

# Managing rare and threatened species in an area of high tourist activity – Zakynthos - GR

## 1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Preserving coastal environment (its functioning and integrity) to share space
- SUSTAINABLE ECONOMIC GROWTH: Balancing economic, social, cultural development whilst enhancing environment

## 2. Key Approaches

- Integration
- Participation
- Ecosystems based approach

## 3. Experiences that can be exchanged

Following the creation of a responsible authority for an area of conflict between nature conservation (specifically the Loggerhead turtle) and sectoral (mainly tourism and agriculture) concerns, a management plan was delineated and implemented. A constant participative process and the active involvement of local stakeholders led to win-win activities.

## 4. Overview of the case

There has been a historic conflict between conservationists wishing to protect the habitat of endangered species and developers seeking to expand tourist activities on Zakynthos. The nesting area of Laganas Bay has been the scene of much contention for over 26 years, with the EC taking Greece to the European Court of Justice in 2002 for failing to implement an effective system of strict protection for the loggerhead turtle in Zakynthos. This led to the creation of the the National Marine Park of Zakynthos (NMPZ).

## 5. Context and Objectives

### a) Context

An important biotope for the rare and threatened species of the loggerhead sea turtle, *Caretta caretta*, is the Bay of Laganas which is on the island of Zakynthos in the Ionian Sea. The 3.5 km beach is considered to be the most important nesting area in Europe. Turtles come ashore at night to lay their eggs on the beaches. Later, the hatchlings – guided by moonlight – return to the sea. However, the high quality of sea waters and sandy beaches in the last two decades has attracted considerable tourist activity to these same beaches. There has been little control of the negative effects of this tourism, resulting in serious threats for the turtles e.g. compaction of the sand, artificial lighting on the shoreline disorienting the hatchlings and causing their failure to find the sea. Although nominally protected since 1984, lack of enforcement and lack of conservation awareness has failed to halt the decline of the populations. For this reason, in 1999, the National Marine Park of Zakynthos was created by Presidential Decree. It is located in the southernmost part of the island and encompasses sea turtle nesting beaches and a section of adjoining land, the wetland of Keri, together with the two small islands of Strofadia. Together, these make up the most important loggerhead sea turtle breeding grounds in the EU.

### b) Objectives

The main objective is the protection and preservation of *Caretta caretta* as well as the Mediterranean monk seal, *Monachus monachus*, and several other important species of animals, birds, amphibians, flora and the sand dunes themselves. This entailed the development of a management plan taking into account the needs for protecting threatened species which would not conflict with the demands of tourists visiting the beaches

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

### **a) Management**

The National Marine Park of Zakynthos falls under the Ministry of Environment, Energy and Climate Change which is ultimately responsible. The Prefecture of Zakynthos, and the Municipalities of Lagana & Zakynthos, were important partners in developing the management plan.

### **b) ICZM tools**

The programme underlined the need for the development of a methodology that could take into account a broad mixture of actions i.e. so-called soft actions and others with a physical output. These actions were further sub-divided into single activities and others that needed to be repeated. In order to achieve the objective of active public participation, a bottom-up approach was adopted for the implementation of actions dealing with monitoring and surveillance, accreditation and certification, as well as collaboration with local stakeholders. This approach contributed to the formulation of a common vision for the long term management of the natural and economic parameters of the implementation area. An important step was the delineation of the marine zone. This was done using a particular anchorage system (Harmony) since there was a need to protect the *Posidonia* sea bed from the damages created by dead-weights. Lighting also received considerable attention and in order to help the local operators to use only non-disturbing artificial lights, a special guide was elaborated. Several important Codes of Conduct were produced i.e. a code of conduct for Eco-tourism activities aimed at the harmonization of a tourism strategy adopted by all operators involved and at sustaining the bio-diversity and cultural authenticity of the NMPZ area; a code of good environmental behaviour for tour operators; a code of proper agricultural practice and animal rearing; and a code for the proper observation procedures of the loggerhead sea turtle. Throughout, local initiatives, amongst the people who are economically active in the relevant sectors, were promoted.

