



saline lagoons - Conserving saline lagoons & their birds on ten Natura 2000 sites in England

LIFE99 NAT/UK/006086



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Project description:

Background

Saline lagoons are a priority habitat under the Habitats Directive and now total just 1300 hectares within the UK. They are subject to ongoing degradation and loss through natural and man-induced processes. Threats include development pressure, pollution, erosion, disturbance and disruption to salinity and water exchange processes. Saline lagoons also provide nesting sites for internationally significant concentrations of terns (*Sterna* spp.) and gulls (*Larus* spp.) and feeding and roosting sites for migrant populations of waders and wildfowl. Breeding populations of the avocet, *Recurvirostra avosetta*, an Annex I bird, are virtually confined to this habitat in the UK. Threats specific to the bird populations present on the sites include vegetation encroachment, erosion, predation and human disturbance. Because of the importance of the habitat, a saline lagoons action plan has been established as part of the UK's Biodiversity Action Plan. The aim of this LIFE project was to give a significant initial boost to the plan by maintaining and enhancing the conservation of saline lagoons and their birds on 10 English Natura 2000 sites.

Objectives

The aim of this LIFE project was to give a significant initial boost to the saline lagoons action plan established as part of the UK's Biodiversity Action Plan.

Thus, through collaboration with public agencies, the project aimed to maintain and enhance the conservation of saline lagoons and their birds on 10 English Natura 2000 sites. Specific threats to saline lagoons and their bird species were to be addressed by bank protection works, control of silt deposition and water levels, re-profiling/maintaining nesting islands, control of encroaching vegetation and predator populations and restriction of human access. This work would be supported by the revision and production of management plans for ten sites, and by the widespread dissemination of information and the publication of best practice guidelines. The necessary monitoring systems required to assess the short- and long-term effectiveness of measures taken were also to be implemented at all sites.

Results

The project aimed to address threats to the integrity of a suite of existing lagoons and the species they support. The project partners used a range of techniques to ensure the continued existence of the lagoons, manage salinities and water levels and manage the habitats used by nesting birds. The project achieved all its objectives and improved the conservation status of all 31 lagoons within the 10 sites in the project (covering 180 ha). This represents about 25% of the resource in England and is a significant contribution to the saline lagoon resources within the Natura 2000 network and in particular to the UK Habitat Action Plan for saline lagoons. The project also had a clear link to the UK Biodiversity Action Plan for lagoons. The UK BAP sets twin goals: firstly to maintain and enhance the current number, area and distribution of saline lagoons (part of this project) and secondly to create sufficient lagoon habitat by 2010 (700 ha) to offset the losses of the past 50 years (38 English lagoons were lost in the 1980s alone). Three UK BAP priority species were sustained by the project's actions: starlet sea anemone (*Nematostella vectensis*), lagoon sand shrimp (*Gammarus insensibilis*) and foxtail stonewort (*Lamprothamnium papulosum*). The delivery of project objectives raised some innovative management concepts – for example, the use of grazing to manage lagoon margins, the concept of fallowing parts of low-salinity lagoons in order to raise nutrients, and the use of flushes of water to dredge tidal creeks of accumulated silt. In addition to addressing the threats to the saline lagoons, the partnership helped to raise public awareness of their importance. Approximately 500,000 people visited the project sites each year. A brochure explaining the importance of coastal lagoons was published for distribution at all sites. All project sites will be monitored. This will allow the key indicators of good condition to be assessed in the future. These will include stable salinities within accepted target levels, changes in populations of specialist lagoon species, biomass of prey invertebrates, and populations and productivity of breeding Annex 1 bird species. The main publications are the manual 'Saline lagoons: a guide to their management and creation', proceedings of the final workshop, and the publication of 'A practical guide to the management of saline lagoons'. This is based on project experience with case studies. The project catalysed interest in developing further projects to conserve priority lagoon habitat at other locations. The final seminar helped to launch develop future conservation initiatives. Summing up, the project increased knowledge (particularly the importance of lagoon fauna), undertook initial practical restoration actions on a significant number of lagoons and shared its experiences. The saline lagoon habitat at all

