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TECHNICAL INTERIM REPORT

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LIFE PROJECT NAME
**ICZM: Demonstration Actions in the National Marine Park
of Zakynthos**

Data Project

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Data Beneficiary

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list (i) key-words and (ii) abbreviations (when appropriate)

i. Key-words

- Integrated coastal zone management
- Sustainable development
- Local initiatives
- Code of conduct (good environmental practices)
- Awareness plan - active public (local population & visitors) participation
- Accreditation & certification of economic activities
- Volunteerism

ii. Abbreviations

NMPZ National Marine Park of Zakynthos
YPEHODE Ministry of Environment, Physical Planning & Public Works
ICZM Integrated Coastal Zone Management
STPS Sea Turtle Protection Society
WWF Ellas World Wild Fund Greece

iii. Glossary

Dimos Municipality
Nomarhia Prefecture

2. EXECUTIVE SUMMARY

The National Marine Park of Zakynthos, Greece, is situated in the southern-most part of the island, in Laganas Bay. It is the first fully-established National Park in Greece to have integrated management status with the objective of sustainable development.

The area has suffered for a long period of time from uncontrolled human development, building up pressure on the natural ecosystem and putting in danger the local flora and fauna, especially the loggerhead sea turtles.

The project involves action towards:

- the protection of the environment within the National Marine Park of Zakynthos using 'on site' actions, limiting to the minimum any disturbance to the species and habitats;
- the promotion of the idea of integrated coastal zone management and sustainable development, through local initiatives, amongst the people who are economically active in any sector in the area;
- keeping the people living on the island aware of the values of the environment and the need for its protection through integrated management and participation;
- making sure that visitors to the area are correctly informed about the importance of natural habitats; and
- the provision of the necessary 'on site' demonstration and guidance facilities that will help both the local population and visitors participate in the active management and protection of the area.

It comprises the following six tasks:

- Collaboration and involvement of local stakeholders in accordance to the National Marine Park objectives
- Environmental management and protection in the area of the NMPZ
- Upgrading, promotion and exploitation of the environment actions
- International cooperation with other Marine Parks seeking transfer of know-how and common problem solutions with reference to ICZM
- Programme management
- Monitoring and evaluation system of the management agency of NMPZ

At this stage of implementation, the application of the ZANTECOAST programme in the area of Laganas Bay has contributed to:

- the safeguarding, in perpetuity, of the natural heritage and preservation of the ecological balance in the area where the programme is to be implemented, in conjunction with the development of activities that are in harmony with the conservation of nature and the landscape;
- increased participation and information of the island's inhabitants in the decision-making process for management of the coastal zone;
- increased flow of information to stakeholders and participation of professional groups such as tour operators, hoteliers, fishermen, etc.;
- the protection of the natural resources and landscape from increased disturbance and pollution resulting from lack of appropriate infrastructure and planning;
- integrated planning for the development of services, infrastructure and a monitoring programme for management of the coastal zone;
- the reduction to a minimum of the disturbance to the natural environment within the habitats of Laganas Bay (nesting beaches, sand dune system, forests, marine habitats, etc...);
- the promotion of the idea that "nature, local residents and visitors can coexist and benefit from their cooperation".

3. INTRODUCTION

The National Marine Park of Zakynthos, Greece, is situated in the southern-most part of the island, in Laganas Bay. It encompasses the marine area of Laganas Bay, the sea turtle nesting beaches and a zone of land adjoining them, the wetland of Keri Lake and the two small islands of Strofadia located 50 miles south of the island of Zakynthos. This is the most important loggerhead sea turtle nesting area in the European Union.

The development of mass tourism on the island of Zakynthos has placed enormous pressure on all the local landscape and habitats, especially the nesting beaches in Laganas Bay. The problem persisted over the last two decades mainly as a result of two facts: poor enforcement of the law protecting sea turtles in the area, and lack of co-operation with the local businessmen, the international tour operators as well as the tourists brought to Zakynthos, who remained ignorant of the damage caused to the region's habitats by uncontrolled development. Intensive and conflicting economic activities on the one hand and uncoordinated and often overlapping activities of environmental NGOs and various associations on the other, have further aggravated the situation. In this context and in order to ensure the effective protection, preservation and management of the area, the NMPZ Management Agency was recently (2000) set up.

The project is based on the following hypothesis: the application (in a practical and exemplary manner) of the principles governing the creation of the NMPZ is feasible and will lead to the achievement of a balanced and sustainable development in economic, social and environmental activities/functions, by carrying out specific management projects and measures targeted at the preservation of the species and habitats of the area. More specifically, the project aims at promoting the idea of integrated coastal zone management and sustainable development through local initiatives, amongst the people who are economically active in any sector of the area. It also seeks to ensure that local population and visitors to the area are correctly informed about the importance of local natural habitats.

In order to achieve the aforementioned aims and objectives, the project will undertake a series of activities organised in six tasks:

1. Collaboration and involvement of local stakeholders in accordance to the National Marine Park objectives
2. Environmental management and protection in the area of the NMPZ
3. Upgrading, promotion and exploitation of the environment actions
4. International cooperation with other Marine Parks seeking transfer of know-how and common problem solutions with reference to ICZM
5. Programme management
6. Monitoring and evaluation system of the management agency of NMPZ

The expected results may be summarised as follows:

- Safeguarding, in perpetuity, of the natural heritage and preservation of the ecological balance in the area, in conjunction with the development of activities that are in harmony with the conservation of nature and the landscape
- Promotion of the idea that "nature, local residents and visitors can coexist and benefit from their cooperation"
- Provision of the necessary framework for the effective exchange of views and opinions that will enable the actions and measures taken for the management of the area to be globally accepted.

4. LIFE-PROJECT FRAMEWORK

The project comprises three broad and interrelated phases:

1. Local and international cooperation
2. Environmental management, protection, upgrading and promotion of the area
3. Monitoring and evaluation

Each phase includes one or more tasks and several work packages / activities.

More specifically:

- Phase 1 includes tasks 1 and 4, which in turn, refer to the following work packages:
 - 1.1 Formulation of a long-term code of conduct for the various economic and social sections of the participants
 - 1.2 Promotion of active participation by the establishment of nominal awards for effort, enthusiasm and effectiveness
 - 1.3 Programme for the accreditation and certification for all economic activities (hotels, restaurants, tour operators etc.), in the area of the Park, in line with the EMAS regulation, with the aim of promoting a voluntary system for participation in the active management and protection of the area; expansion of this system to other services in the area;
 - 4.1 international cooperation with other Marine Parks seeking know-how transfer and common problem solutions with refer to ICZM
- Phase 2 is related with tasks 2 and 3, which include the following work packages:
 - 2.1 delineation and marking of the marine part of the Park using special buoys (in collaboration with the Port Police), in order to facilitate users (fishermen, cargo vessels, tourist craft, recreational craft, etc.) in observing the legal limits for speed and access
 - 2.2 public awareness and wardening programme, with the participation of local residents, for the protection of the area and the provision of information for visitors. The wardening programme will also cover fire-prevention actions for the Park region, in collaboration with the Fire Brigade, including the provision of necessary infrastructure and equipment
 - 2.3 guidance of the area's coastal fishermen, farmers for the good environmental practice during their job's activities including training and awareness sessions
 - 3.1 production of information material (including leaflets, CD ROM and website) and promotion through local agencies and tour operators
 - 3.2 installation and maintenance of the necessary facilities, including trails, boardwalks, observatories, panels, demarcation fences and information centres where visitors can learn about the values of the area and the protection measures and to participate to the active management of the area;
 - 3.3 upgrading, promotion and exploitation actions including installation of interactive computers at selected points, providing more in-depth information for visitors about the area, species, habitats and other characteristics of the island
 - 3.4 conducting of the necessary studies for the management of the coastal wetland of Keri and the management of human activities in the overall area
- Phase 3 concerns task 6 and the work package 6.1 "Monitoring and evaluation system based on a G.I.S. database"

