

SUCCESS STORIES FROM THE WETLANDS



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And ode to wetlands – and the people behind them

In 2006, the number of agricultural wetland hectares totalled 190. In 2011, that figure was 400. However, these numbers are only estimates and include the hectares for which environmental funding for agriculture was applied. It could well be that a major part of the wetlands constructed in Finland have been set up without being recorded in the statistics. One thing is for sure: the number is growing.



There are many motives for constructing a wetland in an agricultural environment. Wetlands slow down water flow: nutrients and soil have more time to sink to the bottom of the wetland. This means that they are not transported onto the Baltic Sea and inland waters where they cause eutrophication. Wetlands also work as water storehouses and in controlling floods. The nutrition-rich environment also offers habitat for reproduction, hunting and living for a wide range of flora and fauna. The landscape becomes more varied and recreational possibilities are improved.

There are many questions related to the construction of a wetland. Where can a wetland be set up? And how? What kinds of designs are needed and who should be informed? How are wetlands financed or managed? Making a wetland project happen on top of all the everyday chores and without any extra help may well remain at the level of a good intention.

In May 2007, WWF Finland published a report on Finland's success in achieving the eutrophication prevention goals of the Finnish Council of State's programme for the protection of the Baltic Sea. There was a goal for wetland hectares to be set up, recorded in the conservation programme, but only a very small percentage of the target amount had been achieved. We at the WWF decided that we would start promoting the construction of wetlands actively, as it is an underutilised means of water conservation.

WWF has now been involved in wetland activities for nearly five years. During this time, we have constructed and designed over 30 wetlands and charted approximately 70 areas that are suitable for wetland use. Over the five-year period, work on wetlands in Finland has undergone significant changes. We have seen increasing interest in the matter; the number of showcase sites where people can visit to learn more has grown; lessons have been learned – sometimes the hard way – about constructing wetlands; and the funding system has developed. At the same time, discussion about draining natural wetlands has faded out; we have noticed that draining nature's treasure troves has proven to be a big mistake.

This leaflet introduces some of the different wetland types constructed in Finland and the parties and forms of cooperation behind these projects. As a result of the projects featured here, as well as many that had to be left out, the number of wetlands in Finland has taken an upward turn. As you might notice when browsing through this leaflet, all wetlands are different. But there is one thing they all have in common: cooperation.

The goal for agricultural wetland hectares in 2020 is 2,000. Even the greatest leaps are often made up of small steps.

April 2013

Elina Erkkilä, Conservation Officer, WWF Finland

The Hovi Research Wetland started a wetland boom

"The Hovi Wetland was constructed in 1998, at a time when there were hardly any agricultural wetlands in Finland. Designing the wetland was based on textbook knowledge and the designers' creativity. The results of the research study exceeded all expectations. Even though the waters running into the wetland for purification were cleaner than purified water at wastewater treatment plants, the wetland achieved significant nutrient retention levels."

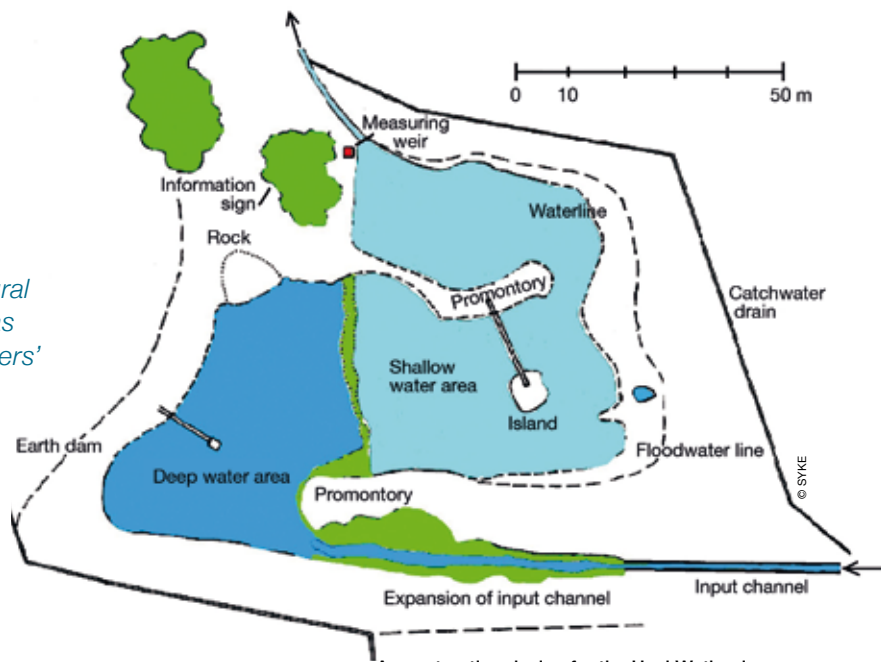
Agronomist Markku Puustinen
from the Finnish Environment Institute

