European Network for Rural Development

VÅTMARK KYLINGE – Creating a wetland to tackle eutrophication

EAFRD-funded projects

SWEDEN

Water management

Location
Kristianstad

Programming period
2014 - 2020

Priority
P4 – Ecosystems management

Measure
M7 - Basic services and village renewal in rural areas

Funding (EUR)
Total RDP budget 64 018
EAFRD 25 991
National/regional 38 027

Project duration
2017 – 2018

Project promoter
Anders Ericson

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n/a

The creation of wetlands in the agricultural landscape can contribute in decreasing the leakage of nutrients into water bodies.

Summary

Eutrophification refers to the phenomenon in which a body of water becomes overly enriched with minerals and nutrients due to runoff from the land. This induces excessive growth of plants and algae and may result in oxygen depletion of the water body. Some areas are more sensitive or more exposed to the overload of nitrogen and phosphorus, and the area of Anders Ericson's land in Blekinge in southern Sweden is one of them.

Creating wetlands in the agricultural landscape might be a way of decreasing the runoff of nutrients into water bodies. After receiving advice during the Greppa Näringen-project, landowner Anders Ericson decided on this course of action. The wetland will help protect the water of Västra Orlundsån stream from eutrophication by binding the phosphorus and transforming the captured nitrogen into gas.

Results

Many different types of plants and animals thrive in the wetland and the surrounding areas. Since this kind of biotope is rare in the surrounding landscape, the wetland is expected to help increase biodiversity.

Given that it is possible to control the water flow in and out of the wetland, if needed, the wetland can be used to store water for irrigation.

Lessons & Recommendations

- The most important lesson learned was to be equipped with a great amount of patience. From receiving initial advice to completing the wetland, more than five years had elapsed – mainly due to the long administration time at the County Administrative Board that handles the applications for funding and permission.
- Owners of similar projects around Sweden emphasise the need to take advantage of all the help and advice available. The "Greppa Näringen" free advisory service is a very good start, but there's also help from professionals with planning and construction of the wetland.

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Context

The Baltic Sea outside the Blekinge coast in Sweden is significantly affected by nitrate and phosphorus due to intensive agriculture, amongst other sources. The land of Anders Ericson in Blekinge is located in an area that is considered a Nitrate Vulnerable Zone. That means that the water in the area is extra sensitive for nitrogen pollution. This is mainly because the stream "Västra Orlundsån" which flows through his land, is overloaded with nutrients. The area is also characterized by flat agricultural land and there is a need for variations in the landscape in order to increase the biodiversity. In addition, the water resources in the area are limited and the crops that are cultivated might require irrigation. There was thus a need of more efficient water storage.

Objectives

The objectives of this projects were to:

- Reduce the loads of nutrients in the stream Västra Orlundsån; and
- Increase the biodiversity of plants and animals in the area.

Activities

The projects helped realise these objectives by financing the construction of a 1.7 ha wetland that cleans the water while providing a popular biotope for rare species.

The project started by receiving advice from Naturvårdsingenjörerna within the Catch the nutrition project (*Greppa Näringen*). A place that was suitable for constructing the wetland was identified and the application for support from the rural development programme was submitted. The process took a couple of years but when the application finally was granted the project could start.

Parts of the area consisted of alder forest that had to be taken down, which was done by the forestry company Skånetimmer. The entrepreneur Naturvårdsingenjörerna that had provided advisory services for Anders helped with the planning of the wetland and its construction. The excavated earth was used to create a levee along the river.

The water is led from the river to the wetland by a pump powered by solar cells and back to the river again through a well that regulates the flow. In the wetland, bacteria break down the nitrogen compounds and transform them into nitrogen gas that is released in the air. The process is called denitrification. The wetland can also function as a store for phosphorus by binding it in soil particles at the bottom.

Main results

The wetland was completed in the autumn of 2017 and is not yet fully functional, according to Anders.

Many different types of plants and animals thrive in the wetland and the surrounding areas. Since this kind of biotope is rare in the surrounding landscape, the wetland is expected to help increase biodiversity.

Given that it is possible to control the water flow in and out of the wetland, if needed, the wetland can be used to store water for irrigation.

Key lessons

The most important lesson that Anders Ericson learnt is the need for great patience. The process from receiving initial advice to the completion of the wetland took more than five years – mainly due to the long administration time at the County Administrative Board that handles the applications for funding and permission. Don't give up!

Other owners of similar projects around Sweden highlight the need to take advantage of all the help and advice that's available. The "Greppa Näringen" free advisory service is a very good start, but there's also help from professionals with planning and construction of the wetland.