

Can benthic macroinvertebrates provide indication of remediation success in agricultural ditches?

Credits: 30 credits
Level: Master
Subject: Environmental Science
Start: Anytime, however the sampling will be conducted March-September



Background

Benthic macroinvertebrates are commonly used as indicators of the biological condition of waterbodies. As such, this project aims to evaluate macroinvertebrate-based water quality indicators as tools to measure effectiveness of agricultural ditch remediation.

Remediation of agricultural ditches aims to convert traditional narrow and steep agricultural ditches into streams with ability to increase water, nutrient, and sediment retention.

Objectives

To identify and catalogue macroinvertebrate species and their habitat in stream of selected remediated ditches in Sweden during summer months. To calculate and evaluate macroinvertebrate-derived water quality indicators. To conduct a literature search on the application of macroinvertebrate indicators of water quality in environmental studies.

Performance

The work involves:

- Field and laboratory measurements,
- Statistical analysis of biological and chemical data including GIS analysis,
- Literature review and report writing.

Contact: Magdalena Bieroza and Lukas Hallberg, Soil and Environment, SLU

Email: magdalena.bieroza@slu.se & lukas.hallberg@slu.se

Website: <https://www.slu.se/en/departments/soil-environment/research/agricultural-water-management-/two-stage-ditches-in-sweden/>