Comments
Lacking financing sources	—	No long term financial support from competent authorities
Expected maintenance needs	Main barrier	unclear maintenance financing, Need for ongoing maintenance

Drivers

Driver type	Driver role	Comments
Legal obligations	Main driver	EU Water Policy
Other	Main driver	research-based evidence of effectiveness

Success factors

Success factor type	Success factor role	Comments
Other	Main factor	simplicity, ecosystem based
Attitude of relevant stakeholders	Main factor	farmers collaboration