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Esa Korkemäki



Ilpo Huolman



Marjo Piha



Vilma Rätty

BACKGROUND OF THE LINTULAHDET LIFE PROJECT

The purpose of the Natura 2000 network is to protect habitat types and species environments that are becoming rare, as well as valuable areas to birdlife within the area of the European Union.

Altogether 12 bird wetland sites in the Natura 2000 network were restored in the Lintulahdet Life project (Bird Bays Life). The areas are situated in the migratory fly-way along the Gulf of Finland in the Uusimaa region and in Southeast Finland where 35 bird species included in the birds directive appendix I come to rest or nest.

With restoration and management, the significance of the project areas, especially as a resting area for birds during migration, was improved. Active management also aimed at supporting the diversity of the wetland nature. During the project, flood meadows and open water areas invaded by plants were cleared and the amount of small predators was reduced.

Recreational use of the areas was developed by building bird towers, duck-boards, map guides and nature trails. Various educational materials and brochures were produced to promote awareness on wetland nature.

Lintulahdet LIFE got half of its funding from the European Union LIFE Nature fund which supports the conservation and restoration of Natura 2000 areas. The project was coordinated by Uusimaa Regional Environment Centre and Southeast Finland Regional Environment Centre. In addition 27 cooperation partners and financiers contributed to the funding of the national share. The overall budget for the project was approximately 3.2 million euros.





Tero Taponen



Leena Eerola



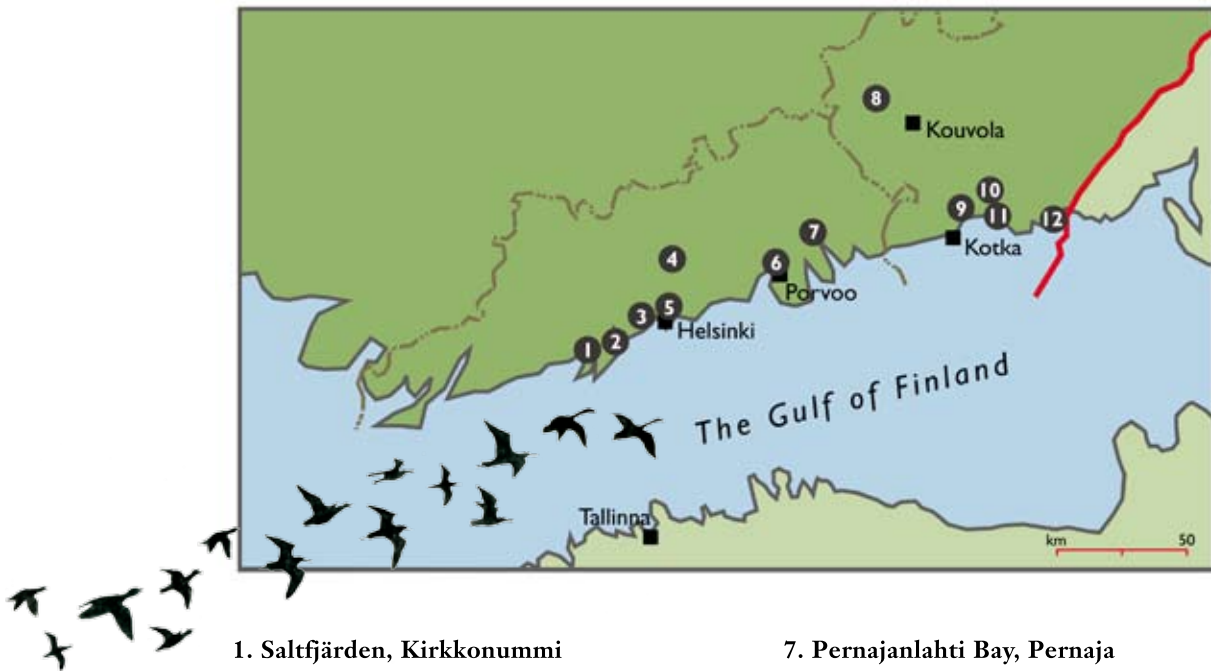
Vilma Rätty



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PROJECT AREAS

The areas involved were mainly shallow overgrown bays. Tuusulanjärvi and Pyhäjärvi lakes in Iitti and Jaala represented lake target areas. Seven of the areas are located in the Uusimaa region and five in Southeast Finland. The overall area of these sites is nearly 3,630 hectares.