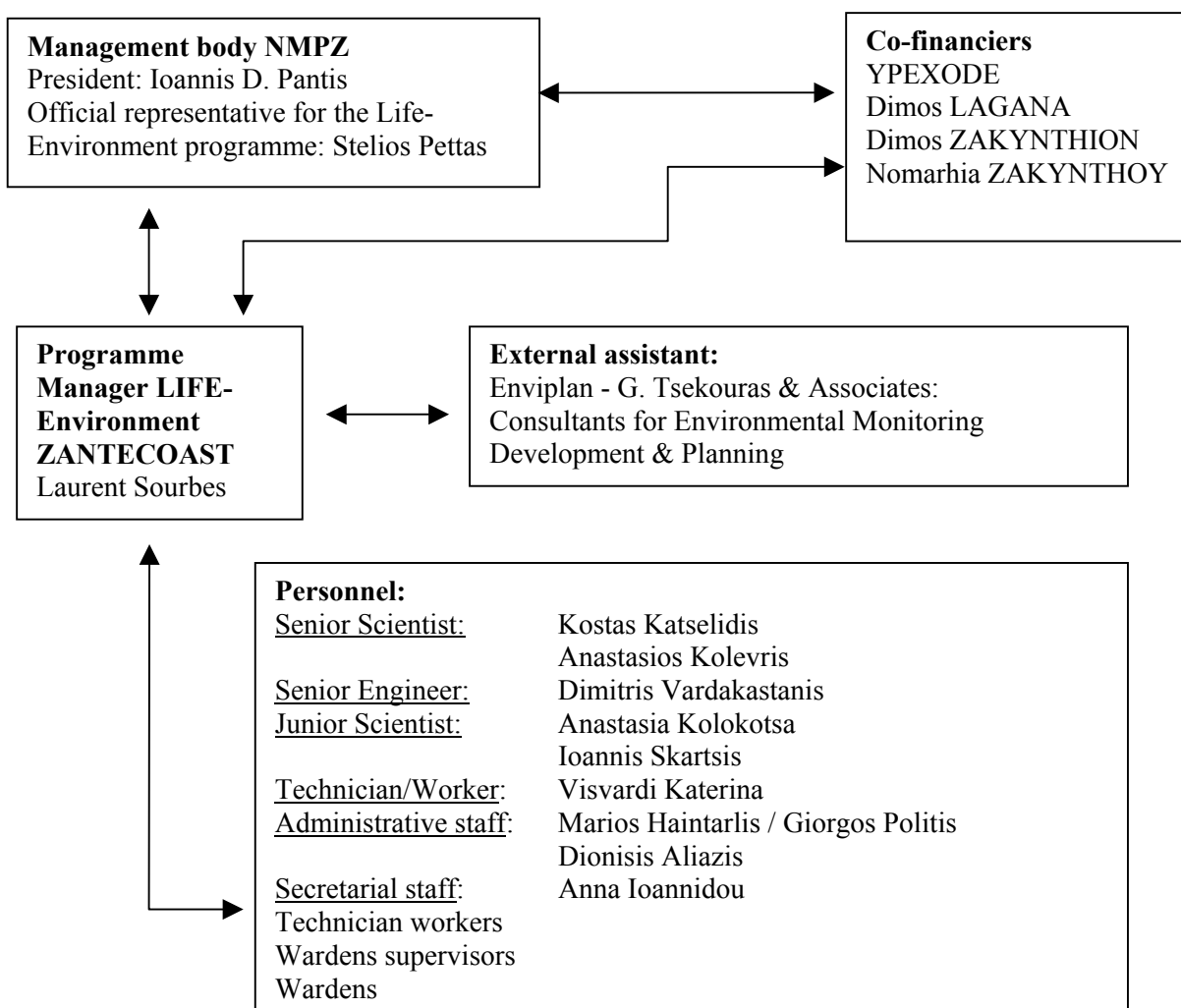
In addition, the programme management task deals with all three phases and includes the following three WPs:

5.1 strategy & methods - conversion of goals & objectives in operational steps by tasks - finalisation of work schedule

5.2 progress reports and meetings preparation

5.3 final technical and financial report

The NMPZ (the beneficiary) has no partners in this project. The Ministry for the Environment, Physical Planning and Public Works (YPEHODE), along with the Prefecture of Zakynthos (Nomarhia Zakynthou), and the Municipalities of Lagana & of Zakynthion, are co-financiers. Project management and implementation is organised in a clear and effective way, as presented below:



The project is being implemented according to the initial proposal and no modifications concerning the project's framework have occurred.

5. TECHNOLOGY

The programme underlines the need for the development of a methodology that can take into account a broad mixture of actions, which themselves can be differentiated into soft actions and others with a physical output. These actions can be further sub-divided into “one-offs” and others that are repeated more than once during the project’s life span.

It is imperative that monitoring and evaluation mechanisms be established for all the actions concerned, and that the output should be capable of quantification.

Recurrent actions

A wardening system was developed for the Park, in order to optimise the number of wardens and at the same time evaluate the effectiveness of the action. On the basis of the results of the methodology, the wardening plan for the current season was modified in order to maximise effectiveness. The wardening plan comprises three different sections that are the wardening of nesting beaches, wardening of marine area and wardening of forest area. For each section, details are given for the exact location of wardening and infrastructure / equipment needed, the procedure to follow to employ guards, the efficiency of guards, the training of guards and the collaboration with local and national administrative services. Furthermore, specific guidelines about wardening activity are written and given to each warden when its contract is signed.

The methodology used for the collaboration and involvement of local stakeholders in accordance to the National Marine Park objectives is based on the international experience and scientific literature. The different phases comprise the collection of data, the draft of guidelines for good environmental practices, the discussion with local operators about the guidelines and the establishment of a collaboration protocol (endorsement / charter). The international experience plays a major role since potential mistakes in implementing this action can be avoided. As an example, the charter established with the turtle spotting operators is mainly based on the experience of French, Spanish and Canadian national parks.

The gradual development of a GIS enables the registration and monitoring of important constituent elements of the Park. The parameters monitored and registered on the System comprise physical and socioeconomic changes (provided the latter can be depicted on the specific system).

Non-recurrent actions

Notable non- recurrent actions with physical output concern the following:

- The application of state of the art techniques in the delineation of the marine area; and
- The development of detailed guidelines for the land-based control of night lighting.
- Designing and installation of warden huts
- Designing and installation of information panels

Delineation of the marine area

The Harmony anchorage system that was used in the marine delineation and marking network, was the result of two different inputs: the one was the need to protect the sea bed of Posidonia and the other was the know-how transfer that gave the opportunity for the NMPZ’ staff to find solutions adopted in other protected areas. The scientific literature and the different actions taken in the National Marine of Port-Cros (France) led the NMPZ to implement this technology in the marine Area.

In order to avoid the damages created by dead-weights on sea-grass meadows for the delineation of marine area, a special steel coil is drilled into the seabed, without cutting or crushing the dense network of seagrass’ roots and rhizomes. An anchor attachment ring, measuring less than 5 cm in diameter, is fastened to the head of the coil. In some cases (hard substrate), the substrate is perforated

to an appropriate depth and a stainless steel rod is fixed within. The anchor attachment point consists of a reinforced ring bolted to the head of the rod.

The technology used for the positioning of the anchorage system consists of a hydraulic key that drills the steel coil into the seabed. Two divers are needed for this action.

The anchor line that is fixed to the head of the steel coil is kept permanently taut in open water in order to avoid damages of the rope on the Posidonia. At the surface, the line is attached to a delineation buoy.

For each anchorage system, the geographical coordinates were taken using a GPS system and a small buoy fixed at the head of the coil in order to avoid possible loss due to external intervention. The geographical coordinates were written into the GIS –Arcview software and maps printed.

A follow-up of the Posidonia will be conducted in collaboration with scientists (Aristotelis university, Thessaloniki) in order to collect data on the seagrass habitat wherever the anchorage system was installed.

The delineation of the marine area of the NMPZ required also a permit that was issued by the Ministry of Maritime activities at the end of May 2002. The main technical characteristics of this permit include the kind of anchorage system used (Harmony for the sea-grass habitats, dead-weights for sand), the kind of buoys used (spherical yellows buoys in the A area and conics yellow buoys in B and C area), the distance between the buoys (75 meters for area A, 150 meters for B and C area) and the technical characteristics of anchor lines (rope or chain according to the kind of anchorage used).

