



Skjern River - Restoration of habitats and wildlife of the Skjern River

LIFE00 NAT/DK/007116

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Project description:

Background

Skjern River in western Jutland is, in terms of water flow, the largest river in Denmark, with a catchment area of 250,000 ha. At the mouth of the river, there was once a huge expanse of marshland (4,000 ha) harbouring a mixture of wetland habitats: meadows, reed-swamps, meandering watercourses, fens and shallow lakes. This was a real heaven for wildlife: in addition to the thousands of migrating birds who used it as a stopping over point along the Western Palaearctic flyway there were also stable breeding populations of bittern (*Botaurus stellaris*), black tern (*Chlidonias niger*) and corncrake (*Crex crex*). Other species such as the otter and Atlantic salmon were also relatively common. But all of this was virtually destroyed following a relentless campaign of land reclamation and river canalisation in the 1960s. This was the last major reclamation activity in Denmark. At first, arable crops were fairly successful, providing some income from the newly created fields. But, as time went on, these revenues began to diminish rapidly despite the large quantities of fertiliser used (which ended up polluting the Ringkøbing fjord), and because of soil collapse of arable land. The land was simply not up to sustaining such intensive activities. In 1987, the Danish Government decided to launch a major strategy for marginal lands e.g. farmlands of poor quality and high maintenance requirements in areas which used to be of high conservation value. The overall intention was to restore these to their former natural state and to introduce more compatible land uses such as extensive grazing or recreational activities. The Skjern River was to be the showpiece of this strategy.

Objectives

The preparation of a new land use plan for the area was funded through a

previous LIFE- Environment project. The part involving restoring areas of conservation value for the Natura 2000 network was to be carried out under this LIFE-Nature project. The main objective was to restore 875 ha of the river valley and to improve biological diversity over 1,600 ha by re-introducing grazing. To rectify poor physical conditions in the riverbed and its tributaries (due to channeling), heavy-duty construction works would be undertaken to re-meander the river along a more natural course over a stretch of 20 kms and thus reestablish its capacity for self-purification. Once this was done, appropriate management measures were to be devised and introduced to encourage the return of the wide array of birds and other animals that used to use the area. The targets were as follows: • Improve the living conditions for bird species listed in Annex I of the Birds Directive, such as *Recurvirostra avosetta*, *Philomachus pugnax*, *Sterna sandvicensis*, *Chlidonias niger*, *Sterna hirundo*, *Circus aeruginosus*, *Alcedo atthis* and *Porzana porzana*. • Create possibilities for priority bird species, *Crex crex* and *Botaurus stellaris*, to re-establish breeding in area. • Improve the conditions for migrating birds in the Palearctic flyway, in particular *Anser brachyrhynchus*. • Improve the conditions for the Annex I habitats and the Annex II species, as well as for a number of animal species in Annex IV of the Habitats Directive. • Improve the spawning grounds and the possibilities for migration of the wild Atlantic salmon (*Salmo salar*).

Results

The main project objectives with regard to the restoration of wetland habitats have been reached and the expected nature conservation benefits have been met. The construction of more than 20 km of new riverbeds in the eastern part of the project site has been successfully carried out. By the end of project, about 1,200 ha of grassland were established, which was less than originally foreseen (1600 ha). The reason is that the restoration work finally resulted in increased areas of wetland and shallow lake areas. However, these extended areas of wetland will benefit important species like the Spotted Crake, Avocat and Bittern and consequently lead to more enhanced nature conservation. The targets set up at the start of project for the site to qualify for SPA status were met, as follows: - In 2002, *Botaurus stellaris*, 4 pairs were breeding; *Recurvirostra avosetta*, 85 pairs; *Sterna hirundo*, 1 pair, *Porzana porzana*, 7-9 pairs, *Philomachus pugnax*, increased number of migrants. In 2000, there were no pairs of any of these birds. - In 2002, the area had become a roosting locality for *Anser brachyrhynchus* (1,780 individuals in spring 2003 and around 2,000 individuals in autumn 2002 and 2003) with 0.7 % of European winter population (> 290,000 individuals). Therefore, the restored wetlands reached the qualifying interests for SPA designation by the end of the project. The official designation of the new SPA took almost two years and was finally successfully completed in August 2006. Overall, most of the expected environmental and nature conservation objectives were met during the project, except for the expected result concerning nutrient retention, which was still only around 10% at project end. With regard to flooding, the project was elaborated so as not to increase the risk of this happening outside the area, which might have negative effects on the drainage of farmland. The monitoring results have indicated a water-level increase inside the area but no negative impact outside. A new shallow lake, Hestholm Lake, of around 5 km² was created. Furthermore, there are potential synergies with previous LIFE-Nature projects aimed at the restoration of wetlands along the