The Hovi Research Wetland of the Finnish Environment Administration, located in the municipality of Vihti in the southern Finland, is 0.6 hectares in size. The wetland is relatively large, as the size of the catchment area is only 12 hectares or so. The catchment area comprises fields.

Today we know that the wetland's ability to retain nutrients and solid materials is at its best when the wetland is large in relation to the size of the catchment area. Another important factor is that the nutrient content is high in relation to the water volume flowing into the wetland.

The water conservation properties of the Hovi Research Wetland continue to be examined. Gauges monitor the concentration levels in the water entering and exiting the wetland 24 hours a day. Over the course of ten years, the Hovi Wetland has removed 68 per cent of solid materials in the outlet water, 62 per cent of total phosphorus concentration and 50 of total nitrogen content on average. At its best, the wetland has achieved a retainment rate of nearly 90 per cent of the soil material and nutrient load that flows into it.

According to Research Engineer **Jari Koskiaho** from the Finnish Environment Institute, the automated water quality measuring brought about a completely new kind of framework for studying the efficiency of wetlands.



A construction design for the Hovi Wetland. The same kinds of multifunctional structures can be recommended for contemporary wetlands too.



© MAARIT PUJUNALA / MTT

Hovi Research Wetland in the summer of 2000.

FURTHER INFORMATION:

The publication
'Maatalouden vesiensuojelukosteikot'
(Suomen ympäristö 2001)
[www.ymparisto.fi/palvelut ja tuotteet/](http://www.ymparisto.fi/palvelut_ja_tuotteet/julkaisut/Suomen_ymparisto/Suomen_ymparisto_sarja_2001/SY499_Maatalouden_vesiensuojelukosteikot)
julkaisut/Suomen ympäristö/
Suomen ympäristö sarja 2001/SY499
Maatalouden vesiensuojelukosteikot
(in Finnish)

Operation Tåktom Bay and Ari Heinilä

"It is us who can raise a new generation; one that has a better understanding and respect for our common sea. I have spent the past thirty years on the Baltic Sea and at Tåktom Bay. I decided that it is now time for me to do more for our sea."

Ari Heinilä

Tåktom Bay is a nature conservation area located in the western Uusimaa region, and one of the most remarkable bird areas in southern Finland. The bay is like the Baltic Sea in miniature: eutrophication and paludification threaten the sea bay, about one square kilometre in size. There are oxygen-free and dead zones in the bottom of the bay, where visibility is only a few centimetres at its worst. The bay is shallow and water exchange is slow. In addition to its natural value, the bay is at a risk of losing its recreational value.

Ari Heinilä is an environmental activist and journalist from the city of Hanko. He invited the Tvärminne Zoological Station, Metsähallitus (Forest Administration) that manages Tåktom Bay, WWF and some of the local landowners to take part in planning to save Tåktom Bay in the autumn of 2009. In addition to research activities connected to the bay and its catchment area, it was discovered that the bay needed concrete measures to reduce the external load. A decision was made to construct a wetland along a ditch running into Tåktom Bay, with the objective of retaining soil and nutrients running into the bay with the water from the diversion ditch.