Warden huts/ information kiosk

The warden huts as well as the information kiosk are a part of the surveillance / information network that the NMPZ intends to create in the area. The technical characteristics and the design of the huts were elaborated in accordance with the technical guidelines from the Ministry of environment (YPEHODE) and the Greek Ornithological Society. The construction is all made of dismembered pieces of wood and can be easily transported, unscrewing 12 screws. It is painted with green water based color. The main dimensions are 2.00 meters * 2.00 meters*2.3 meters and their weight is about 150 kg.

Artificial lights guidelines

One of the main problems for the newborn sea turtles is to find the right direction to the sea. The artificial lights on buildings and on roads confuse them. In specific areas of the NMPZ, it is obligatory to use special artificial lights that don't disturb the sea turtles. In order to help the local operators to use only non-disturbing artificial lights, a special guide was elaborated by the NMPZ. This guide is based on the P.D. 906D and on recommendations made by the Ministry of Environment and the STPS.

Information panels

The NMPZ, in order to inform visitors at the nesting beaches and at entrance points (airport, harbour), elaborated information boards. The frame of the board is all made of wood painted with green water based color. The technical characteristics are in accordance with the technical guidelines edited by the Ministry of environment (YPEHODE). The information is printed on 5 different aluminium panels with the logo of NMPZ, the name of the place, a general map of the park area with the different zones and an arrow pointing the place where the board is located, the presentation of non-allowed activities and the data of the NMPZ. Dimensions of the template are 3.00 m*1.60m.

Information center

In 2001 an information kiosk was functioning in Zakynthos' town. For the summer season 2002, the municipal Theatre of Zakynthos was rented and is currently functioning from 9.00 am to 2.00 pm and 5.00 pm to 10 pm daily. A permanent photographic exhibition and oral presentation facilities, including a video set showing documentaries and other visual material concerning the NMPZ are presented to the public.

Progress, Results

Task 1: Collaboration and involvement of local stakeholders in accordance to the National Marine Park objectives

Implemented action concerning task 1, includes:

- Data collection, from June to October 2001 on man-made pressure upon the nesting grounds. Information that was gathered was used in the drafting of the code of conduct.
- Definition of the environmental criteria needed for a charter of good environmental practices. The co-operation of the NMPZ with the Tour Operators has been the first step towards this target. It resulted in a programme for the accreditation and certification of all economic outlets (hotels, restaurants, tour operators etc.), in the area of the Marine Park. The criteria used are based on the international experience such as TUI check list monitored by the TUI Environmental Department (cooperation with TUI), UNEP criteria (Ecolabel in tourism industry), Studiosus (study tours and intelligent holidays) and Grecohotel environmental management program.
- Write up of a document on Guidelines and Specifications concerning the use of artificial lights by hotels and rented rooms located close to the nesting beaches (**See Annex 1**).
- Response to 30 requests by the town-planning office, concerning artificial lights use permits. Two cases were reported to competent authorities for illegal use of artificial lights in the NMPZ area.
- Response to 55 requests for advice by owners of hotels and rooms to rent.
- Definition of the main criteria for good environmental practices concerning turtle spotting boat users in the Lagana's bay during the summer season.
- Preparation of public tender (legal - administrative arrangements) for the EMAS regulation
- Collaboration with the turtle spotting boat owners and stakeholders involved in the turtle spotting activity (**See Annex 2**). After several meetings with operators involved in Turtle watching activity, an initial code of good practice was elaborated. This code contains specific guidelines for effective observation of the Loggerhead turtle, a special agreement/endorsement between the NMPZ authority and turtle watching operators and a reminder of the NMPZ marine area legislation. At this stage, 16 operators – the majority of those operating within the Lagana's Bay – participate in the implementation of the aforementioned code of conduct. Until now, the results of this collaboration have been proved positive and the guidelines are effectively implemented. After a preparatory test period, an agreement will be signed by those of the involved operators that follow the various rules and obligations specified in the code of conduct. A label with a graphic design stating "Special collaborator of the N.M.P.Z" will be given to operators. This logo is expected to have commercial value in the near future. Furthermore, in collaboration with the Sea Turtle Protection Society, the majority of operators accepted to use on every boat trip, trained volunteers, that provide tourists with information concerning the sea turtle and its biology.
- Collaboration with the local tour-operators resulting in the drafting of a code of good environmental behaviour. In the framework of the NMPZ activities and especially international cooperation (see WP 4), 11 local tour-operators were identified (**See Annex 3**) and a first draft of a code of conduct elaborated. The main aspect of this collaboration is that it aims at the harmonization of the tourism strategy adopted by all operators involved. To this respect, the code includes issues concerning the available accommodation (quality and environmental criteria), the parallel/complementary services and activities offered to visitors (awareness, trips, participation in eco-activities), as well as the promotion and marketing of services (common image).

The implementation of Task 1 is in line with planned output as far as the first two work packages are concerned, namely WP 1.1 "Good Environmental Practices Code" and WP 1.2 "Collaboration scheme". A delay on the implementation of WP 1.3 "Eco Management Audit Scheme" should be attributed to the recent modification of the EU regulation concerning EMAS (EU reg. 761/2001) and the lack of relevant experience at the national level. It has to be noted that until now there is no accreditation verifier in Greece. Future progress is expected at a much faster rate, as a result of the

information that have been collected and the aim of the external assistant that will be appointed in the near future.

Task 2: Environmental management and protection in the area of the NMPZ

Action related to this task concerned all three relevant Work Packages, namely the *Marine area delineation network*, *Public awareness and surveillance* and the *Training and awareness of local professionals* (Wp 2.1, 2.2 & 2.3 respectively). More specifically, it included the following activities:

- WP 2.1 Marine area delineation network

The Management Agency carried out an extensive search and careful evaluation of the most effective methods and materials for the marking of the zone of protection. Several contacts were made with other marine parks and valuable experience in the issue of delineation and marking in protected areas was gained. Furthermore, the procedures concerning certification, licencing & construction in the Marine Park area were reviewed under the guidance of both local (Coast Guard) and national (Ministry of Maritime Activities) Authorities.

The process of delineating and marking the marine area of the National Marine Park of Zakynthos (**See Annex 4**) comprises three sets of actions: the first set is directly linked to the fact that Laganas Bay is part of the Natura 2000 network (SCI, GR 221 0002). The fact that almost one third of the area's seabed is covered by Posidonia beds (priority habitat according to the directive 92/43/EEC Annex 1) - a rather sensitive habitat, made imperative the need for innovative solutions concerning the type of anchor to be used in marking the marine area. The N.M.P.Z. choose a special anchorage system (Harmony type) to be implanted along the outer borders of the marine area. The second set of actions is related to the authorisation procedure which involves the Ministry of Maritime activities (General Navy Staff, hydrographical service). Following extensive consultation with the central authority, a permit was issued at the end of May 2002. The last set concerns the actual positioning of the anchorage system Harmony, which took place on June 2002, with the collaboration of a specialised technician and three professional divers. An anchor line was installed for each system. The line is kept permanently taut in open water, with the use of an intermediate floater. Thus, the anchor line doesn't interact with the Posidonia seabed. It should be noted that priority was given to area A (no access allowed from first of May to the end of October). All action was elaborated in close cooperation with the Zakynthos Port Authority.

In addition, the NMPZ in collaboration with Mr S.El Mistikawi of the Ecole Superieure d' Ingenieurs de Marseille, elaborated a study on Lagana's Bay permanent mooring facilities (**See Annex 5**). More precisely, an analysis and assessment of buoys, mooring lines and anchoring systems was carried out for 6 selected mooring areas, namely Marathonisi, Dive sites, Marathia, Tankers, Lagana harbour and Fishers mooring area around Marathonisi.

