

## The role of vegetation in controlling the effectiveness of two-stage ditches in Sweden

**Credits:** 30 credits  
**Level:** Master  
**Subject:** Environmental Science  
**Start:** Anytime

### Background

Two-stage ditches are mitigation measures aiming to convert traditional agricultural ditches into streams with ability to increase water, nutrient and sediment retention. As such they are measures to reduce eutrophication but a lot of factors can control their effectiveness. This project focuses on **understanding the role of stream and terrace vegetation** in controlling water quality in two-stage ditches in Sweden.



### Objectives

To identify and catalog plant species and coverage on terraces and in stream of selected two-stage ditches in Sweden during spring and summer months. To estimate plant nutrient uptake weighted against coverage. To analyse harvested vegetation by the end of summer and analyse for nutrient content ( $\text{NO}_3\text{-N}$ ,  $\text{NH}_4\text{-N}$ , TP).

### Performance

The work involves:

- Field and laboratory measurements,
- Statistical analysis of a large chemical dataset and GIS analysis of spatial data,
- Literature review and report writing.

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