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MEDITERRANEAN ACTION PLAN

Meeting of Experts on the evaluation
of the implementation of the Action Plan
for the Management of the Mediterranean
Monk Seal

Sabat, 7-9 October 1994

**REPORT OF THE MEETING OF EXPERTS
ON THE EVALUATION OF THE IMPLEMENTATION OF THE ACTION PLAN
FOR THE MANAGEMENT OF THE MEDITERRANEAN MONK SEAL**

Introduction:

1. In conformity with the decisions of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) and its related Protocol for the biennium 1994/1995 (Eighth Ordinary Meeting, Antalya, Turkey, 12 - 15 October 1993), the Regional Activity Centre for Specially Protected Areas (SPA/RAC) has organized a meeting of experts for the evaluation of the implementation of the Action Plan for the management of the Mediterranean monk seal.

The meeting has been organized in collaboration with the Secretariat of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Direction des Eaux et Forêts et de la Conservation des Sols (Ministère de l'Agriculture et de la mise en valeur agricole du Royaume du Maroc), National Focal Point for SPAs.

Agenda item 1: Opening of the meeting

2. The meeting was opened on Friday, 7 October 1994, at 09.00 am by the representatives

- of the Direction des Eaux et Forêts et de la Conservation des Sols (Ministère de l'Agriculture et de la mise en valeur agricole du Royaume du Maroc) namely its director, Mr Abdelwahab KARMOUNI, who welcomed the participants and expressed the great interest of its government in the success of this scientific meeting, held in the framework of the Barcelona Convention. He also briefly exposed the actions undertaken by Morocco for the conservation of the monk seal and its habitat.

- of the Regional Activity Centre for Specially Protected Areas (SPA/RAC) namely its Director, Mr Mohamed SAIED, who warmly thanked Moroccan authorities, and in particular the Direction des Eaux et Forêts et de la Conservation des Sols for their willingness to host the meeting and their important contribution to its organization. He briefly recalled the main initiatives taken in the framework of the Barcelona Convention for the protection of the species, and in particular the adoption of the Action Plan for the management of the Mediterranean monk seal, of which he also summarized the main points. He affirmed that, in consideration of the gravity of the present situation concerning the conservation of the species, a strengthening of the actions accompanied by the establishment of a mechanism for their coordination was extremely necessary. He finally expressed the willingness of SPA/RAC to play an active role in this regard.

- of the Council of Europe, as a member of the Secretariat of the Bern Convention, Mr Eladio FERNANDEZ GALIANO, who thanked the Moroccan authorities for their hospitality. He expressed his satisfaction towards the fact that Morocco had recently expressed its willingness to ratify the Bern Convention, and congratulated the country for the measures adopted to control the impact of fisheries on monk seal populations. He

briefly summarized the initiatives taken in the framework of the Bern Convention, in particular the establishment of a group of experts on monk seal in 1986 and the meetings of Madeira in 1989 and of Antalya in 1991. He finally stressed the importance of a thorough coordination among the different regional Conventions.

3. The meeting was attended by the representatives of the following countries: Croatia, Cyprus, France, Greece, Italy, Morocco, Portugal, Spain, Turkey. In addition, the representatives of Institut Royal des Sciences Naturelles de Belgique, Sea Mammal Research Unit, Seal Rehabilitation and Research Centre of Pieterburen, IUCN, World Wide Fund for Nature (WWF), the Hellenic Society for the Protection of the Environment and Cultural Heritage (ELLINIKI ETAIRIA), Hellenic Society for the Study and Protection of the Monk Seal, UNEP/CMS Secretariat were also present as invited observers. A list of participants is enclosed as Annex II to this report.

Agenda item 2: Rules of procedure

4. The meeting agreed that the Rules of Procedure applicable to meetings and conferences of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution should apply *mutatis mutandis* to its discussions (UNEP/IG.43/6, Annex XI).

Agenda item 3: Election of the Bureau

5. According to article 20 of the rules of procedure, the meeting unanimously elected among the representatives of the Contracting Parties:

- a chairman: the representative of Morocco
- two vice-chairpersons: the representatives of Croatia and Cyprus
- a rapporteur: the representative of Italy

Agenda item 4: Adoption of the Agenda and organization of work

6. The provisional annotated agenda prepared by the Secretariat under the reference UNEP(OCA)/MED WG.87/2 was proposed for approval to the meeting. Several participants made comments on the document.

7. The representative of France noted that the proposed agenda was insufficient to answer the most pressing subjects, in particular the project proposed by France concerning the captive breeding of the species.

8. In its reply, the Secretariat draw the attention of the participants to the fact that the general items of the meeting were provided for by the Action Plan, and that the subject

of interest for the French delegation could find a suitable place of discussion in both Agenda item 6 and 7. Anyway, the meeting was not expected to be focused on a project concerning only one or few of the Parties.

9. The representative of ELLINIKI ETAIRIA proposed the addition of a new agenda item under the title of "Other business".

10. The meeting finally adopted the agenda with the modification proposed by the representative of ELLINIKI ETAIRIA. The revised agenda is enclosed as Annex III.

Agenda item 5: Evaluation of present status and trend of monk seal populations

11. The secretariat briefly introduced this agenda item. He noted that information and data on the status and trend of the Mediterranean monk seal are still rather fragmentary, while indeed they represent the basis for taking appropriate decision on conservation measures. He then presented the working document UNEP(OCA)/MED WG 87/3. He informed the meeting that the document was the section concerning the status and protection of the monk seal of a more comprehensive information document on the biology, distribution and protection of this species, under preparation by the SPA/RAC and the Parc National de Port-Cros. He invited the representatives of the countries to give their opinion and comments on the relevant part of the document with a view to its updating and publication.

12. The representative of Croatia, Cyprus, Greece, Italy, Morocco, Portugal, Spain, Turkey presented the situation concerning the legal protection, status, trend and threats of the Monk Seal in their respective countries. The reports relevant to the different countries, as supplied to the Secretariat by the different delegations, are attached to the present report as Annex IV.

13. Some additional information concerning the population of the Cap Blanc Peninsula was given by the representative of Spain presently involved in a study programme on that population. He informed the meeting that 68 pups had been recorded in the last 12 months.

14. Some information on the genetic structure of the population was given by the representative of the Sea Mammal Research Unit. On the basis of recent studies on mitochondrial DNA, it seemed possible to affirm that the monk seals found along Greek coast are genetically identical among them, while they show differences with and seem to some extent isolated from the populations of the Western Mediterranean and the Atlantic. These results had however to be taken with some caution, due to the low number of animals examined, especially for the Western Mediterranean population.

15. The representative of Cyprus noted that a similar genetic pattern was shown by two species of sea turtles, *Chelonia mydas* and *Caretta caretta*.

16. The representative of Turkey gave some complementary information on the Monk seal population of the Black Sea and Marmara Sea. It seems that only two seals survive in the Black Sea, and two others are known to be present in the Marmara sea. The Marmara Sea is now effectively protected. He informed the meeting that a project to transfer the isolated animals from the Black Sea to the Marmara Sea will be examined in the future.

Agenda item 6: Evaluation of the implementation of the Action Plan for the management of the Mediterranean monk seal

17. The chairman briefly introduced this agenda item, and invited the representative of the countries and of the other organizations and institutions to present their activities related to the implementation of the Action Plan for the management of the Mediterranean monk seal.

18. The representatives of Greece, Morocco, Portugal, France and Turkey as well as those of HSSPMS, Elliniki Etairia, WWF, and the Institut Royal des Sciences Naturelles de Belgique presented their activities and plans to the meeting. The full texts of these presentations are reproduced in Annex IV.

19. Mr E. MAHE, on behalf of the " Ministère de l' Agriculture et de la mise en valeur agricole - Direction des eaux et forêts et de la conservation des sols", presented a project for the establishment of a National Park in the region of Dakhla, expected to include within its boundaries the "Côte des phoques". He described the main elements of the zoning and of the management plan proposed for the park. He also gave some details on the financial aspects of the project, estimated to about 14,000,000 Moroccan Dirhams, for the phase of its establishment.

20. Positive comments to the project were made by several delegations. The representatives of the Secretariats of the Bern and Barcelona Conventions expressed their willingness to support the project about the relevant international financing institutions. The representative of IUCN expressed the interest of its organisation to the project and offered the technical support of IUCN Species Survival Commission.

