

CASE STUDY: Rehabilitation and Restoration of Skocjanski Zatok

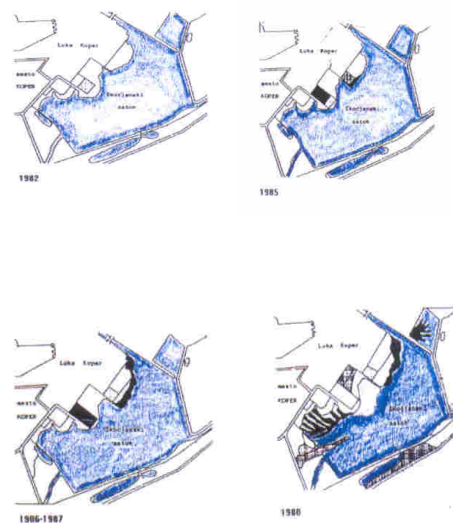
SECTOR: Holistic
COUNTRY: Slovenia

BACKGROUND

At the beginning of the construction of a 900-metre-long dyke stretching from the town of Koper to the spring of the Ri ana River turned the Skocjan bay into a lagoon (Slovene: zatok), the area covered 230 ha of water surface. Two small rivers flowing into the lagoon and an open exit to the sea provided for water exchange and for sufficient oxygen levels to allow rich bioproduction and a diverse flora and fauna. The mixing of salt and fresh water contributed to the creation of the largest brackish wetland in Slovenia; this specific character makes it important for the flora and fauna throughout the whole year. The wetland is home to endangered animal and plant species. The most interesting animals and plants from the environmental point of view are those that need half-salt waters for their development.

Skocjanski Zatok and its surroundings are characterised by an outstanding diversity; the area provides the home for 41% of all Slovene amphibians, 41% of all Slovene reptiles, 55% of all species of birds observed in Slovenia, and 36% of all mammals living in Slovenia. This diversity of animal and plant species is facilitated by different depths of the lagoon, and high diversity of habitats, marshy meadows, shoals, embankments, pools, rivers etc. Due to the immediate vicinity of the sea, the Mediterranean climate, the sub Mediterranean vegetation and also other factors Skocjanski Zatok is a peculiarity among Slovene eco-systems. The large area is covered by brackish water that unlike most stagnant waters in Slovenia and central Europe does not freeze, unless the winter is particularly hard. By changing the flow of the Badasevica river into the Koper Bay in the 80s and

by closing the left discharge stream of the Ri ana river, Skocjanski Zatok was left without the sources of fresh water that were supplying it with, among other things, oxygen. Later on the Port of Koper started to dry the lagoon with 286 thousand cubic metres of sludge which spread over the entire lagoon and destroyed the original bottom rich with nutrients. The number of bird species and of individual birds fell drastically. Today, the natural reserve area is to a large extent degraded, human intervention over the last decades has drastically reduced the size and the volume of water surfaces (to less than 100 ha). The current hydrologic situation does not allow for appropriate environmental conditions to be created under which typical flora and fauna could exist and develop, since the lagoon only has limited water exchange and water in-flow. The water is supplied mostly with precipitation and to a lesser extent also through surface water flows and underground springs. Fresh water in-flow becomes particularly critical in the summer, though at present even the sea water in-flow, which also plays an important role in the lagoon, is itself reaching a critical point. The water is too shallow and polluted with reful, which may in all probability be toxic.



In order to prevent further destruction of this outstanding living environment the experts and certain NGO's, among them the Bird Watching and Bird Study Association of Slovenia (DOPPS), launched a wide campaign in 1993 for the conservation and restoration of the lagoon. In that same year Slovenia adopted a decree temporarily investing Skocjanski Zatok with the status of a natural features, and in 1995 the Skocjanski Zatok Natural Reserve Act was adopted. In 1999 the Slovene Government adopted a conservation and development programme for the natural reserve. Currently, a detailed regulation plan for the area is being prepared which will serve as a basis for any further changes to the area.