A local landowner became interested in the project and offered land that could be used for the wetland. WWF assumed responsibility for designing the wetland and managing its construction. Local people and businesses were sought as donors. "Fundraising was sometimes frustrating, but finally we managed to collect approximately €15,000 and were able to construct the wetland," Ari Heinilä tells us.

A management association has been set up to save the Tåktom Bay. The next step is to construct more small wetlands that will improve the nutrient retainment abilities, even during flood waters. Wetlands are constructed with the help of support from WWF and the City of Hanko.



**Ari Heinilä, father of the project, in action:
planting in the fringe areas of the wetland.**



**A picture of the open water area in the Tåktom Wetland,
taken from a bird-watching tower.**

Ari Heinilä completed a television documentary of the Tåktom Bay, entitled *A Drop in the Ocean*. In addition to constructing wetlands, great importance in the project is placed on environmental education and engaging people. Schoolchildren from the Hanko area have taken part by handing out phosphate-free detergents to the area's summer residents and planting plants in the fringe areas of the wetland. In 2012, Ari Heinilä was granted the Environment Award of the western Uusimaa region for his activities to save Tåktom Bay. "An excellent local initiative that is well worth copying both along our own coast line and in other countries around the Baltic Sea," said the Jury, explaining their reasons for granting the award.

FURTHER INFORMATION:

www.pelastataktom.fi (in Finnish)

Pertteli Bird Wetland swarms with life

"Even the finest talks do no good for the environment before they have become real actions. Since joining forces, we have achieved many great things. Without flexible partners like the WWF, and land-owners who are dedicated to the matter, many wetlands would never have been built."

Anni Karhunen, Centre for Economic Development, Transport and the Environment (ELY Centre) for Southwest Finland

When stepping on to the Pertteli Bird Wetland, you can hear the mosaic of birds calling and a varied rural landscape opens up in front of you. Cows are grazing with their young calves on the buffer strips on the wetland fringe areas and the little twitters fluttering around are a sight for sore eyes. The beautiful audio landscape is complemented by the ruffle of wetland vegetation and the water bubbling.

The Pertteli Bird Wetland, 3.3 hectares in size, is a great example of the cooperation that the ELY Centre for Southwest Finland has taken to construct and restore several wetland areas in the Archipelago Sea catchment area, in cooperation with local land owners and other parties, such as WWF. Senior Inspector Anni Karhunen and her colleagues have established a solid network of cooperation to carry out the practical measures: The main role of the ELY Centre is to check the plans and take care of legislative tasks and participate in funding, while the landowner and WWF take care of the practical work.

At the Pertteli Bird Wetland, the renovation of the old dam, expansions and deepening of the wetland and building a second dam in the middle of it, completed a great wetland area. The water depth in the wetland ranges from some dozens of centimetres up to six metres. As all existing and completed features were utilised, the expenses remained at a reasonable level of around €7,000. The landowner was involved with his own work and he is also responsible for the management of the wetland.

According to the random water samples collected from the Pertteli Bird Wetland, the site retains nutrients and soil materials relatively well, irrespective of its large, over 12-sq-km catchment area.



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Versatility of the wetland area.



© ELINA ERKKILÄ / WWF-FINLAND

Signs with basic information for visitors interested in the wetland.

FURTHER INFORMATION (IN FINNISH):

wwf.fi/maapallomme/itameri/kosteikot/kosteikoesittelyt
(under Inkere, Pertteli)

The Lake Vesijärvi Foundation Heroes of water conservation at the grassroots level

"At the turn of the new millennium, I woke up to the fact that the Mustoja Stream flowing by my house had the highest phosphorous content in all of Lake Vesijärvi. It was about time to start a joint effort for the common good."

Landowner Risto Kauhala

The goal of the Lake Vesijärvi Foundation in the Päijät-Häme region, founded in 2008, is to improve the state and recreational value of Lake Vesijärvi and other lakes in its area of operation. In addition to management fishing, oxidation, setting up of buffer strips and mowing water plants, the plan is to construct approximately fifty wetlands and sedimentation basins in the Lake Vesijärvi catchment area.

