



Houting - Urgent actions for the endangered Houting "Coregonus oxyrhynchus"

LIFE05 NAT/DK/000153



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Project description:

Background

The houting (*Coregonus oxyrhynchus*) is an endangered species of European whitefish, in the Salmonidae family. It lives in salt water but spawns in freshwater (anadromous), and is vulnerable to relatively small habitat disturbances. It was previously distributed throughout the Wadden Sea (the Netherlands, Germany and Denmark) but it has declined severely and is now restricted to just a few rivers in Denmark. One of the main impediments to successful reproduction is the presence of even small obstacles in rivers during the spawning migration, as the houting is unable to pass weirs or make use of fish ladders. Silting of spawning grounds is also a severe problem. Furthermore, juvenile houting require large areas of reed beds or flooded meadows, where they forage for several months prior to migrating to the sea. Previous restocking attempts in Denmark have failed, because they were not followed up by habitat restoration.

Objectives

The overall objective of the LIFE project was to restore and maintain a favourable conservation status for the threatened houting in four Danish river systems. Specific objectives included the removal of weirs and dams in those river systems; the construction of riffles or meanders in order to facilitate upstream

migration; and the decommissioning of two hydroelectric power plants and four fishfarms. The project partners restored river sections with gravel and stone, created new spawning grounds and flooded areas adjacent to the river. The project was implemented in broad cooperation between a number of stakeholders including local and regional authorities, land and fishfarm owners, a regional angling society, and owners of hydrological installations. The project also explored the possibility of reintroducing houting into other parts of its previous distribution range within the EU.

Results

The Houting project removed a number of man-made barriers for migration, and restored meanders, spawning grounds and shallow wetlands in four Danish river systems (Varde, Sneum, Ribe and Vidå); in the only remaining area in the world still with a population of houting. This was done with the aim of restoring a viable population of this species within Natura 2000 areas and achieving favourable conservation status for houting in Denmark.

The project implemented the National Action Plan for North Sea Houting, elaborated in 2003 to meet Denmark's obligations regarding this Habitats Directive Annex II priority species. As a result of the project, migratory fish have gained access to an additional 130 km of river and two Natura 2000 sites have been enlarged with restored river stretches and wetlands.

During the project, barriers for fish migration were removed at eight fishfarms, two hydro-electric dams and one former mill pond. River water intake was also significantly reduced for other fishfarms. The LIFE project demonstrated practical river system restoration, based on compensation payments to fishfarm and land owners, the voluntary selling of land and rights, and state-of-the-art technical solutions.

On the River Varde, 15.5 km of highly degraded river was restored with gravel and stone, creating more than 20 km of naturally meandering river with a natural hydrological regime, to favour upstream fish migration. Approximately 29 ha of natural river habitat was restored, including approximately 2 ha of spawning grounds for salmonids. Along the Rivers Sneum and Vidå, 114 ha of shallow water lakes were created using a combination of changes to hydrology and construction work, as nursery areas for houting fry, while 46 ha of wet meadows were also created. In the case of the Vidå, houting can now reach stretches of the river that have not been accessible for 400 years.

Monitoring of the houting's genetics and population dynamics, together with studies of houting fry survival in restored nursery areas, led to the conclusion that supplementary breeding programs need not be conducted at present; the population could be allowed to grow naturally.

The Houting project had a positive effect on many other components of the river ecosystems, including the conservation status of the Habitats Directive Annex I river habitat: Water courses characterised by *Ranunculus fluitans* and *Callitriche-Batrachion* communities. It resulted in improved access to areas of spawning habitats for other anadromous Habitats Directive Annex II fish species, such as indigenous populations of Atlantic salmon (*Salmo salar*), Twaite shad (*Allosa fallax*), species of lamprey (*Lampetra sp.* and *Petromyzon marinus*) and

the only population of weather loach (*Misgurnis fossilis*) in Denmark, as well as improved habitat conditions for other Annex II species, including freshwater pearl mussel (*Margaritifera margaritifera*) and otter (*Lutra lutra*).

Another environmental benefit resulted from the reduced nutrient loads reaching the coastal area of the Wadden Sea. This will assist in meeting EU Water Framework Directive objectives, by helping to restore the physical quality and natural water regime of four river systems.

The value of the restored sites for recreation has been increased, for recreational freshwater fishing as well as coastal fisheries for trout and salmon, as the potential for production in the rivers has increasing.

Finally, the experience gained and recommendations made during the project, which have been disseminated widely via conferences, study visits and other activities, could prove valuable for the reintroduction of houting in other parts of its natural distribution area, for example, in Germany and the Netherlands.

Further information on the project can be found in the project's layman report (see "Read more" section).

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Environmental issues addressed:

Themes

Species - Fish

Habitats - Freshwater

Water - River basin management

Keywords

endangered species, migratory species, protected area, river, emergency plan, restoration measure

Target EU Legislation

- Nature protection and Biodiversity
- Directive 92/43 - Conservation of natural habitats and of wild fauna and flora- Habitats Directiv ...