21. On the request of the Secretariat, the representative of IUCN, Mr P. Reijnders, made a synthesis and a global evaluation of the action undertaken so far for the protection of the Monk Seal. He recognized 4 main types of actions.

A. Legal protection. It has been established in nearly all countries of past and present occurrence of the species, except apparently Lebanon and Libya. For some countries it is not clear whether the legislation protects the species throughout the year. Progress has therefore been made, and the countries that have not extended yet legal protection to the Monk Seal, should be encouraged to do it.

B. In situ protection. The establishment of a network of marine protected areas is one of the actions envisaged by the Action Plan. Only two protected areas effective for the

protection of the species have been established so far, Desertas Islands and Northern Sporades. Some countries have introduced protection measures, e.g. regulation of fisheries. The experience of the Parks in Madeira and Northern Sporades is certainly positive. The numbers of specimens observed are stable or slightly increasing already in the relatively short period so far. Apart from the potential direct contribution in the sense of preventing human impact on the colonies, another positive offspring of protected areas is the increased awareness of the fishermen community and general public.

Given the positive outcome of these experiences and, on the other hand the very limited numbers of protected areas established, it is concluded that this part of the Action Plan is not achieved and deserves priority for implementation in the near future.

C. Research, data collection and related activities. The aim of these activities is to provide information on the conservation status of the species and enable to design an adequate conservation strategy, including means to check the efficacy of and improve conservation measures. Many studies have been undertaken and are ongoing to investigate habitat requirements, occurrence and numbers of seals. These studies ranged from inquiries to photo-identification and radiotelemetry. A lot of data on occurrence and numbers of animals in certain areas, interaction with fisheries and so on, have been obtained. Most of the information is either published or publishing, and many data are archived in the Register. Until recently, activities were mainly concentrated on Madeira, Greece, and Turkey; many data on the other Atlantic population are now accumulating. The progress here is really remarkable and should encourage all range countries and involved sponsors to continue.

However, distinguishing the information obtained to assess a) the distribution pattern and b) trends, it can be concluded that :

- progresses have been made on the knowledge of distribution patterns in different areas;
- range extent and movements of animals are insufficiently known;
- trends in population / colonies sizes are at present difficult even to assess, let alone to quantify.

Information on feeding ecology (prey availability as well as preference/ choice) is insufficient, while it can be important in addressing conflicts with fishermen. Actions such as the rehabilitation activities and the preparation of the pilot feasibility study on captive breeding have contributed in the identification and evaluation of possible conservation measures other than *in situ* protection.

Because of this lack of concrete information it has proved to be difficult to evaluate the "weight" of the different conservation measures (rehabilitation and captive breeding included) with respect to their contribution, their relative importance and related urgency. It is concluded that continuation of monitoring is necessary, focused on movements and population trends; research on feeding ecology is also advisable.

D. Public awareness. Public awareness campaigns, including those ones towards fishermen, have been carried out in many areas. Often, these were combined with an information system and that mix has been proven to be useful. It is difficult to evaluate the contribution of public awareness towards a better conservation status of monk seal. However, all the available experience points in the direction of an improved knowledge of both the fishermen and the general public about the critical situation of the species, what is an important achievement in itself.

The conclusion is that the awareness campaigns, as mentioned in the Action Plan, have been successfully undertaken, give promising results and should be renewed.

However, a certain delay in the incorporation of monk seal protection in fishery policies has to be pointed out. This includes fishery legislation and fishing techniques. This could be at least partly imputed to a lack of awareness, as well as of research. Emphasis on developing actions in this area would no doubt contribute to reduce one of the major threats to monk seal.

Agenda item 7: Identification of priorities for the conservation of the Mediterranean monk seal, and proposals for further actions and their coordination

22. The secretariat introduced this agenda item. Identification of priorities for the conservation of the monk seal and the opportuneness to establish a coordination mechanism among the different projects were defined as the objectives of the discussion of this agenda item. The advice of the meeting on the opportuneness to envisage one or several of the measures provided for in article 21 of the Action Plan was requested. The document coded UNEP(OCA)/ MED WG 87/Inf 2 was also presented.

23. The representative of France affirmed that the present critical status of the species called for a global strategy of conservation including as main items:

- the *in situ* protection;
- information and public awareness
- captive breeding

In this regard, he exposed the main aspects of a pilot project concerning the captive breeding of the Mediterranean Monk Seal, using specimens taken from the population of the "Côte des phoques".

24. Most delegations expressed their views and requested additional information about the French project.

25. The representative of Morocco expressed the willingness of his country to participate to the project, provided that a wide consensus was reached on it within the international scientific community.

26. The representative of Greece and Cyprus pointed out that a detailed version of the project should be provided in advance to all the participants, so to be in the position to express concrete views.

27. The representatives of Greece, Elliniki Etairia, and HSSPMS separately expressed the view that, although the project deserves to be considered, it had however to be clearly stated that the main priority for the conservation of Monk Seal remained the *in situ* protection. Thus, the representative of Elliniki Etairia pointed out that it must be secured

that the international financial support to *in situ* protection projects must not be affected by other conservation actions.

28. The representative of Italy stressed the importance that the project would obtain general consensus among the participants, in the perspective of a common participation to the project. He expressed strong perplexity for individual actions, finding that some aspects did not seem to be still very clear, both on the "if" and the "how" of the action and made the proposal that all the technical aspects would be discussed during a dedicated workshop, to be organized in short terms, aimed at considering the French project as a basis for further implementation.

29. The representative of Croatia raised several objections to the captive breeding concept, and declared himself contrary to any action related to the proposed concept, while supporting the idea of saving the habitat.

30. The representative of IUCN expressed the present position of its organization on the French project, summarized in the following points:

- i) IUCN does in principle agree to the guidelines drafted in Madeira;
- ii) IUCN does not automatically endorse the Operational Plan, neither reject it. A review is ongoing and contacts with Port Cros - project staff are maintained;
- iii) the guidelines are drafted in case a feasibility study was going to be carried out. However, the critical question is whether such a study is needed in the light of other *in* and *ex situ* activities. The benefits and risks of the feasibility study should be weighted and evaluated in the context of the other activities (translocation, rehabilitation, *in situ* protection).

31. The representative of WWF affirmed that in principle, his organization was in favour of captive breeding. *In situ* conservation should remain in any case a first priority. For what it concerned the monk seal, the WWF, following the theory of IUCN on endangered species, believed that an action in the sense of captive breeding was needed. However, WWF shared the concerns of IUCN for the danger coming from the removal and transportation (other than for other technical aspects) of the six animals from the "Côte des phoques", foreseen by the French project. WWF urged all the experts on this subjects to find an agreement soon and strongly supported the creation of an International monk seal reserve along the "Côte des phoques".

32. The representative of the UNEP/CMS Secretariat recalled that monk seal is listed in Annex I of the Bonn Convention; pursuant to article 3 of the Convention, to which both France and Morocco are Parties, its taking from the wild is prohibited, with few exceptions, which must be limited in space and time. He did not wish his remarks to be interpreted as being unsympathetic to the objectives of the French project, but sought clarification as to whether or not the project met all of the conditions for exceptions to the prohibition, noting that the Bonn Convention Secretariat had not been informed officially of its details. He urged that any projects submitted by States which are Parties to the Bonn Convention involving the capture of animals of Appendix I species for whatever reason take full account of the provisions of Article 3 of the Convention. He also stressed the importance of also addressing implementation of other aspects of the Action Plan.

33. The representative of the Bern Convention Secretariat affirmed that, although captive breeding could not be considered an absolute priority at the present stage, the French project was a good one, which was not expected to represent a risk for the colony of the "Côte des phoques", and that could bring substantive scientific knowledge on the biology of the species.

34. The representative of the Seal Rehabilitation and Research Centre affirmed that given the priorities established previously in the Marine Mammal Action Plan, and the critical situation of the monk seal in the Mediterranean sea, the SRRC felt strongly that *in situ* protection of monk seal habitat areas is of the utmost importance; that the rescue, rehabilitation and reintroduction of sick or stranded animals is a tangible contribution to the future viability of populations, particularly at the "Côte des phoques" in the Atlantic Ocean; and finally, as a measure to be undertaken should all others fail, a captive breeding programme should be undertaken. The full text of this statement is reproduced in Annex IV.