- WP 2.2 Public awareness and surveillance

Wardening & public awareness programme

One of the priorities of the National Marine Park of Zakynthos, during both the 2001 and 2002 nesting periods, was to guard and provide public awareness on the protected nesting beaches (**See Annex 6**). More precisely:

- In 2001 the NMPZ hired 45 seasonal staff to guard the nesting beaches 24 hours a day from the end of May until 10th October. Eight sites were selected on the nesting beaches where Guard Huts were installed. Forty-two persons were hired as wardens and three as supervisors. The wardens and supervisors were obliged to attend a 7-day training programme from 15 to 21 of May, prior to the start of the wardening programme. The duties of the wardens were to:

- guard the nesting habitat of *Caretta caretta*

- minimise human disturbance to the nests
- report problems that occurred to the local authorities (Police, Port Police etc.)
- inform visitors to the area about the NMPZ and the importance of conserving the region's habitats.

- In 2002, once again a wardening programme was elaborated and accepted by the Management Board of the N.M.P.Z. The main change from the previous year, has been in the number of wardens which was reduced to 36 while 3 warden supervisors were hired. This change followed feedback from the evaluation of implementation of protection measures in the National Marine Park of Zakynthos (2001) and is explained by the experience and skills that were acquired by NMPZ staff (including temporary personnel / guards). The reduced number of wardens and a more effective selection process (previous experience) is expected to resolve the problems described in the first progress report (lack of warden conscience & close social relationship with local population). The duties of the wardens remained the same as the first year.

Building control within the Park area

In order to ensure that no illegal building activities occur within the Marine Park area, the NMPZ hired an architect-civil engineer. The architect is responsible for a) monitoring the building activity within the Park area, b) reporting any illegal building activity to the relevant authorities, and c) creating a database listing all existing buildings in the Marine Park area. So far:

- 57 cases of building activity have been examined
- 17 cases of illegal building activities have been reported to the appropriate authorities
- a complete database that includes records of all new buildings since the first half of 1999, was set up.
- consultation has been offered in 55 cases of professional activity permits.
- 30 authorisations concerning the use of artificial lights have been issued.
- Two cases were reported to competent authorities for illegal use of artificial lights in the NMPZ area.
- 7 environmental impact studies have been examined.

Synergy of actions undertaken in collaboration with local authorities and central administrative services (port authority, Land Service department, and police)

The National Marine Park of Zakynthos cooperates with the local authorities and especially with the Municipalities of Lagana and Zakynthos, in order to successfully implement the protection measures of the Marine Park.

Furthermore, the collaboration of the NMPZ with the central administrative services was especially effective (**See Annex 7**). More precisely:

- The Port Police of Zakynthos operates a boat that was purchased, by the Ministry of Environment, Physical Planning & Public Works, for the surveillance of the marine section of the NMPZ. During the 2001 summer season, the Coast Guard reported over 150 cases of boats present in the marine area of NMPZ. Ten of these cases were fined.
- The NMPZ, in cooperation with the Land Service Department of Zakynthos, has organised a number of inspections in businesses operating on the nesting beaches. On 12th July 2001 about 60 illegal beach umbrellas were removed from the nesting beach of Kalamaki. On 10th September 2001 one beach umbrella operator was sentenced in court for exceeding the number of beach umbrellas allowed on Gerakas beach.
- The police have helped the Marine Park wardens perform their duties, especially concerning the problem of "deliberate" horse riding activities on the nesting beaches. The perpetrators have been repeatedly stopped by the police and fined on four separate occasions for riding horses on Laganas beach.
- 37 recommendations about technical activities and their legislation to central administrative services
- Following the recent decision of the Greek Ministry of Economy (1047427462/B0010, June 2002) to attribute the use of seashore zones to management bodies in protected areas, the Management Agency of the NMPZ is now the competent authority that gives local operators authorization to rent umbrella

sets and nautical sports equipment (pedalos). According to the Presidential Decree 906/D, a maximum number of umbrella sets is allowed in two of the six nesting beaches (Kalamaki and Gerakas beach) and pedalos only on Kalamaki beach. This decision of the Greek Ministry of Economy will assist the NMPZ and the local authorities in the implementation of the protection measures. The whole procedure was implemented in tight collaboration with the Land Service Department of Zakynthos, the port police authority and the local police department and the cooperation of Lagana's and Zakynthos' municipalities. These bodies are expected to contribute significantly towards the effective implementation of the law.

Co-operation with Environmental Organisations

The NMPZ cooperates with many active environmental organisations on Zakynthos. A memorandum of cooperation was prepared and signed with the NGOs ARCHELON, WWF-Hellas and MEDASSET in 2002 (See Annex 8). The goal of this co-operation is to raise the efficiency of several actions concerning the conservation, monitoring and public awareness within the Marine Park area.

In this framework, a contract between the NMPZ Management Agency and the Sea Turtle Protection Society (STPS) will be signed, regarding actions for the monitoring of the nesting activity of the loggerhead sea turtle and the raise of public awareness in 2002.

A similar contract has already been signed with the NGO MEDASSET since July 2002.

- WP 2.3 Training for local professionals

For the training of local professionals (farmers, fishermen), the following steps have been completed:

- Meetings with local farmers for the establishment of good cooperation
- Preparative meetings with the president of the local fishermen union (Keri)
- Participation of local fishermen to a informative workshop about fishing practices in the protected areas of Madeira (Portugal) and Cabrera (Spain).
- Collection of material for environmental friendly farming,
- Cooperation with AGROCERT (Accreditation body for certification of farming products) for the completion of environmental friendly farming code and the further certification of their agriculture products.

Actual output in this task corresponds to planned progress.

No significant problems were encountered so far.

Task 3: Upgrading, promotion and exploitation of the environment actions

Action concerned all the Work Packages of this task, namely the **Dissemination of information** (Wp 3.1), the **Engineering and construction actions** (Wp 3.2), the **Upgrading, promotion and exploitation actions** (Wp 3.3) and the **Promotion and exploitation actions** (Wp 3.4). More specifically, it included the following activities:

- WP 3.1 Dissemination of information

In 2001, a substantial amount of information was given by the town information kiosk and the information station in Gerakas that is operating in cooperation with local resident and the NGO Archelon - STPS, while information slides shows were presented to the public (mainly tourists) by a group of eco-guides (technician workers). From July to October 2001, a general presentation of the NMPZ actions was organised weekly in 6 hotels in the area of the Park. About 100 awareness sessions were organised and 1600 persons were concerned (1000 Greeks and 600 foreigners) (See Annex 9).

In addition, through the wardening programme, more than 50000 users of the nesting beaches were given information on general issues concerning the *Caretta caretta* and the NMPZ' area.

Self-adhesive stickers concerning the park have been produced and distributed to the public during the tourist period, from the guard huts and information kiosks in the area.

In 2002, information is given to visitors at both Zakynthos' information center and Gerakas' information centre. The latter operates in cooperation with local residents and with the ARCHELON-STPS. The Zakynthos town information centre – located at the Municipal Movie Theatre “Foskollo” – features a permanent photographic exhibition, a video set showing documentaries, slide-show presentation equipment and other visual material concerning the NMPZ.

Furthermore, from the beginning of August 2002 an information kiosk will operate in Lagana's main street in cooperation with ARCHELON-STPS.

In cooperation with STPS, more than 20 slide shows presentations are conducted to hotels every week providing information about the biology and ecology of sea turtles.

Through the wardening programme, visitors of the nesting beaches are provided with information on issues concerning the NMPZ.

Following the successful collaboration with local stakeholders during the winter period, various activities concerning dissemination of information, like handing out of NMPZ leaflets, are carried out by the glass bottom boat businesses and the local tour-operators.

In an attempt to enhance active involvement of visitors in the activities of the NMPZ, a number of beach cleaning sessions were carried out in 2001 and 2002. Those who participated were mainly tourists, volunteers of the environmental organisations acting in the NMPZ area and scouts. In May, June and July beach cleaning operations were implemented in collaboration with the environmental organizations STPS, WWF and Medasset. A specific programme involving French scouts and volunteers was implemented in the NMPZ area that included beach cleaning, rehabilitation actions in Sekania area and recycling of solid wastes in collaboration with the Zakynthos Cleaning Association (See Annex 10)

The NMPZ also participated in several exhibitions that took place in Athens (YEHODE -Zapeio 28-29-30 June 2002, Okto dytika 27-28/April 2002) and in Zakynthos (Nautical week 30 June-7 July, Two day meeting in Strani 29-30 June 2002, Tour-operators and NMPZ workshop 27-28 May 2002, Town and culture congress 18-20 April 2002) using the information panels elaborated in the framework of Life-Environment programme (See Annex 11).