The operative model of the foundation takes its roots in wide-scale networking: representatives from municipalities, business life, academia and local residents and organisations are all included. Entrepreneur Risto 'Ripa' Kauhala has been an eminent partner in making wetlands and sedimentation basins come true.

Kauhala, who lives in the Lahdenpohja area in Hollola, in the very south-western corner of Lake Vesijärvi, is a true hero of water conservation activities at the grassroots level. He founded the association for the conservation of the areas in the lower reaches of the Mustoja Stream, in 2002, and the association for the conservation of Lake Matjärvi that drains into Lake Vesijärvi, in 2010. Kauhala is also the Chair of the registered association Friends of Lake Vesijärvi (Vesijärven ystävät ry), active in the entire Lake Vesijärvi region.

He is an active, socially gifted man, who has organised the local landowners to take part in a joint effort, as a result of which over a dozen of wetlands or sedimentation basins have come about in three adjacent ditches running into Lake Vesijärvi. There are a total of seven in Mustoja Stream. At the same time,



Heroes of water conservation. Ripa Kauhala on the left.

care has been taken that everything is in order in the village concerning wastewater treatment systems.

According to Kauhala, the impact of the chain of wetlands is clearly visible in the quality of water in the Lahdenpohja area. Water is clearer, and the solid material load no longer blocks the mouths of the rivers. Residents of the village have put in an amazing number of voluntary work for water conservation activities: tens of thousands of hours. Community spirit has been improved and social capital increased as a result of this joint effort. Water conservation activities are not just talk in the Lahdenpohja area. Things are really done.

FURTHER INFORMATION (IN FINNISH):

www.puhdasvesijarvi.fi/ (also briefly in English)

The vast Saimaa Wetland: landowner enthusiasm and government support

"It feels great to have such a large wetland on my lands. We have been thinking about setting up a bird-watching tower and it would sure be nice to have people visit the area to watch the birds."

Landowner Pekka Hintsanen

Landowner Pekka Hintsanen, who owns the lands of the vast Saimaa Wetland, and **Hannu Koponen**, who was in charge of the project, reveal that improving the living conditions of birdlife was a major motive in setting up the major wetland.

"Another goal was to show a good example to others and, by doing so, to encourage everyone to take concrete action. There was a lot of work to be done, but we were lucky to have the help of the local ELY Centre, the Finnish Wildlife Agency and WWF," Hintsanen and Koponen say.

The vast wetland in the Iitiähti Bay area of Lake Saimaa was constructed with the help of non-productive agricultural investment funding. The total cost for the site, over 20 hectares in size, came in at approximately €100,000. The multi-functional wetland was constructed over two years' time, during 2011–2012, and it is made up of several, varied parts. Deep and shallow water sections, open and sheltered zones and island pockets form a site that is of landscape interest as well.

Water quality is mostly at a good level in the Saimaa waters in comparison to such places as the coasts of the Baltic Sea, but



The wetland was swarming already with life in early spring.

there are signs that the state of water ecology is deteriorating at Lake Saimaa too. The greatest importance this wetland has, however, is for birdlife.

Hannu Koponen and Pekka Hintsanen tell us that birds have discovered the site quickly. The following species are some that have been spotted in the wetland and recorded in the nation-wide bird watching system, 'Tiira': whooper swan, Canada goose, Eurasian wigeon, teal, mallard, marsh harrier, buzzard, crane, northern lapwing, European snipe, curlew, green sandpiper, wood sandpiper, sand martin, barn swallow, kestrel, grey plover, common greenshank and common house martin.

In addition to the wide range of birds, there is also a rarity that has taken a liking to the wetland: the Terek sandpiper. Pekka also adds the grey heron and barnacle goose to the list of species he has seen at the wetland.

FURTHER INFORMATION:

Pekka.Hintsanen@issph.fi

The Lurens Wetland has many important tasks

"The Hardom Voluntary Fire Brigade cleared the wetland area as voluntary work. The wetland area is now also a water storage that we can use in the case of a fire."