35. The representative of France, in replying to several questions, stated that in his view there was no doubt that the first priority had still to be considered the *in situ* protection. He also affirmed that the French project will not subtract funding to other project for the conservation of the species, as it was expected to be financed exclusively by French funding. He also expressed the willingness of France to open the Scientific Advisory Group to all experts and representatives of the secretariats of concerned international Conventions interested to take an active part in it.

36. The representative of Spain briefly presented the Spanish project concerning the monk seal population of the Atlantic coast. It is a research programme, supervised by IUCN, which provides for the translocation of seals from the colony of the "Côte des phoques" to the North of their present area of distribution. The project is aimed at facilitating the establishment of an "ecological corridor" between the populations of Madeira and of the "Côte des phoques".

37. During the overall discussion of this agenda item, a number of proposals and suggestions concerning priorities for the protection of the monk seal and mechanisms for the international coordination of the different projects and initiatives were made.

38. It was agreed that a working group meets together, with the task of synthesizing the overall discussion of this agenda item in the form of some concrete recommendations of the expert meeting. The proposals of the expert group, as adopted by the expert meeting, are enclosed as Annex I of this report. The representatives of Cyprus, Greece and Italy expressed a reservation on the recommendation concerning the pilot project to determine the feasibility of a captive reproduction technique.

Agenda Item 8: Other business

39. Within the framework of the promotion of training programmes aimed at increasing

the critical mass of people acting in monk seal research and protection, the representative of Elliniki Etairia proposed to the meeting the continuation, in Greece, of the SPA/RAC training programme for the protection of the Mediterranean monk seal. The first training course was successfully carried out at the Biological Station, Alonissos Island, National Marine Park of Northern Sporades.

40. The representative of Greece fully supported the proposal.

Agenda Item 9: Adoption of the meeting report

41. The draft report of the meeting was submitted to the participants by the rapporteur, and was adopted after discussion.

Agenda Item 10: Closure of the meeting

42. After the customary exchange of courtesies, the Chairman declared the meeting closed on Sunday, 9 October 1994 at 14.00 hours.

ANNEX I

RECOMMENDATIONS

The experts on the Mediterranean monk seal (*Monachus monachus*), meeting in Rabat, Morocco, 7-9 October 1994, within the framework of the Mediterranean Action Plan of UNEP,

Conscious of the difficult survival of monk seal populations in the whole Mediterranean and on the Atlantic coasts,

Appreciating the efforts of Morocco to protect the Mediterranean monk seal in its natural habitat and strongly supporting the creation of coastal protected areas,

Aware that several project proposals have been and are being developed within the framework of articles 21 and 22 of the Action Plan for the Management of the Mediterranean Monk Seal,

Conscious that there is a need for strong scientific collaboration and interaction among the different projects,

Considering that the existing pilot project to determine the feasibility of a captive reproduction technique should be continued,

Considering that it would be essential that all scientific projects concerning conservation of the Mediterranean monk seal be presented for advice to an international scientific committee such as the one proposed in the recommendation no. 11 hereafter,

A. Urge concerned authorities and scientists to collaborate as much as possible in the design, implementation and co-ordination of such projects,

B. Propose to the Contacting Parties to the Barcelona Convention:

1- To ask the countries which have not done it to give full legal protection to the species, and to ask countries ensuring protection limited in time and space to generalize it.

2- To ensure the effective implementation of adopted conservation measures, in particular the strict control of potentially dangerous tourism activities; considering that deliberate killing of animals is the main factor leading populations to local extinction, the Contracting Parties are requested to strengthen control with regard to this.

3- To establish reserves in the following areas, which were identified as having highest priority:

- in the Mediterranean - the Ionian islands;
- in the Atlantic Ocean - the Cap Blanc area, the "Côtes des phoques".

The expert meeting received with great favour the proposal to protect the "Côtes des phoques" presented at the meeting. It also noted that recent studies in Turkey suggest that the list of protected areas established for that country may need to be modified.

4- To engage themselves to protect zones where the Monk Seal used to occur until recently.

5- Noting that interactions with fishermen still represent an important source of mortality, the meeting recommend that appropriate measures to reduce these interactions be expressly included in fishery regulation for all areas where Monk Seal still occurs.

Examples of such actions are in particular the prohibition of fishing in certain areas of the natural reserve of Desertas Islands and in the marine Park of Northern Sporades. In addition, fishermen could be persuaded to change to fishing gear which causes less damage to monk seal and which is less vulnerable to damage by seals, provided they are supplied with appropriate equipment, as it has been done in Madeira.

Regarding research and population monitoring, the meeting of experts recommends that Contracting Parties:

6- Continue and intensify the efforts to monitor Monk Seal populations generally and, in particular, their dispersal pattern.

7- Carry on the studies on habitat requirements.

8- Contribute, if they are not already doing so, to the Monk Seal Register established by the Royal Institute of Natural Sciences of Belgium.

9- Carry out research and exchange information on technics and measures aimed at minimizing interaction with fishing gear.

10- Continue the public awareness programs, taking into account the need to reach in particular fishermen communities; in addition, fisheries policies which benefit traditional fisheries in areas where Monk Seal occurs should be utilized as both awareness and incentive instruments.

11- The meeting propose to the Contracting Parties to present for advice any Monk Seal conservation project to an international scientific committee established to this aim, on the model of similar existing committees, within the framework of the Barcelona Convention, in close coordination with Bern, Bonn and CITES Conventions, as well as IUCN. That committee would have, in particular, the following terms of references:

- a) review and assess the conservation projects referable to point 21 and 22 of the Action Plan;
- b) control possible interactions among different projects;
- c) advice Contracting Parties, the Secretariats of the Conventions related to the conservation of Nature and funding agencies concerned with Monk Seal conservation projects.

ANNEX II

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ANNEX III

AGENDA OF THE MEETING

1. Opening of the meeting
2. Rules of procedures
3. Election of officers
4. Adoption of the Agenda and organization of work
5. Evaluation of the present status and trend of monk seal populations
6. Evaluation of the implementation of the Action Plan for the management of the Mediterranean monk seal
7. Identification of priorities for the conservation of the Mediterranean monk seal, and proposals for further actions and their co-ordination.
8. Other business
9. Adoption of the meeting report
10. Closure of the meeting

ANNEX IV¹

REPORTS PRESENTED BY THE EXPERTS RAPPORTS PRESENTES PAR LES EXPERTS

¹The texts in this Annex are relevant to the presentation of the participants during the discussion of items 5 and 6 of the Agenda. They are reproduced without editing.

REPUBLIC OF CROATIA

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Legal Protection

Mediterranean monk seal has been protected in Croatia by the Decree of the Institute for Nature Protection in the year 1964, according to the provisions of the law on Nature Protection that passed in 1960. The species was strictly protected in its natural habitat within the territory of Republic of Croatia. Deliberate killing, hunting, catching even in scientific purpose was strictly forbidden.

On the basis of the Law on Nature Protection, passed in 1976 Council for Protection of Nature of Croatia proclaimed in 1985 Compensation price-list for killing species protected by the Nature Protection Law. Monk seal is on the list, with the highest price for killing a specimen.

Status of the species

Monk seal population that occurs along Croatian Adriatic coast is rather low. Most northern sighting of the animal were reported along the coast of the island Pag while more frequently can be seen in the Middle and South Adriatic region, especially along uninhabited shores of the islands of Lastovo, Mljet, Korcula and Vis. Total population has been estimated to the number of about twenty animals.

Causes of regression

Obviously main threat to this highly endangered population is touristic using of the area. Many touristic boats and yachts are visiting even distant deserted places, uninhabited shores where monk seal use to live and hide in the caves. Evidently, fishing by dynamite of lack of food because of overfishing are not important factors at all. Fishing by usage of dynamite is extremely rare practice, because one can be prosecuted for a criminal act. Lack of food is not real fact, because the area is still rich in fish populations.

The Mediterranean Monk Seals in Cyprus.

Myroula Hadjichristophorou and Andreas Demetropoulos

*Ministry of Agriculture, Natural Resources and Environment
Department of Fisheries, Nicosia-Cyprus.*

Legal protection

Monk seals are protected under the provisions of the Fisheries Legislation since 1971. These provisions, in free translation, are that:

"No person may

- a) kill, pursue, catch, buy, sell or possess....a seal;
- b) attempt to kill, pursue, catch, buy, sell or possess....a seal;
- c) buy, sell or possess any part of...a seal."