Pupils and students were also informed through two different kind of actions (See Annex 12):

- Guiding and awareness sessions for schools from Athens and from Zakynthos
- Publishing of a leaflet / comic with theme “Chelonionios Caretta: Operation Stavro-Arsonist”. 3850 leaflets were distributed to 27 elementary schools and 37 kindergartens in the whole island of Zakynthos.

Furthermore, there has been a top rank political briefing at the Ministry of the Environment, Physical Planning & Public Works (YPEHODE), as well as the departments of Central Administrative Functions, at the local level.

A website that presents the main actions implemented in the framework of the project is already on line (<http://www.nmp-zak.org/life/LifeEnv/>) since January 2002. At this address, the project objectives, the main tasks, the implementation plan and the relevant reports (eg. First Progress Report) are available.

- WP 3.2 Engineering, construction and other upgrading actions

- Information kiosks and Panels were constructed and placed on strategic points in the Park. An Information center was also established in Zakynthos' town (See Annex 13).

- There has also been a preparatory phase for the Keri Wetland management study involving:

- preliminary collection and evaluation of secondary material for the area, including base maps, other similar studies and surveys for the area
- a search for the most effective way of the involvement of the municipal and prefectural authorities
- the making up of a special working group.

- After fire damages at Sekania in October 2001, small scale works have been done to the area in order to prevent erosion problems on Sekania nesting beach. These works have been done by NMPZ, WWF-Hellas and Archelon-STPS volunteers.

- **WP 3.3 Upgrading, promotion and exploitation actions**

The awareness and information material that will be used in the interactive computers placed at selected spots (the two information centres at Zakynthos town and Geraka) is under design and in this one will be included an electronic version of the comic entitled “Chelonionios” (Nionios is a traditional Zakynthian name, while “chelona” means turtle in Greek). This material will be given to a software designer, who will, in turn, use it as a basic input in the creation of an interactive computer programme.

- **WP 3.4 Promotion and exploitation actions**

Following a report by the legal advisor of the NMPZ, concerning the procedure on Third Party Agreements, it was decided that a Public Tender will be used in order to select the consultancy that will elaborate the study for the management of the coastal wetland of Keri. The procedure was initiated on the 22nd of April 2002 (first publication on the bulletin of the Technical Chamber of Greece, as well as on national and local papers) (See **Annex 14**). Three consultancies participated in the procedure. However, an objection had been raised on the 17th of May 2002, by another (fourth) consultancy, based on the fact that the exclusion criteria in the RfT did not mention that the tenderer should hold a Professional License in Environmental Management. The Board of Directors of the NMPZ agreed that the objection should be sustained. As a result, the whole procedure had to go back to the initial stage (tender publication). Inevitably, the procedure was delayed by at least two months.

In all Work Packages but the WP 3.4, actual output is in line with planned progress. WP 3.4 has been delayed due to the objection to the Public Tender Procedure.

Apart from the time-consuming Public Tender procedure concerning the study for the management of the coastal wetland of Keri, no significant problems were encountered so far in this task.

Task 4: International cooperation with other Marine Parks seeking transfer of know-how and common problem solutions with reference to ICZM

Action in this task included the following:

- Identification of the main themes that have to be developed in the framework of international cooperation
 - Member of the EUROPARC Federation since 2001
 - Cooperation and first contact with various National Marine Parks in Spain, Italy, France, Portugal and Albany. Pre-elaboration of a framework agreement.
 - Networking and coalition building with key people working in Marine Parks and other Protected Areas in the EU.
 - Participation in different congress and workshops (See **Annex 15**):
 - a congress held in Zakynthos (13-15 December 2001) With theme “Sustainable tourism development: the contribution of Parks and Protected areas” and organised by the Ionian Islands Region Authority and the NMPZ. The Life-Environment project and its tasks were mentioned in the framework of the presentation made by the president of the NMPZ. For the purpose of this congress, a

database with all protected areas in the Mediterranean and especially those that have similar characteristics with the NMPZ was elaborated.

- Participation in a workshop in Majorca (28/01/2002-3/02/2002) – organised by the NMPZ and the environmental organisation Euronatur -concerning the management of protected areas. Specific reference was made to the Life-Environment project through the participation of two members of the NMPZ’ staff A. Kolokotsa and D.Vardakastani. More specifically, know-how transfer about themes like tourism management, public awareness and delineation of marine area was made through discussions with the management agency staff of the National Marine Park of Cabrera.

- Participation in a congress held in Roses-Spain (6/03/2002-10/03/2002) with theme “Mediterranean Symposium on marine and coastal protected areas” (Ministry of Environment of the government of Catalonia/ UNEP RAC/SPA). A presentation with title “Promotion of an integrated coastal area management and of a sustainable tourism development: the case of the National Marine Park of Zakynthos” was made by the Life-environment project manager L. Sourbes (See Annex 15). In this paper, all the activities that take place in the framework of the Life-environment project were presented. The number of participants and presentations made (about 80) as well as the awareness material exhibited gave an important opportunity for know-how transfer.

- Participation in a workshop held in Madera – Portugal (19/03/2002-27/02/2003) concerning the management of Marine Parks. Presentation of the National Marine Park of Zakynthos and its actions was made by the NMPZ’ coordinator K. Katselidis. Specific reference was made to the Life-Environment project.

- Participation in an international workshop in Zakynthos (27/28-05/2002) with theme “Tour operators and the Zakynthos Marine Park: Funding conservation, Upgrading the tourism Product” and organised by the NGOs Euronatur and Bellagio Forum for sustainable development and the NMPZ. Specific reference was made to the Life-Environment project in two presentations made by the NMPZ’s president I. Pantis and the Life programme manager L. Sourbes.

It should be noted that as a result of the networking efforts mentioned above, the NMPZ staff was invited to participate in the aforementioned congresses and thus no travel expenses have been charged to the project (except from the workshop held in Madeira).

Last but not least, the NMPZ participate, in cooperation with ICRAM – Central Institute for Applied Marine Research, in a proposal to Express of Interest for a “Network of excellence” in the 6th Framework Programme for Research. In total, 56 research foundations and/or organisations in Europe will participate to this network.

Actual output is in line with planned progress.

No significant problems were encountered in this task, so far.

Task 5: Programme management of the whole management project

Action concerned two of the three Work Packages of this task, namely the **Programme planning finalisation** (Wp 5.1) and the **Management tasks (Progress reports and meeting preparation)** (Wp 5.2). More specifically, it included the following activities:

- **WP 5.1 Programme planning finalisation**

An initial action plan was elaborated along with an internal allocation of functions and responsibilities and an internal Gant chart for the completion of the planned tasks. It should be noted that the revision of the action plan is considered an important on-going process that will continue until the end of the project.

- WP 5.2 Management tasks

Since the beginning of the project, as stated in the proposal, issues concerning programme management consulting services, were regulated by a framework agreement between the NMPZ and the consultancy ENVIPLAN G. Tsekouras & Associates. Following a report by the legal advisor of the NMPZ, concerning the procedure on Third Party Agreements, it was decided that a Public Tender will be used in order to select the consultancy that will be responsible for supporting the NMPZ in programme management, for the remaining period of the project. The procedure was initiated on the 28th of April 2002 (first publication on the bulletin of the Technical Chamber of Greece, as well as on national and local papers) (See Annex 16). Only two consultancies participated in the procedure, i.e. ENVIPLAN G. Tsekouras & Associates and LAMANS S.A. Their tenders were opened on the 10th of May 2002. After careful examination and evaluation of the two tenderers, it was decided that a contract will be signed with the consultancy ENVIPLAN G. Tsekouras & Associates.

