

Conservation of endangered species and habitats in the Secovlje Salt-pans National Park - SI

1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Preserving coastal environment (its functioning and integrity) to share space
- SUSTAINABLE USE OF RESOURCES: Sound use of resources and promotion of less resource intensive processes/products

2. Key Approaches

- Participation
- Ecosystems based approach
- Socio-economic
- Technical

3. Experiences that can be exchanged

The restoration actions and results could serve as demonstration examples for similar ecosystems.

4. Overview of the case

Degraded salt pans have led to a loss of biodiversity from these species rich habitats. In order to re-vitalise the salinas, make them functional, create jobs and improve breeding habitats of listed bird species, measures were taken to restore them.

5. Context and Objectives

a) Context

Salt production was, in past centuries, one of the main commercial activities for people living along the 46 km long Adriatic coast of Slovenia. Today however, this labour-intensive activity has become too costly and most 'salinas' (salt-pans) have been abandoned or are no longer used. The Secovlje Saltworks are the most northerly saltworks still in operation in the Mediterranean. It covers around 650 hectares in the extreme south-west of Slovenia, next to the border with Croatia in the southern part of the Piran Municipal District. Secovlje Salina Nature Park (KPSS), designated in 1990, is considered as one of the most important natural and cultural heritage areas along the Adriatic coast in Slovenia and listed as part of the Natura 2000 ecological network. These salt-pans are on the estuary of the Dragonja river and among the few remaining, active salinas. In one of the two areas that make up the site, Fontanigge, salt production was abandoned a few decades ago. But, it is still produced in the second area, Lera. In common with the majority of the other coastal salinas in the Mediterranean, the Secovlje salt-pans are used as breeding habitats by several species of gulls, terns and waders listed in Annex I of the Birds Directive. The Secovlje salt-pans' site also harbours other important habitats types listed in Annex I of the Habitats Directive, such as mudflats and sandflats not covered by seawater at low tide.

However, lack of management and maintenance of dykes and embankments due to financial constraints in the past, together with intensive external pressures on the area: predominantly the tourism sector which is considered as one of the major threats for biodiversity conservation. The costs of maintaining the natural heritage of the site are high. They involve the maintenance of embankments and dykes, in order to prevent uncontrolled flooding and changes in salinity, which would have a negative impact on the habitats and species present in the area. In the eyes of former managers of the area, the traditional salt-making process which is essential to support biodiversity was not considered profitable. The area was therefore partly

abandoned which resulted in uncontrolled flooding and degradation of the saline ecosystem.

b) Objectives

The main goal was to ensure effective protection of endangered habitats and species, which require particular management measures. Targeted habitats included: estuaries, mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand, *Spartina maritima*, Mediterranean salt meadows (*Juncetalia maritimi*), Mediterranean and thermo-Atlantic salt marshes and salt meadows (*Sarcocornetea fruticosi*). Targeted species included: *Knipowitschia cf. caucasica* and *Aphanius fasciatus* as well as 6 bird species (*Himantopus himantopus*, *Recurvirostra avosetta*, *Sterna hirundo*, *Sterna albifrons*, *Anthus campestris* and *Charadrius alexandrinus*) listed in Annex I of the Birds Directive.

6. Implementation of the ICZM Approach (i.e. management, tools, resources)

a) Management

The salt-producing company, Soline Pridelava soli d.o.o., is a privately-owned organisation. Under a government concession, the company is responsible for both the production of salt and for the management of the protected area (from July 2002).

b) ICZM tools

The main action comprised the restoration of the system of dykes and embankments where, due to lack of funds, maintenance had not been carried out in the last decades. Moreover, nesting islands were created, as additional breeding areas for terns, converting old structures originally built for a fish-farming plant which was never completed. Additional protected spaces for birds were provided by the creation of new channels along the boundaries of the salt-pans, thus reducing the possibility of human disturbance and mammalian nest predation. Information and awareness-raising material, including a newsletter and a film, were produced, in Slovenian and Italian, as the Secovlje salt-pans are located within a bilingual area. A management plan of the site was also elaborated with the involvement of regional representatives.

The following actions were successfully carried out:

- Elaboration of a site management plan for a 10-year period
- Restoration of the dykes and embankments: the dykes and embankments were restored, consolidated and regularly maintained. Some 2,000 m² of the most valuable habitat area was protected by the control of high tides and flooding; 5,000 m² of the area with low conservation value was transferred into potential new breeding areas for six bird species.
- Prevention of nest-predation: some 6,500 m of new edge channels were dredged and over 100 ha basins were surrounded by edge channels.
- Creation of substitute habitats: new small dykes, or sandy and floating islands were created, and beside the targeted bird species these attracted new species such as great flamingo (*Phoenicopterus ruber*) shelduck (*Tadorna tadorna*), redshank (*Tringa totanus*), avocet (*Recurvirostra avosetta*) and European bee-eater (*Merops apiaster*).
- Awareness activities to promote the nature conservation work among local people and to strengthen trans-boundary co-operation.

7. Cost and resources

The total budget was €714,440 of which there was a Life contribution of €357,220.

8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)

All the foreseen actions were carried out successfully. Although there were some delays due to unfavourable weather conditions, these did not affect the overall course of the work. The restoration of the dykes and the creation of sandy and floating islands has already resulted in improved ecological conditions for breeding birds and fishes e.g breeding pairs of common terns increased from 8 to 21 within three years; some bird species appeared for the first time in the region.

Dissemination and awareness activities were effective.

9. Success and Fail factors

The park management authority has continued with the maintenance and further developments in the area for the benefits of the wildlife and habitats.

10. Unforeseen outcomes

The restored area was included in the list of sites that the Slovenian government proposed for the Natura 2000 network. Restoration of the almost deserted salinas created new jobs: additional job opportunities occurred as a result of increased visitation of the restored Salinas and Nature Park.

11. Prepared by

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12. Verified by

It has not been possible to verify this case.

13. Sources

- Conservation of endangered species and habitats in the Sečovlje salt-pans (2006)
- Layman's Report LIFE03/NAT/SLO/000076
- www.kpss.si



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