The Fisheries Law provides for fines of up to CP5,000 (\$10,000). On a second offense imprisonment for up to 6 months may be additionally imposed. This legislation which covers also turtles and other marine mammals is strictly enforced, though in the case of the Monk seals there were no instances of having to apply it.

Status

Historically there were apparently 7-8 small colonies at which breeding took place. These were at:-

- (a) Cape Gata at Akrotiri Peninsula
- (b) Thalassines Spilies near Ayios Georghios, Peyia on the west coast.
- (c) Akamas Coast (West and North)
- (d) Dhekelia
- (e) Cape Pyla
- (f) Cape Andreas and Klidhes islands on the North Eastern tip of the Island
- (g) on the North Coast East of Yalousa.

These colonies have declined dramatically in the last 3-4 decades and most have disappeared.

There were 7 confirmed sightings from 1972-1976. These were: one at Cape Kormakiti (1972), one at Moni (East of Limassol) with three animals (1976). Three other sightings were at Yeronissos (1975) and at Maniki island (1979) near the Thalassines Spilies colony area (where the last confirmed breeding was about 1957).

There have been several recent sightings :

a) Off Akamas, on the west coast of the island , near Ayios Georghios and Yeronissos (1988, 1989 and 1990) and further north near Jioni (1991 1992, 1993, 1994) , most of the sightings were probably of the same animals, with reports of one or two animals each time (the 1994 reports mention also one young animal; these have not so far been verified); and

b) Between Ayia Napa - Cape Pyla area in 1990 (2 sightings). Press report in the Turkish Cypriot press also report Monk seals at Cape Andreas-Klidhes islands in 1991 (Halkin Sesi 28.2.91).

Protected Areas

Breeding caves have been identified in several areas (Cape Pyla, Akrotiri, Thalassines Spillies, Akamas, Latchi).

There are currently still no protection measures in force ,though the Akamas-Latchi area is expected to be protected soon by the declaration of the area into a National Park. The first steps towards this have already been taken on the basis of the Town and Country Planning Law with changes in the zonation (building coefficients etc.) of these areas into areas where no development is allowed. Cape Pyla and Cape Akrotiri are within British Base Areas and no development can take place in these areas. Several of the known breeding caves are within these three areas (i.e., Akamas, Cape Pyla and Cape Gata)

Causes of decline

There seem to be several possible reasons for the decline:

- Capture and exploitation of young seals, mainly for showing in fairs etc. is documented until the 1950's. Killing of seals by fishermen was also not illegal until 1971 and it is likely that this took place to some degree, though there are few reports of such killings..

-Recent human (recreational, tourism etc.) encroachments on their breeding and feeding areas is also likely to have had an impact, as at Thalassines Spillies and Latchi. and Cape Pyla.

-Fish populations have declined as a result of intensive fishing perhaps having an impact on seals. Management measures for the better management of fishery resources were introduced in 1981 and 1990 with encouraging results. It is noteworthy that all the recent sightings of seals are in an area in which there is no trawling (due to the morphology of the sea-bed).

Public awareness

The public is alerted and in general aware of the problems involved and very much in support of protection measures. Even the fishermen who were traditionally hostile to the seals are now cooperating with the Fisheries Department giving information (both past and present) on locations, sightings etc. A TV program was made by the Fisheries Department in cooperation with CyBC on the Monk seals in Cyprus in 1989.

Nicosia, 28th September, 1994.

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INITIATIVES PRISES PAR LA FRANCE DANS LE CADRE DU PROGRAMME DE SAUVEGARDE DU PHOQUE MOINE DEPUIS LA REUNION D'ANTALYA EN MAI 1991

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Le programme français de sauvegarde du phoque moine a été initié, dès 1985, par le Ministère français de l'Environnement, et confié pour sa réalisation, au Parc national de Port-Cros (Var, France).

La rapidité du déclin des effectifs de phoque moine dans le monde et la pauvreté de ses effectifs (moins de 300 individus), nous a conduit à ne plus établir de hiérarchisation dans les différentes actions à entreprendre pour sauver l'espèce. Il apparaît en effet aujourd'hui que le seul espoir réside dans une stratégie qui consiste à agir simultanément dans tous les domaines possibles de l'*in situ* et de l'*ex situ*. C'est pour cela que le programme pour la sauvegarde du phoque moine mené par le parc national de Port-Cros comporte les volets suivants :

- la protection *in situ* des populations, avec la proposition et l'aide de la création d'Espaces protégés,
- l'acquis de connaissances scientifiques indispensables à la gestion des populations existantes,
- la création et la promotion d'un centre de sauvetage (Rescue Center),
- les actions de sensibilisation auprès du public,
- la mise au point de la reproduction en captivité.

Pour la mise en oeuvre de ce programme, le parc est assisté d'un Comité Scientifique International présidé par le Dr. H. COSTA NEVES, et à l'intérieur duquel on compte plus d'une vingtaine de scientifiques nationaux et internationaux, ayant soit une expérience directe du phoque moine, soit pouvant y contribuer par leur spécialité, et dont certains appartiennent au "Captive Breeding Group" de l'I.U.C.N (Dr. Seal) ou au "Seal Specialist Group" de l'I.U.C.N.

La protection *in situ*

La protection *in situ* a toujours été dans nos préoccupations. La réserve satellite pour phoques moines, du Parc National du Banc d'Arguin (1986) est le résultat du travail de notre collaborateur M. D. Marchessaux. Depuis la Réunion d'Antalya, le parc national de Port-Cros a attiré l'attention du gouvernement algérien sur la nécessité de mettre en réserve deux sites : celui de Rachgoun et celui des Iles Habibas, en Oranie.

Pour la "Côte des Phoques" et compte tenu de son importance dans le dispositif mondial de sauvegarde de l'espèce, nous n'avons eu de cesse de sensibiliser et d'interpeller les instances internationales (WWF et IUCN). Un document a été spécialement réalisé à cette intention en Octobre 1993 et adressé à ces derniers. Nous sommes prêts à apporter notre concours pour le développement rapide de la protection *in situ* dans ce secteur et nous tenons à féliciter le gouvernement marocain d'avoir pris un arrêté interdisant la pêche dans cette zone, acte rapide et courageux.

Acquis des connaissances scientifiques

Dans la cadre d'un accord de collaboration franco-marocain pour la protection et la sauvegarde du phoque moine de Méditerranée, établi entre le parc national de Port-Cros (France) et l'Office National des Pêches du Maroc, et avec le support logistique de la Marine Royale marocaine, de nombreuses missions de terrain ont été réalisées conjointement depuis janvier 1988 à la "Côte des Phoques" (presqu'île du Cap Blanc).

Aux missions de 1990 et 1993, ont participé également des représentants de la Direction des Eaux et Forêts, Ministère de l'Agriculture marocain.

Les résultats des missions jusqu'en 1990 ont déjà fait l'objet d'une présentation, à la réunion d'Antalya (mai 1991). L'année 1991 a été consacrée préférentiellement au lancement, toujours avec l'aide de l'O.N.P. du Maroc, d'une vaste campagne de sensibilisation des populations locales et des pêcheurs tout le long de la côte allant de Casablanca à Dakhla.

Par la suite, les missions de recensement se sont poursuivies en 1992 et en 1993. Toutes les observations ont été menées par voie maritime, le long de la côte des Phoques, avec pénétration dans les grottes.

L'acquis de connaissances scientifiques a été ainsi bien développé tout particulièrement sur la population de la presqu'île du Cap Blanc avec le recensement de la colonie de la "Côte des Phoques" et l'étude biologique et éthologique des individus de "la Réserve Satellite du Cap Blanc" (les publications correspondantes sont en cours).

Les comptages ainsi réalisés montrent que la "Côte des Phoques" abrite en effet presque la moitié de la population de phoques moines dans le monde, concentrée sur seulement 14 km de côtes. Cette population semblerait toujours stable avec celle de Madère, les deux seules populations à ne pas être en déclin dans l'Atlantique.

Rescue Center

Le Rescue Center du parc national de Port-Cros est toujours opérationnel, mais jusqu'à ce jour il n'a pas eu à être utilisé.