Target species

Coregonus oxyrhynchus

Target Habitat types

- 3150 - Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation
- 3260 - Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation

Natura 2000 sites

SCIDK009X182 Vidå med tilløb, Rudbøl Sø og Magisterkogen
 SCIDK00AX175 Nørholm Hede, Nørholm Skov og Varde Å øst for Varde
 SCIDK00AX177 Sneum Å og Holsted Å
 SCIDK00AY176 Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde

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Beneficiaries:

Coordinator	Danish Nature Agency, Waddensea (Naturstyrelsen, Vadehavet)
Type of organisation	National authority
Description	The Danish Nature Agency is an agency within the Danish Ministry of Environment. It is responsible for the administration of national policies and legislation concerning protection, management and restoration of nature, open-air recreational activities, hunting and forestry. The agency manages the state forest areas and other publicly owned nature and agricultural areas, in total around 190,000 ha.
Partners	Ribe County, Denmark Sønderjylland County, Denmark

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Administrative data:

Project reference	LIFE05 NAT/DK/000153
Duration	01-FEB-2005 to 31-DEC -2012
Total budget	13,385,913.00 €
EU contribution	8,031,548.00 €
Project location	Sønderjyllands amt(Danmark) Ribe amt(Danmark)

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Read more:

- Leaflet Title: "Genopretning af Varde Å-systemet" (429 KB) Year: 2005 Editor: RIBE AMT No of pages: 5
- Leaflet Title: The Houting Project Year: 2013 Editor: Danish Forest and Nature Agency No of pages: 2
- Newsletter Title: "Genopretning af Varde Å" (65.4 KB) Year: 2006 Editor: RIBE AMT No of pages: 1
- Newsletter Title: "Genopretning af Varde Å" (45 KB) Year: 2007 Editor: Miljøministeriet Naturstyrelsen No of pages: 2
- Project web site [Project's website](#)
- Publication: Case study Title: "Delprojekt : Genopretning af Varde Å : Projektbeskrivelse" (2.31 MB) Year: 2005 Editor: Miljøministeriet Naturstyrelsen No of pages: 25
- Publication: Case study Title: "Etablering af vådområde langs Vidå i Nørresø og Hestholm Kog - projekt" (475 KB) Author: Lene Kristensen, Helle K. Jespersen Year: 2008 Editor: Miljøministeriet, Skov- og Naturstyrelsen, Vadehav No of pages: 28
- Publication: Case study Title: "Etablering af faunapassage ved Bachmanns Mølle : Projekt" (977 KB) Author: Lindet State Forest, Lene Kristensen, Helle Jesper Year: 2007 Editor: Miljøministeriet, Skov- og Naturstyrelsen, Lindet No of pages: 28
- Publication: Case study Title: "Faunapassage ved Stampemøllen i Ribe : Projektforslag" (16.1 MB) Year: 2011 Editor: Skov- og Naturstyrelsen, Vadehavet No of pages: 74
- Publication: Layman report Title: Layman report Year: 2012 No of pages: 20
- Publication: Research findings Title: "Projektforslag for Sneum Å for strækningen : Størsbøl - Golfbanen" (7.66 MB) Author: Jimmy Teilmann, Ole Schacht Year: 2010 Editor: Skov- og Naturstyrelsen, Vadehavet No of pages: 52
- Publication: Technical report Title: "Etablering af faunapassage ved Rens Dambrug" (663 KB) Author: Lindet State Forest / Lene Kristensen et Helle Je Year: 2007 Editor: Miljøministeriet Naturstyrelsen No of pages: 24
- Publication: Technical report Title: "Naturgenopretning Hjortkær : Fiskeri - Projektering" (3.14 MB) Year: 2009 Editor: Skov- og Naturstyrelsen, Vadehavet No of pages: 58

- Publication: Technical report Title: "Faunapassage ved Endrup Mølle Dambrug" (3.92 MB) Author: Naturstyrelsen, Esbjerg Kommune Year: 2011 Editor: ALECTIA No of pages: 52
- Publication: Technical report Title: "Naturgenopretning Bramming : Fiskeri – Alternativt Projekt" (1.14 MB) Year: 2009 Editor: Skov- og Naturstyrelsen, Vadehavet No of pages: 48
- Publication: Technical report Title: "Naturgenopretning Gørding Mølle Dambrug : Projektering" (389 KB) Year: 2008 Editor: Skov- og Naturstyrelsen, Vadehavet No of pages: 28
- Publication: Technical report Title: Project's Final technical report Year: 2013 No of pages: 57
- Publication: Technical report Title: "Gel A ved Gelsbro Dambrug : Skiseprojekt for faunapassage" (1.95 MB) Year: 2010 Editor: Orbicon No of pages: 56
- Video link [Project's video \(28'\)](#)
- Video link [Project's video \(28'\)](#)

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