- | | |
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| 1. Saltfjärden, Kirkkonummi | 7. Pernajanlahti Bay, Pernaja |
| 2. Medvastö-Stormossen, Kirkkonummi | 8. Pyhäjärvi, Iitti, Jaala and Valkeala |
| 3. Laajalahti Bay, Espoo | 9. Salminlahti Bay, Kotka and Hamina |
| 4. Lake Tuusula, Tuusula and Järvenpää | 10. Lake Kirkkojärvi, Hamina |
| 5. Viikki-Vanhankaupunginlahti Bay, Helsinki | 11. Pappilansaari-Lupinlahti Bay, Hamina |
| 6. Porvoonjoki estuary-Stensböle, Porvoo | 12. Kirkon-Vilkkiläntura, Virolahti |



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PLANS FOR MANAGEMENT AND USE

When planning management and use, the requirements and goals of nature conservation, recreational purposes and other use are taken into account.

Within the project, plans for management and use were made to altogether ten areas. The plans were based on collected data on the nature and current use of the areas. The opinions and views of landowners and local residents were heard in public events. The plans defined the needs and goals for management, as well as the procedures to attain them.

The plans contained an estimate of the effects of these procedures on the state of the species and habitat types to be conserved. In the planning stage, further funding was also determined, as well as the parties responsible for management after the project.



Vilina Rätty



Tero Taponen



Ilpo Huolman



Ilpo Huolman



Juha Eyselari



Ilpo Huolman



Ilpo Huolman

RESTORATION OF BIRD WATERS

Man has affected the emergence of wetlands by regulating water-level, leading waste water and nutrients into the water system, dredging, reaping, and by keeping cattle in pasture in coastal areas. Man's actions and natural invasion have deteriorated the state of many bird wetlands. Without active restoration, a large part of wetlands will be invaded by plants and turn into swamps within a few decades. The amounts of water birds and waders nesting and resting during migration can be substantially increased through active restoration.

During the project, flood meadows were restored by clearing trees and bushes, and by reaping, crushing and cutting cane-grass. Altogether 161 hectares of open area with low growth was created for waders and water birds. This procedure was carried out with an exterior contractor and special machinery.

After the basic restoration, the flood meadows have been taken into pasture use. With an appropriate pasture strain, the cows and sheep keep the vegetation of the meadows on a low level. The water-line still needs to be cleared with machines, because the cattle does not like to go to the wettest areas.

Some of the restoration procedures were carried out by organising voluntary camps in cooperation with WWF. In Medvastö and Pappilansaari camps, trees and bushes were cleared, and duckboards and a bird tower were built.

The moisture conditions in flood meadows were restored by decentralising ditches and making them flow through flood meadows. In addition, new open water areas were dug to the flood meadows invaded by plants. In Tuusulanjärvi, nesting patches were left between the Loutinoja spreading ditches for Black-headed gulls which then, after a decade, finally returned to the Natura area to nest.

Open water bog lakes were dug to the shore areas to provide a suitable living environment for insects which depend on wetland, such as the rare yellow-spotted whiteface (*Leucorrhinia pectoralis*).



Reijo Salminen/Kuvalitteri



Mikko Pöllänen/Kuvalitteri

SMALL PREDATOR TRAPPING

Small predators thrive at the perimeter of wetland, due to a profusion of nutrition. In addition to rodents and fish, predators also eat bird eggs, nestlings and even grown-up birds. Of our small predators, raccoon dogs and minks do not belong to the original Finnish fauna. They have spread to our country through farm runaways and plantation. Culling and reducing these species can help birds succeed in their nesting.