Sensibilisation

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En ce qui concerne les actions de sensibilisation, une campagne de sensibilisation des

autorités locales (Gendarmerie Royale, Direction des Ports, Agents de la Marine Marchande, professionnels de la pêche, responsables de l'Education National, scolaires et populations locales) a été réalisée au Maroc, en octobre et novembre 1991, par le Parc National de Port-Cros et l'Office National des Pêches du Maroc, dans les différents ports de pêche situés tout le long de la côte entre Casablanca et Dakhla.

Cette action a consisté à donner des conférences bilingues (arabe et français) sur le phoque moine, à distribuer des brochures, affiches, autocollants et tee-shirts aux différentes personnes rencontrées. La télévision marocaine a relayé la conférence donnée à ce sujet, à Agadir.

Mise au point de la reproduction en captivité

L'IUCN recommande la mise en place de tels programmes quand la population d'une espèce est inférieure à 1000 individus, ceci s'applique donc bien au cas du phoque moine. C'est l'outil de la dernière chance qui doit être prêt quand on en aura besoin, en souhaitant qu'on n'en ait jamais besoin. Aussi, le dernier volet du programme français s'intéresse-t-il à la mise au point de la reproduction en captivité de l'espèce. L'étude de faisabilité menée par le parc national de Port-Cros, a été préparée en juin 1993 et soumise pour discussion au Comité Scientifique International en juillet de la même année. Au cours de cette séance, un premier document intitulé "General Guidelines" a été établi et les membres du Comité ont accepté de confier à un Groupe de Travail Technique (TWG) composé de certains d'entre eux, la responsabilité de son approfondissement.

A Madère, en février 1994, ce Groupe de Travail Technique s'est réuni à cet effet, sous la responsabilité de son président pour la réalisation du document souhaité.

Le Ministère français de l'Environnement et le parc national de Port-Cros ont ensuite, en avril 1994, rendu visite aux autorités concernées du Maroc (Sous-Secrétariat d'Etat chargé de la Protection de l'Environnement auprès du Ministère d'Etat à l'Intérieur et à l'Information, Ministère de l'Agriculture et de la Mise en Valeur Agricole, Ministère des Pêches Maritimes et de la Marine Marchande), afin de les informer de l'état d'avancement du programme.

En mai 1994, le parc national de Port-Cros a soumis le "Guidelines" réalisé à Madère, ainsi que le Protocole Opérationnel, c'est-à-dire l'application pratique de ce "Guidelines", au Comité Scientifique International réuni à cet effet à Paris.

Ces deux documents ont reçu un consensus en séance et les points suivants ont été retenus:

- lieu de prélèvement,
- technique de prélèvement et de transport,
- accueil au Centre d'expérimentation,
- programme de recherche.

Un stage durant l'été '94, auprès de l'équipe du Dr. Gilmartin à Hawaii, a permis à l'équipe de Port-Cros et à un représentant désigné de l'Institut Scientifique et Technique des Pêches

du Maroc de se former aux techniques de capture et de maintien en captivité du phoque moine.

Le Protocole opérationnel passera à la phase de réalisation pratique dès l'obtention du C.I.T.E.S.

THE STATUS AND CONSERVATION OF THE MONK SEAL IN GREECE

by P. Dendrinou, Hellenic Society for the Study and Protection of the Monk Seal

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Legal Protection

The Mediterranean Monk Seal (*Monachus monachus*) is under strict legal protection in Greece. By ratifying international conventions and by putting in force national legislation Greece is protecting not only the species itself, but its habitat as well. In particular with:

- Presidential Decree 67/81/29-11-1980 monk seal is considered as a protected species and its capture or killing is forbidden.
- Law 1335/14-3-1983 the Bern Convention is ratified.
- Law 2055/30-6-1992 the CITES (Washington Convention) is ratified and it was put into force on 6-1-1993.
- Presidential Decree 519/16-5-1992 establishes the National Marine Park of Alonissos Northern Sporades (NMPANS) with special mention to the conservation of the largest breeding Monk Seal population in the Mediterranean.
- Laws 855/78 and 1634/18-7-1986 ratify the Barcelona Convention and all related protocols.
- Law 1650/16-10-1986 introduces legislation constituting the protection of the environment in Greece.
- Law 743/77 introduces legislation for the protection of the marine environment.
- Law 2204/15-4-1994 ratifies the Rio Convention on biological diversity.

Finally it should be mentioned that through :

- Law 1337/14-3-1983 coastal areas are under special protection regulations.
- Law 420/26/1970 (fisheries' code) governs fisheries' activities and through prohibiting illegal activities conserves fish stocks.

Status of the Species

Greece is the country that at present shelters the largest monk seal population in the Mediterranean (Reijnders et al., 1993).

The range of the monk seal includes virtually the whole of the Greek coast. Information collected from Greece through questionnaires, interviews (Marchessaux et Duguy, 1979; Sergeant et al., 1979; Vamvakas et al., 1979; Ronald et Yeroulanos, 1984; Verriopoulos et Kiortsis, 1985; Vlachoutsikou et Lazarides, 1990) and since 1992 through an information network, operated by the Hellenic Society for the Study and Protection of the Monk Seal under the Greek National Programme for the Protection of the Monk Seal indicate that

seals can be found throughout coastal and island Greece (see Map 1).

The total seal population in Greece was estimated to be 200-250 (Reijnders et al, 1993). Similar estimates were given by the individual teams working in the field, during the Population and Habitat Viability Assessment workshop for the Greek population of the Mediterranean Monk Seal in Athens in April 1994.

Seal populations are found scattered along the coasts of the Aegean and Ionian Seas. Indeed, evidence of breeding populations have been collected from islands in the Archipelagos of Dodekanese, Cyclades, North East Aegean, Kythira, Myrtoon, Ionian, Crete and Northern Sporades.

The most known and longest monitored breeding populations are located in the Ionian sea and the Northern Sporades. Specifically in the Ionian a population of 18-25 animals is estimated to exist in the islands of Kefallonia, Lefkada and Ithaki (Harwood 1987, Panou et al., 1993) and at least 8-10 animals in Zakynthos (Karavellas, pers. com.).

Within the area of the National Marine Park of Alonnisos - Northern Sporades, an actively protected area since 1992, 35 individuals have been already identified (HSSPMS, 1994). It is important to mention also that in the NMPANS births have been recorded every year for the last five years, while no deliberate killing has been reported.

Eventhough, considering the total population size estimates it may appear that there is a general pattern of decline (Marchessaux et Duguy, 1979; Verriopoulos, 1985; Reijnders et al., 1993), this is not clearly evident when we consider local populations for which we have reliable monitoring results (Matsakis et al., 1985; HSSPMS, 1994; Marchessaux et Duguy, 1979; Panou et al., 1993).

Threats to the population

Habitat degradation and interaction with fisheries constitute the main threats to the survival of the species:

- The physical destruction or disturbance to seal habitats is being effected through land and sea access with the development of tourism, associated construction operations and increased boat activity.
- Related to the interaction with fisheries deliberate killing continues to be the major cause of seal mortality in Greece (Panou et al., 1993, Vlachoutsikou et Cebrian, 1992, Karavellas, pers. com., HSSPMS, 1993). In addition, the increase in fisheries' activities apart from the negative effect on fish stocks may also increase the accidental entanglement of seals in fishing gear.

Initiatives for the Conservation of the Monk Seal in Greece

The Greek state considering that in its coasts lives and breeds one of the largest remaining monk seal populations, has taken several initiatives for the protection of the species.

Greece has implemented a number of conservation projects following a strategy which took into account the directions and priorities set forth by national and international governmental and expert bodies.

The basic objective of these initiatives can be summarized as follows :

- * The research and study of the biology and ecology of the species
- * The establishment of zones of protection
- * The reduction of mortality caused by interactions with humans
- * The education and sensitization of the public
- * The reduction of pollution
- * The rescue and rehabilitation of animals
- * The application of extreme conservation measures as last resource.

In the effort to implement the above objectives a variety of actions have been taken during the last three years. Some projects have been conducted by Universities, Institutes, NGOs and others, while a number of projects have operated through the EUACNAT projet "Greek National Program for the Protection of the Monk Seal" in which several institutions and organizations participated and is coordinated by the ELLINIKI ETAIRIA for the Protection of the Environment and the Cultural Heritage (see table 1).