western coast of Jutland and the Palaearctic flyway, i.e. the Vest Stadil Fjord project in operation 1997-2001 and the restoration project at Varde River/Wadden Sea, 1999-2003. The project has also benefited some plant and animal species listed on Annex II of the Habitats Directive, such as water plantain (*Luronium natans*, which has spread over large parts of the project site), the otter and the local salmon stock of Skjern River. A management plan for the long-term sustainability of the site, over the period 2005-2020, was elaborated during the project. A proposal for establishment of the Skjern River National park was sent to the Danish Minister of the Environment. This was the result of a joint long-term initiative involving the project's beneficiaries, municipalities and local/regional NGOs. Progress with regard to the establishment of the national park is expected by the end of 2006. For the long-term sustainability of the project's results, especially with regard to birdlife, it is essential that the wetland and meadow area are grazed. This includes Kalvholm Island, which is situated between the northern and southern branches in the outlet area of the river. For the transport of cattle to this island, a special barge was constructed, which was the only one of its kind in Denmark. During the project, recreation facilities were established in the project area. The site has attracted an increased number of visitors and by the end of the project the beneficiary estimated that 350,000-400,000 people had attended the site. With the system of 17.4 km of trails and 3 observation towers or hides, financed by the project, large parts of the project sites and its birdlife are accessible without any disturbing impact. Compensations to private landowners to allow for public access were paid by the project (approx. €20,000). An analysis by the Royal Danish Agricultural University in 2002, concluded that the projects along the Skjern River are beneficial at an interest of 5 % or less on a 20 year time scale, and on an infinite time scale even at 7 %, i.e. a good public investment. It was also stated that the overall cost of the project (which is substantial) will be more than compensated for by the local economic opportunities generated through this work. Even if the criteria used for the analysis have the subject of some debate, the study nevertheless deserves credit as a model for this kind of analysis. It clearly demonstrated that investments in nature conservation and restoration have a potential to be beneficial long-term also from the economic perspective, and that it may be too one-sided to consider just the cost of Natura 2000 without considering the financial benefits that may be incurred as well.

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Environmental issues addressed:

Themes

Habitats - Freshwater

Risk management - Pollution control

Industry-Production - Agriculture - Forestry

Keywords

sustainable development, development planning, pollution prevention, agricultural pollution, indicator, evaluation method, pollutant elimination, rural development, touristic zone, land restoration, restoration measure, water resources management, flood protection, diffuse pollution, conflicting use, management contract, river management, drainage system, aquatic ecosystem, ecotourism, environmental impact of agriculture, environmental impact of tourism, eutrophication, freshwater ecosystem, grassland ecosystem, grazing, lake, land use planning, migratory species, monitoring, renaturation, wetlands ecosystem, site rehabilitation, hydrographic basin, water quality improvement, integrated management, tourist facility, policy integration, public-private partnership

Target EU Legislation

- Water
- Directive 2000/60 - Framework for Community action in the field of water policy (23.10.2000)
- Nature protection and Biodiversity
- Directive 79/409 - Conservation of wild birds (02.04.1979)
- Directive 92/43 - Conservation of natural habitats and of wild fauna and flora- Habitats Directiv ...
- Decision 93/626 - Conclusion of the Convention on Biological Diversity (25.10.1993)
- COM(95) 189 - "Communication on the judicious use and conservation of wetlands" (12.12.1995)
- COM(98)42 -"Communication on a European Community Biodiversity Strategy" (05.02.1998)
- COM(2001)162 -"Biodiversity Action Plan for the conservation of natural resources (vol. I & II)" ...

Target species

Botaurus stellaris Calidris alpina schinzii Crex crex Luronium natans Salmo salar

Target Habitat types

- 1150 - Coastal lagoons
- 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

SCI DK00CY163 Ringkøbing Fjord og Nymindestrømmen

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Beneficiaries:

Coordinator	Skov- og Naturstyrelsen, Danish Forest and Nature Agency
Type of organisation	National authority
Description	The beneficiary is an agency under the Danish Ministry of Environment and Energy. It is responsible for the administration of national policies and legislation concerning the protection, management and restoration of nature, as well as for cultural heritage, open-air activities, hunting and forestry. This includes the national implementation of the Birds and Habitats Directives, as well as other international agreements ratified by Denmark. The agency manages state forest areas and other publicly-owned land, in total around 185,000 ha. It has a central administration and 25 regional State Forest Districts. This particular LIFE project is managed by the Oxbøl State Forest District.
Partners	National Environment Research Institute (NERI)

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Administrative data:

Project reference	LIFE00 NAT/DK/007116
Duration	01-JAN-2001 to 31-DEC -2004
Total budget	7,357,210.00 €
EU contribution	2,207,163.00 €
Project location	Ringkøbing amt(Danmark)

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Read more:

Brochure	Title: The Skjern River - history of the river valley, major projects, the new landscape and the nature, visiting the valley. Year: 2004 Editor: Danish Min. Environ., Forest and Nature Agency No of pages: 56
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Project web site

[Project web site](#)

Publication: Book

Title: Drift- og plejeplan for Skjern Enge - vest (management plan, in Danish) Author: Lisborg, N.D. Year: 2004 Editor: Skov- og Naturstyrelsen, Oxbøl Statsskovdistrikt No of pages: 34

Publication: Book

Title: Drift- og plejeplan for Skjern Enge (management plan, in Danish) Author: Lisborg, N.D. Year: 2005 Editor: Skov- og Naturstyrelsen, Oxbøl Statsskovdistrikt No of pages: 39

Publication: Book

Title: "Restaurering af Skjern Å : sammanfatning af overvågningsresultater 1999-2003" (3.500 KB) Author: Anderson, J.M. (ed.) Year: 2005 Editor: Danmarks Miljøundersøgelser (DMU/NERI) No of pages: 100

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