sites is now more secure from the threats that faced it, and the lagoons are generally in more favourable condition for the designated interest. Numbers of key birds nesting at project sites have also increased overall through the project, and the status of known lagoon specialist species is stable or improved. The understanding of the management issues facing saline lagoons and the solutions to them has increased and has been incorporated into the best practice guidebook. The project did not focus exclusively on pSCIs notified for priority habitat lagoons. Islands in saline lagoons provide nest sites for *Sterna albifrons* as they are normally inaccessible to predators and people. Other Annex 1 birds supported by lagoons include spoonbill (*Platalea leucorodia*), Mediterranean gull (*Larus melanocephalus*), Sandwich tern (*S. sandvicensis*) and common tern (*S. hirundo*) – all of which nest in this habitat – and bittern (*Botaurus stellaris*), which feed where lagoons are edged with reeds. The project also worked at SPA sites where *Recurvirostra avosetta* is the primary interest. Avocets are virtually confined to saline lagoons as a breeding bird in the UK. They nest on sparsely vegetated islands within lagoons and feed on the dense mass of invertebrates found in the water column and the sediment. This double objective has led to interesting conclusions. It is possible to manage lagoons for birds or for assemblages of specialised invertebrates but difficult to do both (this is a challenge for the future). Results of the project also show that it is easier to conserve the interests of lagoons where a series of lagoons are found in close proximity. A range of salinities and depths can be maintained and the risks of a single catastrophic incident are reduced. Where current biodiversity values are high the view developed by the project is to leave well enough alone as the colonisation of lagoons is still insufficiently understood. However, wherever possible new lagoons should be created on new sites, rather than making alterations to existing sites. The best practice guide developed by the project helps managers to prioritise the importance of a lagoon based on its species assemblage. One conclusion of the project was that in a suite of lagoons it is actually useful to have some of the lagoons outside the Natura 2000 site so that these can be ‘sacrificial’ sites where any excess freshwater can be pumped. In the UK too much freshwater is a current threat. However, there is also growing interest in low-salinity lagoons as a habitat. Recognising coastal change as inevitable in many areas (as addressed by the Living with the Sea LIFE project), lagoons will still be classed as ‘favourable’ if changes are due to natural causes but ‘unfavourable’ if changes are the result of coastal works.

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Environmental issues addressed:

Themes

Species - Birds

Habitats - Coastal

Keywords

endangered species, protected area, biodiversity, coastal area, public-private partnership

Target EU Legislation

- 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(2001)162 -"Biodiversity Action Plan for the conservation of natural resources (vol. I & II)" ...
- 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)

Target species

Recurvirostra avosetta Sterna albifrons Sterna hirundo Sterna sandvicensis

Target Habitat types

- 1150 - Coastal lagoons
- 1310 - Salicornia and other annuals colonizing mud and sand
- 1330 - Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

Natura 2000 sites

SPA	UK9006111	Humber Estuary
SPA	UK9008021	The Wash
SPA	UK9009031	North Norfolk Coast
SPA	UK9011031	New Forest
SPA	UK9011061	Solent and Southampton Water
SCI	UK0017075	The Wash and North Norfolk Coast
SCI	UK0019838	North Norfolk Coast
SCI	UK0030059	Solent Maritime
SCI	UK0030170	Humber Estuary

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Beneficiaries:

Coordinator	Royal Society for the Protection of Birds
Type of organisation	NGO-Foundation
Description	Royal Society for the Protection of Birds RSPB is a charity registered under English law. The RSPB is the UK's foremost authority on the conservation of birds and their environment. RSPB is also the UK partner for BirdLife International. In the UK the RSPB owns and manages land and seeks to influence land use practices and governmental policies. RSPB manages 168 nature reserves and has over 1 million members.
Partners	Hampshire County Council Havant Borough Council

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Administrative data:

Project reference	LIFE99 NAT/UK/006086
Duration	01-APR-1999 to 31-MAR -2003
Total budget	1,364,840.52 €
EU contribution	682,419.50 €
Project location	Yorkshire and Humberside(United Kingdom),East Anglia(United Kingdom),South East (UK)(United Kingdom)

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Read more:

Brochure	Title: Lymington-Keyhaven Nature Reserve Author: Hampshire County Council Year: 2003 Editor: Hampshire County Council
Brochure	Title: Coastal lagoons; why are they important? Author: RSPB Year: 2003 Editor: RSPB
Publication: Guidelines-Manual	Title: A practical guide to the management of saline lagoons Author: RSPB Year: 2004 Editor: N C Symes & P A Robertson (eds) No of pages: 90
Publication: Guidelines-Manual	Title: Saline lagoons: a guide to their management and creation (interim version) Author: English Nature Year: 2001 Editor: R N Bamber, P M Gilliland and M E A Shardlow No of pages: 95

Publication: Proceedings

Title: Managing coastal saline lagoons
-Proceedings of a seminar RSPB Author: RSPB
Year: 2004 Editor: N C Symes (ed) No of
pages: 75

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