Specifically in terms of the general objectives of the Action Plan for the Management of the Mediterranean Monk Seal, the following initiatives have been taken :

1. In terms of reduction in adult mortality apart from the existing legal protection to the species (see above) legislation also exists prohibiting the use of destructive fishing (dynamite, chemicals etc), as well as, scuba diving thus further decreasing the disturbance to the animals.

Furthermore, a number of sensitization campaigns have been established et a local level by each organization working in the field. At the national level, the Rescue and Information Network operating throughout Greece is establishing a good working relationship with fishermen and authorities in order to alter their attitude towards the monk seal and thus contribute to the collection of information on the species and the rescue of wounded animals.

Lastly, the establishment of the NMPANS is a good example of protecting the species while at the same time provides opportunities to local fishermen communities. This is done by regulating industrial fisheries and thus reducing over fishing to the advantage of local coastal fishermen.

2. In terms of the establishment of marine reserves Greece established the first National Marine Park of the country in Alonnisos - N. Sporades, on May 1992. Within its area of approx. 2200 km² human activities are controlled in order to conserve the most important Greek monk seal population and its habitat. Tourist visits or other human disturbance are prohibited in areas where breeding sites exist. In the last two years the regulations of the

Park are enforced through active guarding of the NMPANS.

In addition, apart from the permanent monitoring of the population in the NMPANS, surveys are conducted in the areas with important populations throughout the entire Greek space in order to identify all breeding sites.

3. Concerning research, data collection and rehabilitation apart from the already mentioned activities the field teams are collecting information on the ecology and habitat of the species. Especially in the areas where long term monitoring studies exist, data, not previously available, are collected on the fields of basic seal biology, ecology, behaviour, habitat choice, identification techniques, genetics, infectious diseases, pollution, diet choice and interaction with fisheries (see attached list of the reports prepared in the terms of the Greek National Programme for the Protection of the Mediterranean Monk Seal).

Furthermore, important data on the development, handling and rehabilitating of seals have been collected through the operation of the Rescue and Rehabilitation Center (SRRC) in Alonnisos. Since its establishment in 1990 three monk seal pups have been rescued and treated in the Center and after their rehabilitation were successfully released in the NMPANS.

Important for the functioning of the SRRC is the establishment of the Rescue and Information Network (RIN) already mentioned. The RIN establishes a National Network of observes that provide important information about the species.

It is important to mention that Greece is one of the major contributors to the Monk Seal Register, an international data base for monk seal information that creates a link between all working teams.

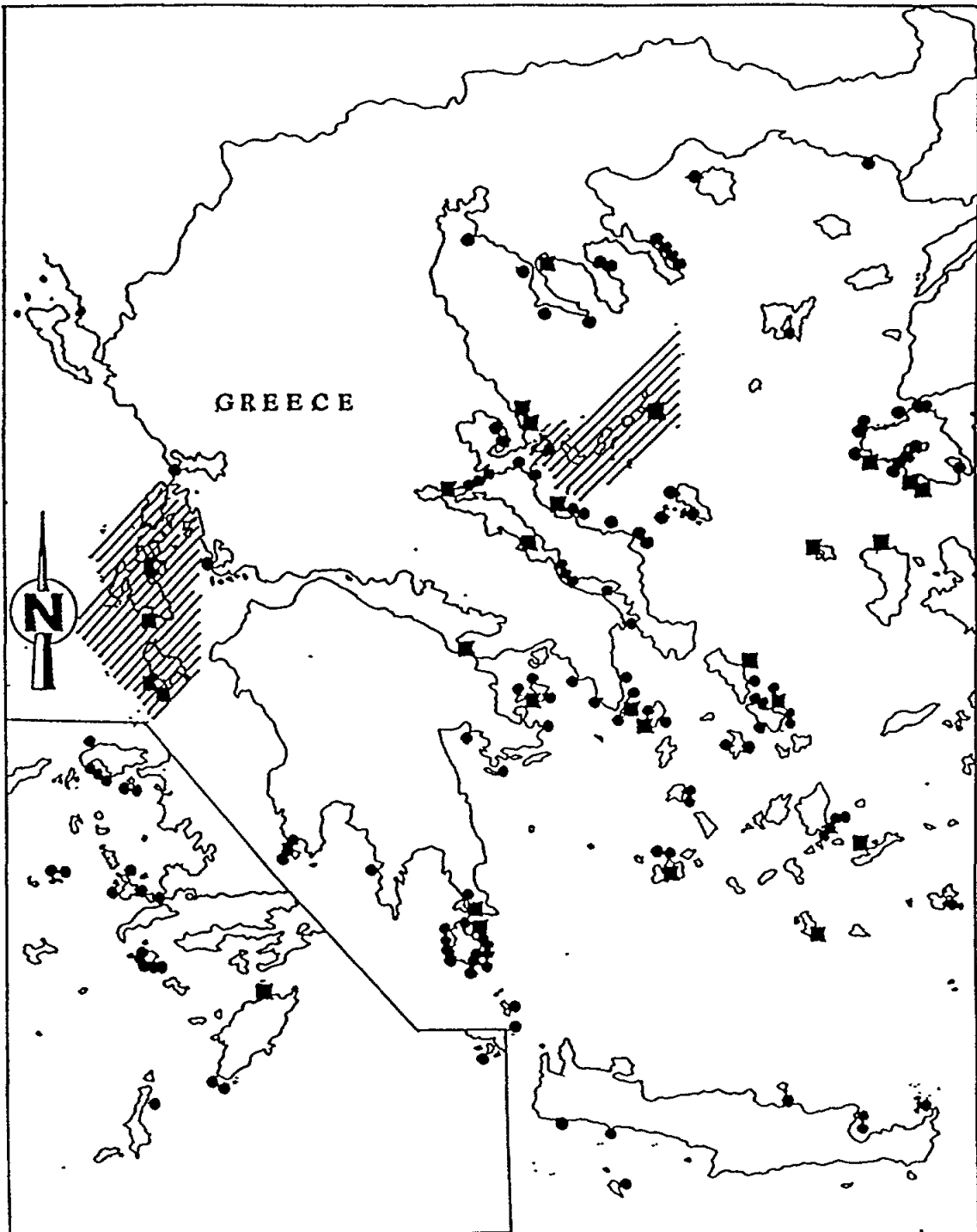
4. In terms of information programs, apart from the already mentioned information network, almost all the organizations involved in the protection of the monk seal conducted large scale information and public awareness campaigns. An array of informative material addressing the problem of the monk seal conservation is continuously being published and distributed not only to the Greek general public, but to tourists as well, especially in sensitive areas. The above efforts have been greatly assisted by the mass media, which have covered these efforts to a great extent during the last few years.

Special attention has been given to the sensitization of the children by conducting environmental education programs to schools throughout Greece.

Lastly, the Greek Ministry of Environment, in collaboration with RAC/SPA and Greek NGOs organized the 1st Mediterranean Training Course on the Conservation of the Mediterranean Monk Seal, held at the Biological Station of Gerakas, Alonnisos, N.Sporades with trainees from a number of Mediterranean countries. We reaffirm our intention to continue this initiative.