EVALUATION

The main objective of the reserve conservation and development programme is to re-introduce and preserve natural values in the reserve, in other words, to provide appropriate living conditions for endangered animal and plant species and to facilitate the functioning of this area as a biotope.

The situation in 1983, prior to destructive interventions, has been evaluated as the ideal one. In its restored and rehabilitated form the reserve should include certain habitat types (based on a list for the brackish and fresh-water parts) and an appropriate park infrastructure (information centre, observatory, trails) and it should be part and parcel of the urban image of Koper. The project of restoration and regulation will last for five years, during which time it will also be possible to continue monitoring individual programmes, the state of the vegetation, the habitat types, the orinofauna and other types of animal groups.

Slovenia adopted all the necessary legislation for the conservation and restoration of Skocjanski Zatok (with the exception of the detailed regulation plan

currently under preparation). In 1999 the Government issued a decree on the concession for managing the natural reserve. The ten-year long concession was awarded to the Bird Watching and Bird Study Association of Slovenia.



border of nature reserve

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LESSONS LEARNT

The destruction of Skocjanski Zatok would represent a serious loss of natural wealth and bring about the downfall of a large number of animal and plant species. The wide campaign run by experts and NGOs has contributed to gaining positive public opinion on the matter and to raising public awareness. This helped put through the timely proclamation of Skocjanski Zatok as a natural reserve and prompted the activities for its restoration.

IMPACT ON APPLICATION

The reserve will be integrated in the network of Mediterranean wetlands in the area of the Trieste Bay and Istra peninsula. Skocjanski Zatok as a European rest-stop for migrating birds can fulfil this important function only in combination with other wetlands on the coast and in the hinterland. At the same time it will also be possible to apply the experience gained in the Skocjanski Zatok pilot project to new protected areas.

SUSTAINABILITY AREA

The rehabilitation and restoration of the Skocjanski Zatok area is of direct benefit to the State and to the local community, since the conservation and

establishment of conditions for the existence and development of the largest brackish marsh in Slovenia, with its endangered animal and plant species, promotes biodiversity in the country, and the preservation of this special ecosystem increases not only the diversity of eco-tourism and educational trails but also the comparative advantages of the Slovene coastal area and of Koper in particular, since the town will gain a marine bay. The programme will help to increase directly the value of the natural reserve, as it is going to be the rest-stop and to a large extent also nesting place for birds of European significance.

The benefits attained will be in direct proportion to the success of the rehabilitation of the lagoon, of the stabilisation of its bottom and of other elements in the area, since all these activities will substantially reduce the risk caused by environmentally unsound behaviour in the past (waste disposal in the lagoon), reduce putrefaction by allowing water to circulate and consequently reduce negative effects (stench, pollution of underground water). Regulating the area will increase the visual and ecological value of the open landscape in the immediate vicinity of the large urban structure of Koper.

The inhabitants will thus have an additional high-quality surface for recreational activities at their disposal. Since the area is adjacent to the main traffic vein used for tourists to travel from the hinterland to the coast, rehabilitation is useful also from the point of view of tourism. Once the infrastructure is completed (the visitors' centre, observatories, trails and the overall presentation) the area will be visited by an increased number of people (schools from Slovenia, Croatia and Italy, tourists).



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REFERENCES

- The Skocjanski Zatok Natural Reserve Act (Official Gazette of the RS No. 20/98)
The Decree on the Protection and Development of the Skocjanski Zatok Natural Reserve (Official Gazette of the RS, No.31/99)
- Regulation Plan for the Skocjanski Zatok Natural Reserve Area (A Draft), ACER, November 2000
 - - The Skocjanski Zatok Natural Reserve, by Borut Mozeti and Ana Frelj, Svet ptic Magazine, July 2000
 - - Habitat II, Slovenian National Report, Part B, December 1995