Patrik Lindfors, Hardom Voluntary Fire Brigade

A general plan was prepared in 2011 for the Loviisanjoki River water system area, introducing some areas that could be suitable for use as agricultural wetlands. The proposals in the plan set no obligations for the landowners; the goal is to offer assistance and encourage people. The Lurens Wetland in the Hardom area in Loviisa was the first site constructed on the basis of the overall plan.

The wetland was constructed by using a wet, low-lying wasteland area. The water conservation effects of the wetland were improved by constructing deep water zones. Island pockets were also set up. Damming was used to raise water onto this area, approximately one hectare in size. Water depth in

the wetland ranges from a few metres to less than half a metre. The catchment area above the site is approximately 60 hectares in size, and it is mostly made up of ditched swamps and forestry land.

One of the important reasons for interest in wetlands in the Loviisanjoki River area is indeed the river that runs through the area. Over time, the Loviisanjoki River has filled with solid material that has formed dams in the river. If wetlands were set up around the ditches that run into the Loviisanjoki River, flooding problems could be reduced in the future.

The wetland was constructed in cooperation by landowners, the voluntary fire brigade, City of Loviisa and WWF. The Lurens Summer Theatre is located nearby, which means that there are almost 10,000 visitors to the area in the summer. Many interested visitors have also come to see the wetland.

The general plan for wetlands in the Loviisanjoki River area was funded by the Ministry of Agriculture and Forestry, and the project management was the responsibility of the ELY Centre for Uusimaa. The practical aspects of the project were carried out by WWF.

FURTHER INFORMATION:

<http://www.wwf.fi/mediabank/1783.pdf>



Plans for the follow-up of the wetland began immediately. Prime movers of the project from Loviisa pictured.

Paavo and the Forest Wetland

"The area used to be meadow and swamp, but they were drained for the purposes of agriculture and forestry. I had dreamed about restoring the wetland for quite some time."

Paavo Heinonen, landowner from Perniö

Constructing a wetland had been the long-standing dream of landowner Paavo Heinonen. The Myrkniiitu Wetland and the surrounding areas are like a fairy tale forest. Paavo has built a lean-to shelter and places for making a fire near the site. He tells us that when he wants to enjoy the peace and quiet and nature, he heads for the wetland. He has even taken a dip in the wetland.

Besides recreational use and water conservation, Paavo's motives for setting up the wetland included the species for which the wetland offers an environment to reproduce and live. You can see the footprints of many animals, like the otter, on the frozen wetland's ice surface in the wintertime. Green sandpipers have also taken a liking to the wetland and it is possible that they have already nested in the area. There are almost thirty bird houses at the Myrkniiitu Wetland.

The Myrkniiitu Wetland and surrounding areas will probably be in the scope of the METSO programme in the future. The aim of the programme is to secure the biodiversity of nature in the forests of southern Finland.

The Myrkniiitu Wetland was constructed by WWF. WWF has constructed other wetlands alongside the ditches running into the Laukanlahti Bay. However, the peaks in water flow and water volumes due to heavy rainfall and snow-melt waters are harmful to the operation of the wetlands, in particular in the lower reaches of the catchment area.

The upper reaches of the catchment area are mostly made up of ditched swamps and forests that have, for their part, aggravated the floods in the catchment area. The Myrkniiitu Wetland was constructed to balance off the flow of the flood waters.

FURTHER INFORMATION (IN FINNISH):

www.wwf.fi/maapallomme/itameri/kosteikot/kosteikko-esittelyt/Laukanlahden-kosteikot-1228.a#myrkniiitu



The wetland is a place of recreation for Paavo.

A small wetland located in the central part of the Laukanlahti Bay catchment area.

Game husbandry and water protection in one package

"A wetland combines many good features. A wasteland that felt worthless has become a great recreational area that makes it possible to carry out activities for the management of the birdlife population."

Landowner Ville Porkka

Ville Porkka owns land in Raasepori, located in the region of western Uusimaa. In 2011, he became interested in constructing a wetland, encouraged by the example shown by neighbours and the Finnish Wildlife Agency. An old, low-lying field with wet bottom structure was only partially overgrown with trees and it seemed like a great site. Would it be possible to turn it into a wetland that could be beneficial to biodiversity, game husbandry and landscaping as well as water conservation?