The first progress report was prepared and sent to the EC Life-Desk Officer on time (December 2001). Since the beginning of the project, there have been regular progress evaluation meetings that have contributed to a more effective project implementation (See Annex 17 for minutes of the meetings).

Actual output is in line with planned progress. However, the contract with the Programme management consultant has not been signed yet and thus the advance payment has not been initiated.

Apart from the time-consuming Public Tender procedure concerning the programme management consulting services, no significant problems were encountered so far.

Task 6: Monitoring and evaluation system of the management agency of NMPZ

The following activities have been implemented so far:

- The establishment of evaluation criteria / indicators on important parameters concerning the effectiveness of the programme and the environmental condition of the protected area. The programme manager in collaboration with the consultants provided by the external assistance coordinates this process and the selection of relevant inputs.
- The development of a Geographic Information System and the selection of cartographic material in a digitised form. At this stage important compatibility and up to date data problems has been resolved (e.g. correction of boundary limits, software harmonisation etc). The specifications for the development of the G.I.S have also been completed. A search for the most suitable software has been carried out in order to achieve compatibility with the existing software and hardware of the agency. The identification of the most suitable layers of spatial information and of the available digitally processed maps, has also been completed.
- The identification and delineation of habitats within the park area (Natura 2000 site). Previously defined habitat polygons were updated, while more accurate coordinates were used. This task combined fieldwork with work on the PC using the ArcView G.I.S. software and statistical analysis of raw data. This work was conducted in collaboration with three external collaborators, A. Hartley, L. Mottram and G. Schofield.
- Processing of Autocad layers that had been created in the past, as part of the Marine Park Environmental Study. The latter were imported on ArcView G.I.S. software. New themes were created and a projection was applied using the GRS 80 system.
- Processing of maps that present the activities developed in the area of NMPZ (See Annex 4, 6, 7).

Actual output is in line with planned progress.

No significant problems were encountered so far.

List of deliverables concerning all tasks

WP ID ⁱ	WP Title ⁱⁱ	Start Date ⁱⁱⁱ	End Date ^{iv}	Actions	Planned deliverables	Actual deliverables (01/06/2002—25/07/2002)
1.1	Good Environmental Practices Code	01/06/2001	31/05/2002	Formulation of a long term code of conduct for the various economic and social actions of the participants	Regulations for good environmental practices	Regulations for good environmental practices (Artificial lights, glass bottom boat operators, Tour operators)
1.2	Collaboration scheme	01/12/2001	31/05/2004	Promotion of active participation of the stakeholders and companies that are located in the Park area	Charter for good environmental practices Nominal awards (gold, silver and bronze turtles) for effort, enthusiasm and effectiveness	Charter for good environmental practices (Glass bottom boat operators)
1.3	Eco Management Audit Scheme	01/12/2001	31/05/2004	Programme for the accreditation and certification for all economic activities (hotels, restaurants, tour-operators, rooms to rent...) in the area of the National Park in line with the EMAS regulation as well as the ISO 14001, according to the Environmental Management Scheme.	Registration to Eco Management Scheme and acquisition of the EMAS graphic symbol for the companies that complete the criteria and are located in the area of the National Park.	Listing of accreditation bodies in Greece + technical characteristics
2.1	Marine area delineation network	01/06/2001	31/05/2004	Delineation and marking of the marine part of the Park using special buoys (in collaboration with the Port Police), in order to facilitate users (fishermen, cargo vessels, tourist craft, recreation craft, etc...) in observing the legal limits for speed and access	Network of buoys indicating the protection marine zones within the area of Lagana's Bay.	Network of buoys indicating the protection marine zones within the A area of Lagana's Bay. The B and C area are partially delineated

2.2	Public Awareness and surveillance	01/06/2001	31/05/2004	Public Awareness and wardening programme, with the participation of local residents, for the protection of the area and the provision of information for visitors. The wardening programme will also cover fire-prevention actions for the Park's region, in collaboration with the fire brigade, including the provision of necessary infrastructure and equipment.	Annual report in regards with the disturbances of the nesting turtles. Wardens' equipment (uniforms, binoculars, vehicles, etc...). Observation posts. Crossbars limiting the access to the nesting beaches.	Evaluation report of implementation of protection measures in the NMPZ (2001), action plan for wardening 2001-2002, warden's equipment (150 uniforms in 2001, 20 uniforms in 2002), 8 warden huts
2.3	Training and awareness of local professionals	01/06/2001	31/05/2004	Guidance of the area's coastal fishermen, farmers for the good environmental practice during their job's activities including training and awareness sessions	Report covering the training of the fishermen and farmers, which also evaluate the influence of the training. Leaflet presenting this action.	
3.1	Dissemination of information	01/06/2001	31/05/2004	Production of information material (including leaflets, posters, CD ROMs and website) and promotion through local agencies and tour operators	Set of leaflets, posters and CD ROM presenting the National Marine Park of Zakynthos, the flora and fauna, the Management Agency public awareness activities.	NMPZ graphic symbol sticks (1050), 4000 leaflets / comic "chelonionios" for public awareness

3.2	Engineering and construction actions	01/06/2001	31/05/2004	Installation and maintenance of the necessary facilities, including trails, boardwalks, observatories, panels, demarcation fences and information stations where visitors can learn about the values of the area, the protection measures and how to participate to the active protection of the area;	Observatories in the most remarkable sites of the protected area, Information stations and info points at the entrance points of the Zakynthos' island and into the limits of the Park, fences and boardwalks in sensitive areas (sand dunes) or specific areas (forest, cliff), trails.	8 information panels for nesting beaches, 3 general information panels (airport, Zakynthos harbour), one provisory information centre at Zakynthos municipal theatre, one information kiosk (Lagana)
3.3	Upgrading, promotion & exploitation actions	01/06/2001	31/05/2003	Upgrading, promotion and exploitations actions including installation of interactive computers at selected points, providing more in depth information for visitors about the area, species, habitats and other characteristics of the island.	Interactive computers focusing on different species and habitats according to their location, tables of orientation.	Graphics for interactive computer programme (chelonionios)
3.4	Promotion and exploitation actions	01/06/2001	31/08/2002	Conducting of the necessary studies for the management of the coastal wetland of Keri and the management of human activities in the overall area	Final report and proposals for the integrated management of the Keri's wetland	
4	International cooperation	01/06/2001	31/05/2004	International cooperation with other Marine Parks and marine protected areas, seeking know-how transfer and common problem solutions that refer to I.C.Z.M.	Contacts and publication about the common problems concerning I.C.Z.M.	Database with Mediterranean protected areas, 3 workshops and 2 conferences (two articles for publication)
5.1	Programme planning finalization	01/06/2001	31/11/2001	Strategy and methods – conversion of goals & objectives in operational steps by tasks – finalization of work schedule	Final programme plan	8 technical meetings, draft of operational plan

5.2	Management tasks	01/06/2001	31/11/2003	Progress reports and meeting preparation	Five progress reports	First progress report (1/06/2001-30/11/2001)
	5.3 Final technical report	01/03/2004	31/08/2004	Final technical and financial report	Final technical and financial report to the Commission Audit	
	6 Evaluation system and planning tool	01/06/2001	31/05/2004	Monitoring and evaluation system based on a GIS database	GIS database	Database and maps about NMPZ actions already undertaken in the framework of Life project

6. DISSEMINATION ACTIVITIES AND DELIVERABLES

The dissemination plan that was followed, is based on two distinctive sets of actions:

- ❖ Set 1 is aiming at the local level. Action is targeted at visitors as well as local operators.
- ❖ Set 2 is globally oriented. Particular attention is given to other Parks and Protected areas.

In each set of actions, two main target groups are used:

- a) the permanent population (residents, owners of tourist businesses, various socio-professional groups, every type of user of the area in general, officials and employees of public services and other agencies at local and prefectural level, NGOs, etc.); and
- b) visitors/tourists (with general and specialised interests) from both Greece and abroad.

