

## **LIFE-Goodstream and the use of constructed wetlands and other measures to decrease eutrophication, increase biodiversity and decrease floods– a holistic approach to multiple environmental problems**

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The project LIFE-Goodstream aims at solving or reducing several environmental problems of the stream Trönningeån in Southern Sweden by using a holistic approach, where all measures are planned with multi-functionality in mind, simultaneously addressing eutrophication, fish migration, biodiversity and floods.

Agricultural streams often suffer from different forms of environmental stress. In Sweden, as in most industrial countries, the most common environmental problems in these systems are eutrophication and migration barriers. In addition, lowland streams in agricultural areas commonly suffer from low biodiversity, stream bed alterations and a lack of active flood plains. A result of stream alterations together with the environmental pressure from intensive agricultural practice (e.g. pipe drainage) is also a reduced hydrological buffer capacity of the landscape with subsequent floods in downstream areas, both of farmlands and of rural areas and infrastructure. Constructed wetlands have been used for >20 years in Sweden as a cost-efficient method to reduce transport of nutrients to freshwater bodies and the sea, as well as a method to enhance the biodiversity of rural landscapes. Recent evaluations have shown good results for nutrient reduction and increased biodiversity. In recent years new environmental measures to combat eutrophication have been presented, such as Integrated Buffer Zones (IBZ) and Level-Adjusted Constructed Wetlands. Apart from the commonly sought ecosystem services of nutrient retention and biodiversity enhancement, also hydrological buffering (peak flow reductions and flood prevention) and farmland irrigation possibilities as well as public recreation and education have a potentially very high value for the society, and should be considered and optimized when planning measures and choosing landscaping elements

In the project LIFE-Goodstream, we try to address as many environmental problems as possible and together with engaged farmers and landowners we work towards both efficient agriculture as well as improved nature values and a sustainable environment.