The Finnish Wildlife Agency's *Return of Rural Wetlands Life+* project helped Porkka in the design, construction and funding of the Isoahde Wetland. The three-hectare wetland, located in the middle of a forest, was constructed by making a dam in November 2011; as early as in December, rains raised water onto the wetland.

Work remained to be done even once the wetland was constructed. Management of the wetland is an important part of maintaining the new, valuable habitat. Porkka is prepared to do natural management at the site. Management of the nearby pasturage and meadows on the wetland's shores by pasturing is a part of the future plans.

The Isoahde Wetland has already been discovered: in the end of the first summer, at least 66 pairs of flippers were taking their first steps at the wetland as broods of teals, goldeneyes, mallards and European wigeons nested in the area.

The *Life+ Return of Rural Wetlands* project is a Life project partially funded by the European union. Finnish sponsors include the Ministry for Agriculture and Forestry and the Finnish Wildlife Agency, which is responsible for the project.

The project includes setting up a demonstrative wetland improving biodiversity in cooperation with locals in each region



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A wetland also brings about versatility to the natural landscape of a forest.



© PAAVO PORKKA

The 2.5-hectare wetland soon became the home of many chicks.

and encouraging people to participate in the management of wetland nature in their home region. 33 wetlands, with a total size of 200 hectares, have already been constructed as a part of this project. The original goals were exceeded and the project aims at building additional 50 wetlands.

The project website, www.kosteikko.fi/ contains more information about the project, including introductions to the demonstrative wetland sites (also in English).

FURTHER INFORMATION (IN FINNISH):

www.kosteikko.fi/

Baltic Farmers of the Year as wetland founders

“The well-being of animals, preserving biodiversity and water conservation are all matters of the heart to us, in addition to food production.”

Katariina Vapola and Jyrki Ankelo, Vapola Farm

The Vapola beef farm in Kallanti, in the town of Uusikaupunki, is a place where environmental effects of agriculture are minimised in many ways. These include organic production, plant cover on fields in the winter, restoring pastures using no-till farming and spreading slurry on using a precision spreader.

The Angus cattle at the farm graze on traditional biotopes and natural pastures that are true treasure troves of species. With help for designing and funding received from the ELY Centre for Southwest Finland, the Vapola family was able to attain a wetland of their own.

The catchment area for the wetland, completed in 2009, totals 158 hectares, of which approximately 20 per cent is fields. The wetland is made up of two sedimentation basins, with a total size of 4,550 square metres with island pockets and dam banks included. The wetland is surrounded by grassy meadows and reed beds, totalling 22,500 square metres. The grass areas are grazed. The water is directed into the reed beds and from there further on to the bay; the reed bed makes the nutrient restoring abilities of the sediment basins more effective.

An exercise yard with removable bedding base for cattle was built in connection to the cow shelter located by the other ditch that runs into the wetland, with help for designing and funding granted from the TEHO project. From the exercise yard, the outlet waters run into the sediment basin and further on to the ditch. Taking advantage of wetlands and sediment basins in the treatment of outlet waters of the largest generators of point



The Vapolas in action at the OKRA Farm Fair 2012.

© SAMPSA VILHUNEN / WWF FINLAND

source pollution remains at a low level in Finland. However, their use continues to spread.

The Vapola Farm was granted the Baltic Farmer of the Year 2009 Award.