In the beginning of project implementation, work was focused mainly at the local level. The tools that are being used include the following:

- Communication with people living or working at (or near) the Marine Park, on a personal level. Their reaction revealed that they preferred to be informed about the project's progress (and the work of the NMPZ in general) on a personal basis than read about it on the newspapers. This approach allowed for a variety of comments to be made by locals concerning the protection and management approaches applied in the area as well as their notion of the concept of sustainable development and thus provided the NMPZ with valuable feedback.
- A visitors awareness and information campaign. A twofold approach is followed. On the one hand, programmes concerning awareness and / or participation in eco-activities (like the collection of garbage from beaches) are organised for individuals. On the other hand, custom made programmes are elaborated for groups such as schools, scouts, members of NGOs and other volunteers. Once more, a distinction is made between awareness (usually lasting one to three days and have a recreational orientation) and participation programmes (usually lasting up to one or two weeks and have an educational orientation).
- Meetings with local operators. During these meetings an effort is made to reach agreements on the basis of a Code of Good conduct, concerning the environmental protection of the Marine Park.
- Contacts with local agencies, institutions and NGOs
- Press releases and announcements in the local newspapers and TV channels
- Written material (Leaflets, handouts, Good Practice Codes, etc.)

As more experience is gained and contacts with other parks around the world is made, a global orientation of dissemination activities is also developed. To this end, the following tools are used:

- Presentation of papers in international conferences and workshops, held abroad.
- Contacts with Management Bodies of Parks and Protected areas of a similar character.
- Organisation of workshops, symposia and forums concerning Marine Parks and the sustainable management of protected areas
- A bilingual presentation of the project on the internet (<http://www.nmp-zak.org/life/LifeEnv/>)

A detailed presentation and analysis of the implementation progress (including comments on the activities, the output and a list of deliverables) of the Dissemination task is provided in §6.

A revision of the dissemination plan is not considered necessary at this stage.

7. EVALUATION AND CONCLUSIONS

The implementation process that was presented in the initial proposal has not changed significantly. The National Marine Park of Zakynthos, remains the only participant (beneficiary) in the project, with ENVIPLAN G. Tsekouras & Associates providing programme management consultancy services. The beneficiary is co-financed by the following:

- a) the Municipality (Dimos) of Laganas,
- b) the Municipality (Dimos) of Zakynthos,
- c) the Prefecture (Nomarchia) of Zakynthos,
- d) the Ministry of Environment, Physical Planning & Public Works.

The most important alteration in the implementation process concerns the replacement of the framework agreement between the NMPZ and ENVIPLAN G. Tsekouras & Associates by a contract valid from August 2002. The main consultants working on the project are:

- G. Tsekouras, Urban and Regional Planner
- C. Tsoutsou, Architect – Environmental Planner
- A. Charalambous, Environmentalist - Planner

As a whole, programme progress follows the time schedule established. The main problems encountered so far are presented in Box 8.1.

At this stage of implementation, the application of the ZANTECOAST programme in the area of Laganas Bay has contributed to:

- the safeguarding, in perpetuity, of the natural heritage and preservation of the ecological balance in the area where the programme is to be implemented, in conjunction with the development of activities that are in harmony with the conservation of nature and the landscape;
- increased participation and information of the island's inhabitants in the decision-making process for management of the coastal zone;
- increased flow of information to stakeholders and participation of professional groups such as tour operators, hoteliers, fishermen, etc.;
- the protection of the natural resources and landscape from increased disturbance and pollution resulting from lack of appropriate infrastructure and planning;
- integrated planning for the development of services, infrastructure and a monitoring programme for management of the coastal zone;
- the reduction to a minimum of the disturbance to the natural environment within the habitats of Laganas Bay (nesting beaches, sand dune system, forests, marine habitats, etc...);
- the promotion of the idea that "nature, local residents and visitors can coexist and benefit from their cooperation".

Box 7.1

Persisting problems with the conduct of economic activity actors within the Park

Since the antagonism between operators remains very strong, it is not always easy for them to follow the adopted code of conducts. However, there's a need for amelioration of the quality of services from tour-operators because many visitors are asking for better quality. This fact will contribute to the better implementation of the code of good environmental practice.

EMAS

Observed delay in implementation of EMAS is due to lack of experience in Greece. Public tender will be completed by September 2002.

Keri lake study

The Keri Lake study has been delayed due to the objection to the Public Tender Procedure. In the beginning of August 2002 the public tender procedure is started again and will be completed by the middle of September 2002.

The environmental benefits of the project concerns mainly:

- the more effective conservation of the *Caretta caretta* sea turtle
- the better implementation of protection measures within the park area
- more environmental friendly activities by local operators.

However, at this stage, it is not possible yet to assess in quantitative terms the exact impact of the project on the environment, nor to conduct a cost-benefit analysis. Such a task will be elaborated in the final report.

The programme has created the initial momentum for dealing with the immediate and pressing needs of the area. This momentum, in combination with:

- the management and monitoring tools delivered by the project, e.g. the marine delineation network, the environmental information mechanisms supported by the GIS
- the overall benefits from the awareness and information activities

is expected to make a decisive contribution to the promotion of sustainable development in the Marine Park area.

Innovative aspect

As a result of the importance of the NMPZ, which is the first fully operational Marine Park in Greece, the demonstration role of the project has been very high. The NMPZ is viewed by Greece's environmental authorities as a first step towards setting the standards for the management of protected areas in Greece, and especially for the management of coastal protected zones.

For the first time in Greece, an integrated wardening programme has been launched in order to manage, conserve and guard the protected area in land and sea.

In addition, new techniques have been used in the delineation of the marine area of the NMPZ (Harmony system).

Effectiveness of dissemination activities

At the same time, taking advantage of the fact that the Park has been created in an area that is among the 4-5 most important tourist destinations in the country, the project has achieved a very significant dissemination effect, not only on local people and professional groups, but also on international operators (tour operators, hotel companies, etc.) that are active on the island, as well as on visitors.

The effect on visitors can be observed by a better behaviour *in situ* and the respect of protection measures. On the other hand, the behaviour of stakeholders and local authorities has changed since they cooperate more closely with the management agency of the NMPZ.

Job creation:

Project implementation has contributed in the creation of 4 new job positions, on a permanent basis.

- 1 civil engineer (from 01/06/2001). He is responsible for monitoring the building activity within the Park area, reporting any illegal building activity to the relevant authorities, creating a database with all existing buildings in the Marine Park area and he's also responsible for supervising all technical constructions and infrastructures of the NMPZ. His involvement in the project is 10,5 person-months until the 31st of June 2002.

- 1 Junior scientist (from 01/06/2001). She is an assistant in the wardening programme, responsible for the smooth running of the programme on the field. Her involvement in the project is 11,7 person-months until the 31st of June 2002.

- 1 Junior scientist (from 01/10/2001). He is involved in tasks such international cooperation, public awareness programme and informative material directly linked to the Life Environment project. His involvement in the project is 9 person-months until the 31st of June 2002.

- 1 technician worker (from 1/04/2002). She's involved in the follow up of infrastructures and equipment used in the framework of the project and she's also occupied into the wardening programme. Her involvement in the project is 3 person-months until the 31st of June 2002.

Furthermore, project has contributed in the creation of seasonal job positions.

In 2001;

- 3 Warden supervisors were hired from June until the middle of October. Their main task was to supervise the wardens spread in 8 nesting beaches of the NMPZ. Their involvement in the project was 13.5 person-months.

- 42 wardens were hired from June until the middle of October. Their main task was to warden the nesting beaches within the NMPZ area and to provide visitors with information about NMPZ' protection measures, and the importance of the habitats. Their involvement in the project was 189 person-months.

- 7 technician workers were hired from June until the middle of October. They were involved in the dissemination of information and the public awareness programme. Their involvement in the project was 31.5 person-months.

In 2002;

- 3 Warden supervisors were hired in June 2002. Their main task is to supervise the wardens spread in 8 nesting beaches of the NMPZ. Their involvement in the project until now is 3 person-months.

- 36 wardens were hired in June 2002. Their main task is to warden the nesting beaches within the NMPZ area and to provide visitors with information about NMPZ' protection measures, and the importance of the habitats. Their involvement in the project until now is 35.5 person-months.