The game districts of Uusimaa and Kymi made hunting plans for the project areas, defining suitable hunting methods and procedures. The intensive hunting focused on February-April. Minks were hunted with iron traps and raccoon dogs with hidden snares underground and with traps which leave the animals alive. All traps were checked on a daily basis. The hunting was carried out by local hunters and hunting clubs.

During the project, altogether 1310 raccoon dogs and 391 minks were trapped. The outcome was monitored by counting water bird and gull broods. Due to the small predator hunts, nesting was more successful in the hunting areas.



WETLAND BIRDS



Black-headed Gull



Northern Shoveler



Grey Heron



Smew



Great Crested Grebe



Reed Warbler



Bittern



Wood Sandpiper



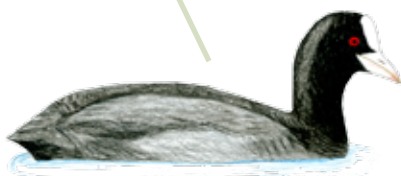
Ruff



Vilma Rätty



Sedge Warbler



Coot



Common Teal



MONITORING

The effect of restoration work on birdlife in these areas was followed up with extensive counts. The birdlife counts were carried out as the project started in autumn 2003 and spring 2004, and again at the end of the project in autumn 2006 and spring 2007.

The birds which favour open meadows as their living environment were sensitive to change. In several target areas, the amount of species and individual birds, especially the amount of waders resting during migration, increased significantly due to the restoration of flood meadows. The accumulation of water birds during migration also increased significantly. At its best, the amount of dabbling duck individuals became tenfold as a result of the restorations. Several species nesting in the flood meadows, such as lapwing and common redshank, increased.



The effect of management procedures on vegetation and habitat type was monitored with aerial photographs. The aerial photographs were taken in late summer 2004–2006. The air views show extensive changes in the open flood meadows which are dominated by common reed and belong to the category of transition mires and coastal swamps. Pattern-based vegetation monitoring was carried out in Laajalahti and Medvastö where the effect of mowing and grazing on the flora of the Boreal Baltic coastal meadows was monitored.



Vilma Rätty



Riitta Ilvonen

Insect monitoring was carried out to determine how management procedures might have short term effect on the nutrition network and biological values as well as the insect species living in wetlands. Insect monitoring focused on yellow-spotted whiteface. In the project, the viability of the populations was improved by dredging small dragonfly bog lakes. The insect monitoring showed that yellow-spotted whiteface and many other dragonflies began to inhabit these bog lakes faster than anticipated.



Esa Korkkämäki



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Vilma Rätty



Vilma Rätty



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Vilma Rätty



Vilma Rätty



Vilma Rätty

BIRD TOWERS AND SIGNS

Building bird towers is a central element in managing recreation activities in wetlands. Towers which are well located enable versatile bird-watching and prevent unnecessary movement in areas where people may disturb nesting. Access to bird towers has been facilitated by building duckboards which lead to them. For drivers, parking lots have been built in Pernajanlahti, Saltfjärden and Medvastö.

Altogether 14 bird towers or viewing platforms were erected during the project:

- **Smedjeviken bird tower in Medvastö, Kirkkonummi**
- **Otaniemi bird tower in Laajalahti, Espoo**
- **Linturanta bird tower in Tuusulanjärvi, Järvenpää**
- **Koskenmäki bird tower in Tuusulanjärvi, Tuusula**
- **Purolahti bird tower in Vanhankaupunginlahti, Helsinki**
- **Viikinoja platform, Helsinki**
- **Ruskis bird tower in the northern meadow, Porvoo**
- **Baggnäs bird tower, Pernaja**
- **Saltfjärden bird tower, Kirkkonummi**
- **Jaalanlahti bird tower in Pyhäjärvi, Jaala**
- **Mukulanlahti bird tower in Pyhäjärvi, Iitti**
- **Kirkon-Vilkkiläntura bird tower in Kolsinpohja, Virolahti**
- **Pappilansaari-Lupinlahti bird tower, Hamina**
- **Salminlahti bird tower, Kotka**

Joukon polku in Tuusulanjärvi, the Ruskis nature trail in Porvoo, the Pappilansaari nature trail in Hamina, and the renewed Sikosaari nature trail in Porvoo present wetland management and versatile nature to the visitors. Main map guides have been erected into all project areas, providing information on the nature, use, history and services of the area.