REFERENCES

- . Harwood J. (1987). Population Biology of the Mediterranean monk seal in Greece. SMRU rep. pp. 1 - 72.
- . HSSPMS (1993). Continuation of Establishment of a Rescue Network for Orphan, Wounded and Sick Seals and Gathering of Seal Observations from the Whole of Greece. Progress Report. April 1992 - March 1993. pp. 1 - 16 + Appendices.
- . HSSPMS (1994). Continuation of the Monitoring of the Monk Seals in the National Marine Park of Northern Sporades. Progress report. Jan 1993 - December 1993. pp. 1 - 12.
- . Marchessaux D. et Duguay R. (1979). La phoque moine, *Monachus monachus* en Grèce. The Mediterranean Monk Seal, Proc. 1st Int. Congr.: 65-84.
- . Matsakis J. (1985). Programme "Sporades du Nord". Equipe de l'Université d'Athènes. pp. 1 - 77.
- . Mediterranean Monk Seal (*Monachus monachus*). Greek population. Population and habitat Viability Assessment. (1994). IUCN/SSC. Seal Specialist group, Captive Breeding Specialist Group, Elliniki Etairia. 1st draft. Workshop Report. pp. 1 - 180.
- . Panou A., Jacobs J., Panos D. (1993). The endangered Mediterranean monk seal *Monachus monachus* in the Ionian Sea, Greece. Biological Conservation, 64:129 - 140.
- . Reijnders P., Basseur S., van der Torn J., van der Wolf P., Boyd I., Harwood J., Lavigne D., Lowry L. (1993). Seals, Fur Seals, Sea Lions and Walrus. Status Survey and Conservation Plan. IUCN/SSC Seal Specialist Group. pp. 1 - 88.
- . Ronald K., Yeroulanos M. (1984). A conservation plan for *Monachus monachus* on Greek islands and coasts. 2nd Int. Conf. on the monk seals: 31 - 40.
- . Sergeant D., Ronald K., Boulva J., Berkes F. (1979). The recent status of *Monachus monachus* the Mediterranean monk seal. The Mediterranean Monk Seal, Proc. 1st Int. Congr.: 31 - 54.
- . Vamvakas C.E., Tsimenidis N., Kainadas H. (1979). Contribution to the knowledge of the distribution pattern of the monk seals *Monachus monachus* in Greek seas. Conservation plan by the establishment of Marine Parks. The Mediterranean Monk Seal, Proc. 1st Int. Congr.: 147 - 150.
- . Verriopoulos G. (1985). Comparison entre diverses données sur l'évolution des populations du phoque moine en Grèce. Rapp. Comm. Int. Mer Med., 29 (8): 167 - 168.
- . Verriopoulos G., Kiortsis V. (1985). Frequence et répartition du phoque moine (*Monachus monachus* L.) en Grèce. Resultats d'une enquête (1982 - 1984). Rapp. Comm. Int. Mer Med., 29 (8) 169 - 170.
- . Vlachoutsikou A., Lazarides Y. (1990). Monk seals in Greece. rep. European Nature Heritage Fund. pp. 1 - 44 + Maps.
- . Vlachoutsikou A., Cebrian D. (1992). Population status, Habitat use, Interaction with fishery and Biology Study of the Mediterranean Monk Seals on Zakynthos island, Greece. WWF proj. 3871 Greece. pp. 1 - 19 + Appendices.



Map 1. Indicative map showing information collected from January 1992 till March 1994, through the Information Network Programme

- Alive seal observations
- Dead seal observations
- /// Areas not covered by the Information Network (N.Sporades, Zakynthos, Kephallonia, Ithaca, Lefkada)

Table 1. Participants in the Greek National Program for the Protection of the Monk Seal, areas and topics in which each specializes.

NAME	AREA	WORK
1. HELLENIC SOCIETY FOR THE STUDY AND THE PROTECTION OF THE MONK SEAL	a) N.SPORADES b) GREECE	a)SCIENTIFIC RESEARCH MONITORING SAFEGUARDING REHABILITATION PUBLIC AWARENESS b)INF.RESCUE NETWORK PUBLIC AWARENESS
2. ENVIRONMENTAL RESEARCH BUREAU	CYCLADES ISLANDS	a. SCIENTIFIC RESEARCH b. PUBLIC AWARENESS
3.SCIENTIFIC GROUP FROM THE UNIVERSITY OF AEGEAN	N. AEGEAN ISLANDS	a. SCIENTIFIC RESEARCH b. PUBLIC AWARENESS
4.SCIENTIFIC GROUP FROM THE UNIVERSITY OF THESSALONIKI	SKYROS ISLAND	a. MONITORING b. PUBLIC AWARENESS
5.ECOLOGICAL SOCIETY OF HYDRA "HYDRAISA FHOKIA"	MYRTOON AREA	a. MONITORING b. PUBLIC AWARENESS
6.EUROPEAN NATURE HERITAGE FUND		PUBLIC AWARENESS
7. HELLENIC SOCIETY FOR THE PROTECTION OF NATURE		PUBLIC AWARENESS
8. ELLINIKI ETAIRIA THE HELLENIC SOCIETY FOR THE PROTECTION OF THE ENVIRONMENT AND THE CULTURAL HERITAGE		a. COORDINATION b. RUNNING OF THE BIOLOGICAL STATION IN GERAKAS ALONNISOS c. BOOK-DIRECTORY d. REGISTER

9. WWF-GREECE *	IONIAN SEA	a. SCIENTIFIC RESEARCH b. PUBLIC AWARENESS
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* Funded under another budget line from the European Union through WWF

ALONNISOS FISHERMEN COÖPERATIVE	ALONNISOS ISLAND	ACTIVE PARTICIPATION IN THE PROTECTION OF THE ANIMALS
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**REPORTS PREPARED IN THE TERMS OF THE
Greek National Programme for the Protection of the Mediterranean Monk Seal
Phase I
CEU DG XI, Contract No. 4-3040(91)7808**

Elliniki Etairia (1992), Monitoring surveys of the Monk seal in Greece except in N. Sporades:
Final overall report. Athens, Greece.

Environmental Research Bureau (1992), Status of the population and habitat of the
Mediterranean monk seal in Kyclades islands (First approach). Athens, Greece.

HSSPMS (1992), Monitoring surveys in Dodecanese island: Final report. Athens, Greece.

Hydraisa Fokia (1992), Status of the population and habitat of the Mediterranean monk seal
in Myrtoon sea: final report. Hydra, Greece.

University of Thessaly (1992), Status of the population and habitat of the Mediterranean monk
seal in Samothraki island: final report. Volos, Greece.

University of Thessaloniki (1992), Study of the population and habitats of the Mediterranean
Monk seal in Northern Aegean: final report. Thessaloniki, Greece.

**REPORTS PREPARED IN THE TERMS OF THE
Greek National Programme for the Protection of the Mediterranean Monk Seal
Phase II
CEU DG XI Contract No. 4-3010(92)7829**

- Elliniki Etairia (1993), Greek National Programme for the protection of the Mediterranean Monk seal: Interim overall report. Athens, Greece.
- Elliniki Etairia (1993), Progress report of the project: Biological Station in Gerakas bay. Athens, Greece.
- Elliniki Etairia (1993), Progress report of the project: Functioning of a documentation centre for the Greek population of the Mediterranean Monk seal. Athens, Greece.
- Elliniki Etairia (1993), Progress report of the project: Preparation of a book-directory on the protection of the Mediterranean monk seal. Athens, Greece.
- Environmental Research Bureau (1993), Continuation of the surveys on the status of the population and habitat of the Mediterranean monk seal in Kyclades islands: interim report. Athens, Greece.
- European Nature Heritage Fund (1993), Progress report of the project: Preparation of an educational package about the monk seal. Athens, Greece.
- Hydraisa Fokia (1993), Continuation of the surveys on the status of the population and habitat of the Mediterranean monk seal in Myrtoon sea: interim report. Hydra, Greece.
- HSSPMS (1993), Continuation of establishment of a rescue network for orphan, wounded and sick seals and gathering of seals observations from the whole of Greece-Function of the seal treatment and rehabilitation centre in Alonnisos: interim report. Athens, Greece.
- HSSPMS (1994), Surveillance and safeguarding of the sensitive area of N. Sporades: interim report. Athens, Greece.
- HSSPMS (1994), Continuation of monitoring surveys in the NMPANS: interim report. Athens, Greece.
- University of Aegean (1993), Study of the population and habitats of the Mediterranean Monk seal in the area of Northern Aegean sea: Interim report. Mytilini, Greece.
- University of Thessaloniki (1993), Study of the population and habitats of the Mediterranean Monk seal in Skyros island: Interim report. Thessaloniki, Greece.

ITALY

An Updating on the situation of the Monk Seal in the Italian waters

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Legal protection.

The species is protected since 1939 and is on the list of specially protected species of 11 February 1992, but no other implementations have been resolved. A previous decree from the Ministry of Environment that banned fishery and boating in a large part of the waters of the Gulf of Orosei, is no more effective, especially under the pressure of the local community.

The Gulf of Orosei is included in a list of future National Parks.

Status of the species.

No more observations have been recorded since 1992. The last official one has been recorded close to Tavolara Island (north-eastern Sardinia) and involved a lone, wandering animal. A probable sighting has been reported last summer in the south-west of Sardinia. Not even dead animals have been encountered since many years.