In total , the new job creation regarding all tasks of the Life-Environment project reached 306.7 person-months.

Relevance to EU legislative framework

The project's approach to sustainable development is in line with the strategy adopted by the Fifth Action Programme, i.e. identifying the right balance among the three aspects of human activity (social structure, economic development and environmental conservation) in order to achieve a lasting and environmentally-aware development. It addresses all five implementation instruments used in the 5th Action Programme, while the focus is placed on the "promotion of land-use planning integrating the environment".

Undoubtedly, the project has already offered various interesting lessons to environmental planners, since:

- It emphasised the importance of strengthening local environmental organisations, revealing the need for a more active role by the leaders who should mobilise, organise and represent local population
- It showed that as indifference reproduces itself and leads to further deterioration of the already negative condition of the local ecosystem, so does environmental awareness, creating an impetus for both residents and visitors to respect their living environment
- It proved that co-ordinated multi-level intervention by public authorities (e.g. E.U., Greek Ministry for the Environment, Physical Planning and Public Works, Municipalities of Zakynthos, NMPZ) can be successful in a bottom-up, democratic and participatory way
- It served as a reminder of the existence of many different local interests and political powers (even in such a small area) fighting for their own narrow, sectoral goals.
- Finally, it revealed that organised societies, even in remote areas, are neither static nor dormant. Local people manage to adapt to many situations by mobilising formal and informal mechanisms and by using available customary institutions and practices (through links with elected officials, community organisations, people with the same interests, etc.).

8. PLANNED PROJECT PROGRESS

The actual and planned project progress are presented in table 10.1.

Table 8.1. Implementation Progress (Gantt-chart)

LIFE00 ENV/GR/000751		ZANTECOAST ICZM: Demonstration Actions in the National Marine Park of Zakynthos															
Tasks		2001			2002				2003				2004				
		2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	
Collaboration and involvement of stakeholders																	
Good Environmental Practices Code	Baseline	.	...	...	...	..						
	actual		xxx	xxx	xxx	xx											
Collaboration scheme	Baseline			.	...	...	...	...	...	...	...	...	...	..
	actual			x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Eco-management audit	Baseline			.	...	...	...	...	...	...	...	...	...	..
	actual				xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Environmental Management and Protection																	
Marine area delineation	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual		xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Public awareness & surveillance	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Training & awareness of local professionals	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual		xx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Upgrading, Promotion & Exploitation actions																	
Dissemination of information	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Engineering & construction actions	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Upgrading, Promotion & Exploitation actions	Baseline	.	...	...	...	...	...	...	..
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
Promotion & Exploitation actions	Baseline	.	...	...	...	...	...				
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx								
International cooperation	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual		xx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			
Programme Management																	
Programme planning finalisation	Baseline	.	...	..										
	actual	x	xxx	xx													
Management tasks	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	...
	actual	x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx			
Final technical & financial report	Baseline												.	...	..
	actual												x	xxx	xx		
Monitoring & evaluation system (G.I.S.)	Baseline	.	...	...	...	...	...	...	...	...	...	...	...	..
	actual		x	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xx			

.....
xxx xxx

Initially Planned progress
Actual (& expected) Progress

Project activities that are planned to be implemented in the future, include:

- Regulations for good environmental practice & briefing of stakeholders
- Completion of EMAS specification & call for tender
- Contacts & training of local farmers & fishermen
- Completion of the Keri wetland management study
- Continuation of all sub-actions and tasks which are scheduled to be completed at the end of the project period

9. COMMENTS ON FINANCIAL REPORT

In comparison with the initial proposal, the main discrepancy on the budget post is the one belonging to the external assistance. This discrepancy is due to the delay for public tender concerning the Keri's lake study and the one concerning the EMAS programme. Although the contract with the external assistant is valid from August 2002, the expense is not yet incurred.

Table 9.1 Breakdown of expenditure

<i>BREAKDOWN OF EXPENDITURE</i>				
Cost category	Total cost according to the Commision's decision* (in Euro)	Costs incurred from the start date to 25.07.2002 (in Euro)	% (actual over planned cost)	% (each item over total)
1. PERSONNEL	868.893	412912	47,52%	79,91%
2. TRAVEL	44.750	5175	11,56%	1,00%
3. EXTERNAL ASSISTANCE	292.050	23525	8,06%	4,55%
4. DURABLES: TOTAL NON-DEPRECIATED COST	270.000	47536	17,61%	9,20%
- INFRASTRUCTURE SUB-TOT.	<i>180.000</i>	30937	17,19%	5,99%
- EQUIPMENT SUB-TOT.	<i>90.000</i>	16600	18,44%	3,21%
- PROTOTYPES SUB-TOT.	-			
5. CONSUMABLES	40.000	10590	26,47%	2,05%
6. OTHER COSTS	29.000	4114	14,19%	0,80%
7. OVERHEADS	75.000	12871	17,16%	2,49%
SUM TOTAL	1.619.693	516723	31,90%	100,00%

APPENDICES

ANNEX 1: Information for local operators about artificial lights use

- Document with guidelines and specifications concerning the use of artificial lights by hotels and rented rooms located close to the nesting beaches.

ANNEX 2: Code of good practice and endorsement for turtle spotting boat owners

- Code of Collaboration with the turtle spotting boat owners and stakeholders involved in the turtle spotting activity.

ANNEX 3: Collaboration with the local tour- operators.

- List of local Tour-operators interested in collaborating with the NMPZ for the implementation of code of conduct for environmental friendly behaviour

ANNEX 4: Delineation of the marine area of the N.M.P.Z.

- Request for authorization for NMPZ' marine area delineation from the Ministry of Marine activities.

- Authorization from the hydrographical service

- Maps that represent the installation of Harmony system and the installation of buoys.

- Photos of all the process for NMPZ' marine area delineation

ANNEX 5: Permanent mooring in the NMPZ' marine area

- Plan of permanent mooring facilities for the marine area of N.M.P.Z.

ANNEX 6: Wardening and public awareness programme

- Evaluation on implementation of protection measures in the National Marine Park of Zakynthos in 2001

- Wardening & public awareness action plan for the year 2002

- Photos for wardening infrastructure and equipment

- Map of Warden huts location

ANNEX 7: Collaboration of the N.M.P.Z. with central administrative services.

- Decisions from the Management body of the NMPZ about illegal practices in the NMPZ' area

- Letters from the Management Agency to central administrative services about illegal practices

- Press release about the actions of central administrative services.

ANNEX 8: Co-operation with Environmental organizations.

- Contract about the monitoring activity and raise of public awareness with the NGO Medasset for the year 2002.

ANNEX 9: Dissemination of information

- Poster for hotel' slide show presentation and stick distributed to visitors

ANNEX 10: Involvement of visitors in the activities of the N.M.P.Z.

- Two weeks Programme for beach cleaning and rehabilitation actions

- Photos about the implementation of the awareness-sensitization programme.

ANNEX 11: Participation of the N.M.P.Z. in exhibitions

- Exhibition at Zapeio center in Athens 28-30 June 2002 (YPEHODE)

ANNEX 12: Environmental education of pupils and students.

- Photos about environmental education of pupils and students

- Leaflet/comic distributed to Zakynthian's elementary schools and kindergartens.

ANNEX 13: Engineering, construction and other upgrading actions.

- Letter of information to Zakynthos and Lagana's municipalities about the information center and information kiosk being installed.
- Plan of the information center and kiosk as planned by the NMPZ' staff
- Maps about the Information panels and information center and kiosk location.
- Photos about public awareness infrastructure and equipment 2001-2002

ANNEX 14: Promotion and exploitation actions.

- First public announcement for the management of the coastal wetland Keri as it was published.

ANNEX 15: International cooperation with other Marine Parks.

- Article for the international congress held in Roses (Spain) in March 2002.
- Photos about the international cooperation that took place in the framework of conferences and workshops.

ANNEX 16: Management tasks

- Public announcement for the selection of consultant for the management of the Life-Environment project as it was published
- Final decision about the selected consultants

ANNEX 17: Meetings.