Vilina Rāty



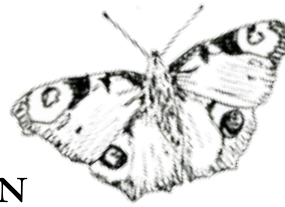
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ENVIRONMENTAL EDUCATION

Environmental education methods which are experience-based and suitable for wetlands were developed together with teachers and nature guides. As a result of ideas by four workshops, the guidebook *Retkelle kosteikkoon* was created. The book contains excursions plans for various age groups, articles on nature guidance and methods, and information on the diverse nature in wetlands. As support material for the *Retkelle kosteikkoon* book, a video was shot on wetland fieldtrips of nursery groups, elementary school pupils and juveniles.

Wetland cards were developed for nature education to be used both indoors and during fieldtrips, for comprehensive school. The colourful and laminated cards presented flora and fauna in bays and shallow fertile lakes, and also their various stages of development. Each card describes the living environment of the species in the wetland, its nutriments, and its enemies. Additional information on the wetland species and the use of the cards was collected in the teacher's booklet.

A poster of wetland birds specified by the directive was designed together with BirdLife Finland. The poster has been printed in Finnish, Swedish and English, and it has been distributed extensively to comprehensive schools, to nature schools and to project partners.







COOPERATION PARTNERS AND CONTRIBUTORY FUNDING

Beneficiary

Uusimaa Regional Environment Centre

Main cooperation partner

Southeast Finland Regional Environment Centre

Cooperation partners

Metsähallitus

Finnish Environment Institute

City of Helsinki

City of Espoo

Central Uusimaa regional water protection council

Uusimaa Game Management District

Uusimaa Road Administration District

WWF

BirdLife Finland

Kymi Game Management District

SE Finland Road Administration District

Contributory funding provided by

City of Järvenpää

City of Porvoo

Municipality of Tuusula

Municipality of Pernaja

Municipality of Kirkkonummi

Eastern Uusimaa Regional Council

Fingrid Oyj

Society of Swedish Literature in Finland

SE Finland Employment and Economic Centre

Kymenlaakso Regional Council

Kouvola Regional Council

City of Hamina

City of Kotka

Municipality of Iitti

Municipality of Jaala

Municipality of Virolahti

PROJECT IN NUMBERS



Plans and reports

Plans for management and use 10 pcs
Birdwatch reports 12 pcs
Vegetation briefs 3 pcs
Insect survey reports 2 pcs
Technical plans 5 pcs

Restoration and management

Mowed 161 hectares
Cleared trees and bushes 87 hectares
Dredged open water areas 58 000 m³
Pastures founded 177 hectares
Ditches closed 3km
Insect bog lakes founded 40 pcs
Small predators trapped 391 minks and
1310 raccoon dogs

Monitoring

Counts of nesting birds 324 days
Brood counts 21 days
Counts of migrating birds 610 days
Bird counts in total 955 days
Insect surveys 73 days

Communication

Project brochure in three languages
3400 copies
Retkelle kosteikkoon book 2000 copies
Kumpparit jalkaan video 100 copies
Wetland cards 500 bundles
Wings over the Wetlands poster in three
languages 12500 pcs
Published newspaper articles 86 pcs
Public events 18 pcs
Briefings 28 pcs

Infrastructure

Bird towers 14 pcs
Nature trails 6 pcs
Main map guides 31 pcs
Nature trail boards 35 pcs
Parking lots 4 pcs