

Conservation management of an Island Specially Protected Area - GR

1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Preserving coastal environment (its functioning and integrity) to share space

2. Key Approaches

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

3. Experiences that can be exchanged

Management measures to enhance species listed on the Bird's Directive in habitats that have deteriorated due to tourism pressure and changes in farming practices.

4. Overview of the case

The island of Tilos has conducted habitat enhancement works in conjunction with the local population (farmers) to benefit threatened bird species. The results have had a positive effect on the tourism industry.

5. Context and Objectives

a) Context

Tilos, situated between Kos and Rhodes in Greece, is one of the smallest islands of the Dodecanese (63 km²). The five hundred permanent residents of the island are mainly occupied with services provision and the rural sector. Despite its relatively small size, the island hosts a large variety of habitats, which include rocky islets, relic woodland, a number of small but abandoned springs, natural and human-made grasslands. These habitats are home to rare and protected bird species, which account for the island's Specially Protected Area (SPA) status. Tilos is very important for the two raptor species Bonelli's eagle (*Hieraaetus fasciatus*) and Eleonora's falcon (*Falco eleonora*). The island is also important for the Mediterranean shag (*Phalacrocorax aristotelis desmarestii*). During the last decades, Tilos' natural environment has changed due to anthropogenic influences such as tourism development, land-use changes and other small infrastructure development. All these have threatened the island's traditional agricultural landscapes, its biodiversity and consequently its important avifauna.

b) Objectives

The objective was to implement management measures in order to improve the conservation status of the bird species of *Hieraaetus fasciatus*, *Falco eleonora* and *Phalacrocorax aristotelis desmarestii* and to set a basis for the SPA management requirements of the site of Tilos. In addition, work was planned to increase the availability of raptor prey by enhancement and maintenance of invertebrate (insects), bird (partridges), reptile (lizards) and (micro) mammal populations.

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

a) Management

The municipality of Tilos was responsible, supervising the services responsible for the planning and development of primary and secondary sector activities in areas which lie within its administrative bodies.

b) ICZM tools

The work and management plan for the actions included two phases. In the first, a work plan was prepared that specified the aims, methodology and technical specifications of the works and of the actions related to the 3 targeted bird species and their monitoring. It included the preparation of a special study and survey on rodent population on the reproductive islets of Eleonora's Falcon. In the second, the Management Plan for the species and the area was prepared and included the data collected and their analysis as well as proposals for the future conservation management of the species and the area.

The technical actions included the habitat enhancement works of small springs and woodland restoration. Environmental Impact Assessment Studies for the habitat enhancement works of these restoration actions were conducted. Many of the trees of *Quercus ithaburensis macrolepis* and *Pistacia terebinthus palaestina* on Tilos island have vanished due to human activities and overgrazing prevents them from regenerating. Therefore, new trees were planted and protected from grazing through fencing and safeguarding them. The habitat enhancement of small springs included the digging up of small ponds that retain bigger amounts of water for more time, so that the wildlife, the targeted bird species included, can easily find fresh water to cover their needs during the summer time. Re-instating traditional cereal crops for the benefit of local wildlife included the seeding of traditional local cereal varieties, in selected locations on the island to benefit the populations of insects, birds and mammals. Scientific monitoring of the targeted bird species was conducted: population, behaviour, breeding success and habitat selection was monitored. Surveillance of the site (as patrols) for illegal actions and activities, as well as the surveillance and protection of the targeted species mainly during their breeding period was also conducted. Rodent populations on islets with breeding colonies of *Falco eleonora* were controlled. There was a significant public outreach campaign e.g. the construction of notice boards, establishment of exhibition and an information kiosk/ stand containing information for tourists.

7. Cost and resources

The total budget was €824,212 of which there was a Life contribution of €618,159.

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

There was an increase of the traditional crop cultivation area, by 60 ha, that sustains a great number of seed eating birds (prey for the targeted species). Provision of freshwater was also guaranteed for longer periods in summer from two modified springs for the benefit of wildlife and targeted species. Enhancement or preservation of invertebrates (insects), birds (partridges), reptiles (lizards) and (micro) mammals, was seen due to the new native tree plantations and fencing of the planted sites. The monitoring of the three targeted bird species and daily surveillance operations helped to provide information that significantly reduced the threats to them. Monitoring confirmed increased estimates on the populations and breeding success of Bonelli's eagle and Eleonora's falcon. Surveillance also provided useful information about the breeding performance and feeding areas of the Mediterranean shag, as well as leading to the identification of some 59 species which had previously been unrecorded in the project area.

9. Success and Fail factors

The sowing of cereals was considered to be successful in increasing the number of prey species for raptors and other important results included: modifications to two fresh water springs that improved and extended water supplies during the summer; controlling human disturbances to the target species via surveillance and increased public awareness; improved appreciation of the SPA's conservation value by visitors and the local population through widespread information dissemination, particularly via the internet; and enhanced experience provided to local, regional and central authorities regarding conservation management. An information campaign formed an important part of the project strategy and this included providing visitor facilities to manage visitor pressures. Capacity-building was also integrated within the project, and this was directed at supporting the effectiveness of local, regional and central authorities, particularly in terms of developing

sustainable and traditional agricultural systems capable of supporting the target species.

10. Unforeseen outcomes

The Tilos Information Centre, at Livadia, now has more than 1.500 visitors per year, who visit the exhibition and are informed about the ecological value of the island. New jobs were also created .

11. Prepared by

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12. Verified by

It has not been possible to verify this case.

13. Sources

- Tilos: Conservation management of an island Special Protection Area LIFE 04 NAT / GR / 000101 LAYMAN'S REPORT (2008) Municipality of Tilos



LIFE 101 Laymans report (1.16 MB)