## **7. Cost and resources**

The costs and resources vary considerably according to the year and infrastructure investments. Currently, and as an estimation, the functioning cost (without investments) is about €1.2 million from which 60% are employees salaries. Resources are provided by European programmes and national fundings (80%) and own resources (20%).

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

The situation has slowly improved and most issues that still prevail are long-standing and represent a general need for change in attitude and vision by the Park, the local community, the involved local and governmental authorities. There is now more effective conservation of the loggerhead sea turtle and other fauna and flora (both marine and terrestrial) and better implementation of protection measures within the park area as well as more environmentally friendly activities by local operators. As regards the landward area, there has been a significant reduction of trespassing by visitors and more local people involved in leisure activities. A more effective control of building and other development activities and night lighting has reduced disturbance and disorientation of the hatchlings heading for the sea. Farmers have commenced environmental friendly agriculture practices. Sand compaction of the nesting areas has been reduced through alternative siting of umbrellas and deck chairs. As regards the marine area, the demarcation by means of buoys has gradually aided the control of recreation and visitors' boats, thus reducing the dangers to the turtles and the rest of the ecosystem considerably. The carefully chosen anchoring system for the buoys avoided the destruction of *Posidonia* fields.

## **9. Success and Fail factors**

For the first time in Zakynthos' long history of environmental conflict, the NMPZ has been able to gain partial acceptance and support for the ICZM and sustainable development measures. This was mainly thanks to a participatory and co-management process involving various stakeholders: NGOs, local businesses, farmers and fishers. For the majority of the actions taken there were considerable benefits for the local community, the operators in the area and the visitors. These benefits are both of a social and economic nature (creating win-win situations) e.g. employment of wardens, guided tours, turtle spotting trips and other eco-tourism activities etc. are already on the increase. Know-how transfer gave the opportunity to park staff to find solutions adopted in other protected areas e.g. the Harmony anchorage system. A large number of actions were of considerably low cost with certain exceptions such as the anchoring system of the demarcation buoys.

The NMPZ was the first park in Greece set up by legal procedures and operating with a Management Board and Staff. Initially, there were a number of difficulties experienced largely because there was no practical advice and methods which could be borrowed by other national parks operating in the country. These difficulties can be broadly divided into three categories. The first involved financial matters and especially the lack of cash flow which inevitably led to the disillusionment of the Management Board and an eventual strike of the staff. The second category of problems concerned legal matters e.g. problems with land ownership, with the obligations of the local authorities and Coast Guard regarding enforcement but also the legal competence of the Park in enforcement and the application of incentives for the participation of third parties in matters concerning the park. A third category of difficulties stemmed from the fact that the low awareness of the public and entrepreneurs regarding the environment and the importance of the park itself hindered the progress and completion of some activities e.g. the eco-management plan and audit scheme. Most difficulties were, however, surmounted through the implementation of a constant participative process and the active involvement of local stakeholders. The work was part-funded through the Life III programme and was chosen as one of the best projects in 2006-2007. The Life project implementation undoubtedly contributed to improve the mid-term and long-term operation of the NMPZ.

The ZNMP still lacks a long-term Integrated Management Plan with guidelines and recommendations to establish a comprehensive, sustainable and appropriate approach to management, encouraging the participation of all stakeholders in the implementation of future environmental management actions. It lacks transparent procedures. Interested parties do not have access to procedures and information on decision-making, to allow cooperative dialogue between all interested parties. Designation of communication channels and procedures are required for the decision-making process. There is little stakeholder engagement during the selection of management options and stakeholder education.

The roles and responsibilities of the NMPZ and the conflicting interests between sub-groups in the community are issues that still have to be addressed in order for further improvement to occur.

## 10. Unforeseen outcomes

The transferability potential is both significant and extensive in Greece due to the fact that several formally registered habitats lack statutory approved management bodies. Similarly, the development of such an ICZM strategy, which also takes care of cases where there is high conflict between socio-economic interests and preservation of areas of high ecological value, covers urgent cases. The management plan, as well as a number of tools used e.g. good practice codes for the public and different categories of professionals, co-operation agreements etc. can be applied to other newly created management boards in the rest of Greece and at EU level.

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## 13. Sources

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