FURTHER INFORMATION:

www.vapola.fi (in Finnish)

www.wwf.fi/maapallomme/itamero/itamero-viljelijoiden-ymparistopalkinto/ (in Finnish)

TEHO Plus (2011–2013) continues the work initiated in the TEHO project (2008–2011) for the reduction of the load caused by agriculture on the water and the environment, and the promotion of biodiversity. Its places emphasis on targeting environmental activities and developing farm-specific guidance. The scope of the project activities includes the regions of Satakunta and Southwest Finland, but the results can be applied nation-wide. The project involves 120 old and 55 new TEHO farms. The project is managed by the ELY Centre for Southwest Finland as well as the local MTK (Central Union of Agricultural Producers and Forest Owners) organisations in Satakunta and Southwest Finland.

www.ymparisto.fi/tehoplus (The page is also available in English)

The Active Wetlands project comes to Paimionjoki River

"It is my dream that one day, the outlet waters of our wide catchment area could be retained in the upper reaches of the streams and ditches in the several small wetlands and low-laying areas, just like it used to before the large-scale ditching of the lands took place; the ditches would run in natural, winding ducts, causing minimal erosion. And, additionally, the cycle of nutrients would be completed at the farm and on a wider scale, in the entire water system. I believe all of this is possible. And I hope more and more people will believe the same."

Päivi Joki-Heiskala,
Executive Manager of the Paimionjoki River Organisation.

The use and functionality of the active measures included in the Active Wetlands project was tested in the pilot area on Paimionjoki River in 2012. Three pilot targets, where the precipitation of soluble phosphorus produced in agriculture and retention of this phosphorus before it runs into the Paimionjoki River and adds to the eutrophication of waterways is being tested. The so-called Ferrix method was used in the precipitation of nutrients. In the method, soluble phosphorus is precipitated with the help of iron sulphate.

One of those actively involved in the testing of the active methods was farmer **Totti Nuoritalo**.

"I became involved in the project, because I think this research study is important as is the development of innovative methods," Totti Nuoritalo says.

According to the study, 28 kg of soluble phosphorus is normally transported through Nuoritalo's pilot site in ditch water in a year. After the use of the chemicals, the amount of phosphorus was 11.7 kg, which means that the chemicals retained 42 per cent of the soluble phosphorus during the experiment.

In addition, the farmers' take on the use of chemicals was also investigated with interviews. The interviews were carried out by the Paimionjoki organisation. Farmers in the Paimionjoki River



The construction took about four hours.



The V-dam reduces water flow and regulates the amount of chemicals.

area did not consider the maintenance of chemical dispensers too laborious. It was, however, hard to find pilot targets that had the right circumstances.

FURTHER INFORMATION:

www.paimionjoki.fi/yhdistys (in Finnish)

www.wwf.fi/activewetlands (in English)

More information about the Active Wetlands Project on p. 26.



The iron sulphate box is the source of the chemical-containing sock.

Active Wetlands project

The Active Wetlands project (2009–2013) investigates the use of iron sulphate in the treatment of agricultural outlet waters. The chemical, which is well known at the wastewater treatment facilities, retains soluble phosphorus. The project was carried out in cooperation with Agrifood Research Finland (MTT), Turku University of Applied Sciences, Finnish Environment Institute, WWF Finland, University of Tartu and the WWF's Estonian sister organisation ELF.

In the final report of the research study (2013), it was stated that the chemical retained at an average 60 per cent of the soluble phosphorus in the ditch waters of the examined sites. The chemicals worked better, the more soluble phosphorus the water contained. However, it was necessary to use a high dosage of chemicals, in particular when there was heavy flowing. For example at the Nuutajärvi site, the average expense for a retained kilogram of phosphorus was €180, with the sum ranging from €45 to €450 at the various sites.

According to the estimates of the research study, the wetlands could make the use of chemicals more efficient: a wetland located in the upper reaches from the iron sulphur dispenser would even out the flow of the water and, those located in the lower reaches from the dispenser, would gather the iron sulphate silt.

There are questions related to the using safety of some of the chemicals that must be settled before the use of these chemicals can be recommended on a wider scale. More research is needed.

FURTHER INFORMATION:

www.wwf.fi/activewetlands (in English)



This leaflet has been compiled as a part of the Active Wetlands project, funded by the European Union's Inter-reg programme. The project is organised in cooperation between MTT Agrifood Research Finland, Turku University of Applied Sciences, the Finnish Environment Institute (SYKE), WWF Finland, Estonian Agricultural University and WWF's Estonian sister organisation ELF.



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