In the mainland, last sightings date to 1988 near Puglia, in the South-east of Italy, quite close to the Greek Ionian Coasts, so that these animals must be considered as coming from there.

At this moment, we must conclude that there is no more an effective "population" of monk seals along the Italian coasts and that total amount of animals can be estimated in no more than very few individuals around Sardinia, possibly wandering to the Corsica Island and to the not far islands of the Archipelago Toscano.

Causes of the decline

The very first blow to the Italian population has been carried by fishermen that deliberately killed them up until 70's mainly because they considered the animals as competitors and for the damages made to the nets to tear away the fishes but even for their furs or simply for fun.

Since the development of the activities linked to the tourism (building-up of the coasts, boating, that is really impressive during the summer season, diving, occupation of the beaches, visiting to the "seal's grotto") which represent a very important source of economic incoming even for the local communities, and with the probable over fishing caused by some high impact kind of fishery (i.e. trawlers) all along the Italian coasts, the monk seals practically is vanished from the Italian waters. So, by now, we must consider the loss of the habitat as the major obstacle to the reconstitution of the population.

Projet d'Etude et de Conservation du Phoque Moine méditerranéen, *Monachus monachus*, des Côtes du Maroc

présenté par M. A. BAYED (MAROC)

Il existe depuis un an, le Comité National Marocain de sauvegarde du phoque moine. Parmi les objectifs de ce comité figure l'élaboration de programmes et d'en assurer l'exécution.

Dans sa réunion du mois de Juillet 94, le Comité m'a chargé d'élaborer les grandes lignes du programme National qui sera examiner lors de sa prochaine réunion. Je vais vous présenter ce programme provisoire.

Ce programme tient compte de l'ensemble des connaissances acquises et accessibles sur les populations du phoque moine du Maroc.

Les différents volets de ce programme sont:

- 1) Recherche de nouvelles populations entre Cap Barbas et Guerguerat
- 2) Aide à la mise en place de la protection *in situ*
- 3) Sensibilisation
- 4) Compléter les études scientifiques en cours
- 5) Etudes des déplacements
- 6) Etude des captures accidentelles de phoques

1. Recherche de nouvelles populations entre Cap Barbas et Guerguerat

La portion de côte comprise entre le Sud du Cap Barbas et Guerguerat montre plusieurs secteurs avec des grottes. Ce secteur présente les conditions écologiques nécessaires pour l'installation d'une colonie de phoques renforcés par des observations récentes de phoques le long du littoral et au large de ce secteur.

Ce secteur est à prospecter d'une manière intense à l'aide d'une embarcation légère (type Zodiac). La visite des grottes est impérative pour localiser celles qui sont habités et évaluer l'effectif des populations éventuelles. La visite des grottes se fera soit à partir de la mer (nage) soit à partir du haut de la falaise (échelle, corde). La partie sud de ce secteur (Nord de Guerguerat) héberge très probablement une population de phoques moines car les grottes sont nombreuses, de configuration adéquate et les observations de phoques rapportées sont récentes.

2. Aide à la mise en place de la protection *in situ*

Le Maroc sera doté bientôt d'un réseau d'aires protégées qui s'ajouteront à celles déjà mises en place. Parmi les zones proposées pour la mise en défend figure les régions où se trouve encore le phoque moine (Méditerranée et Atlantique) et tout particulièrement au

niveau du futur Parc National de Dakhla qui englobe la côte des phoques.

3. Sensibilisation

L'éducation des populations par l'organisation de campagnes de sensibilisation est incontournable car aucune mesure de protection du phoque moine ne peut espérer accéder au succès sans la participation des populations locales et tout particulièrement la communauté des pêcheurs. Cette action est particulièrement nécessaire sur la côte méditerranéenne moins que dans le secteur atlantique car la zone de la côte des phoques est très peu peuplée.

La sensibilisation des populations utilisera divers moyens: brochures, posters, autocollants, tee-shirts, pins, conférences etc. Ces actions doivent être effectuées à l'échelle locale et nationale. Le comité national coordonnera la sensibilisation des populations avec les différents départements concernés.

4. Compléter les études scientifiques en cours

Les connaissances scientifiques acquises et les études commencées récemment sur les populations de phoques doivent être complétées. Dans ce but, une collaboration avec les équipes scientifiques étrangères est nécessaire afin de réduire le temps d'investigation et obtenir des résultats dans de courts délais. Ces études sont programmées dans le but d'améliorer nos connaissances sur l'espèce d'une part, et d'autre part, d'établir un protocole de mise en réserve et de gestion qui tiennent compte des constats scientifiques et de diagnostics socio-économiques.

5. Etudes des déplacements

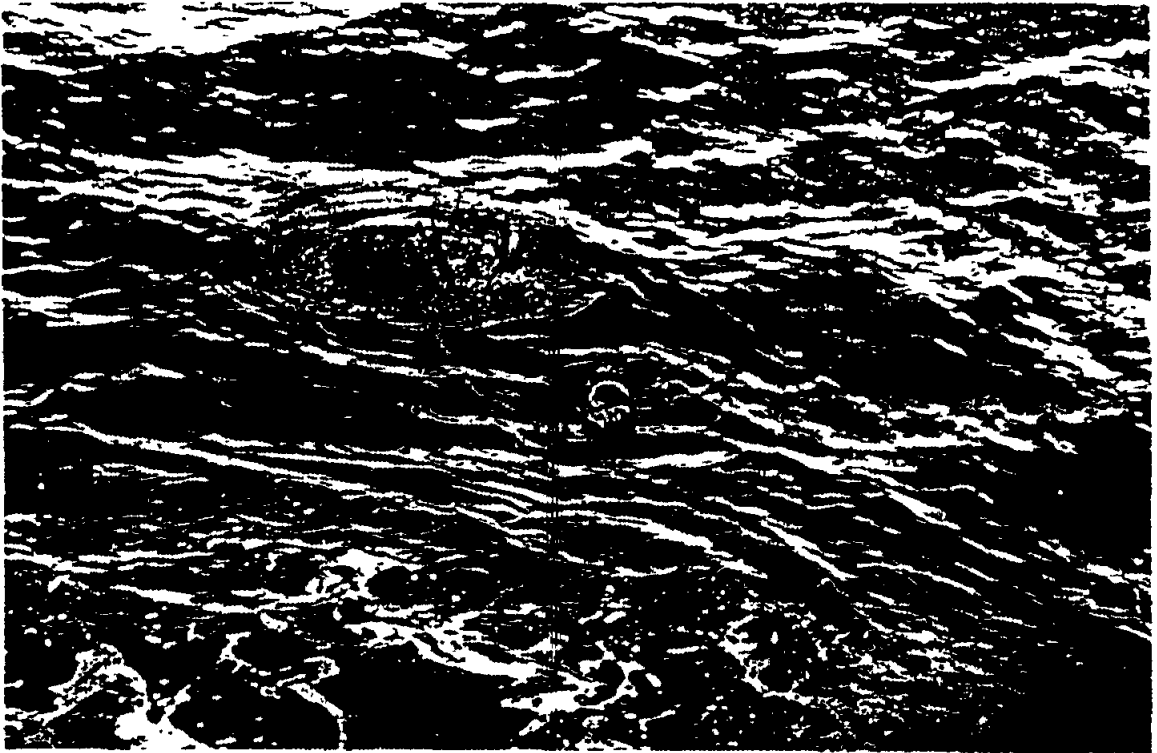
Une telle étude se justifie par le faible niveau de connaissance relatives aux déplacements des phoques. Cet aspect de l'étude peut être envisagé par l'utilisation d'une fiche d'observation qui seraient distribuées à tous les bateaux de pêche qui fréquentent le secteur étudié. Une fiche de ce genre existe déjà. Les informations demandées dans cette fiche font l'objet d'une saisie dans une base de données fonctionnelle depuis quelques années et pour laquelle existe tout une panoplie de traitements possibles dont la cartographie.

6. Etude des captures accidentelles de phoques

Depuis enquêtes sont prévues dans les ports où se trouve la flottille des bateaux de pêche opérant sur le plateau continental au large de la côte saharienne. Les bateaux non marocains opérant dans la zone seront aussi sollicités. Les renseignements demandés, outre les informations d'ordre générale concernent les conditions de captures accidentelles, les individus capturés et les espèces de poissons pêchés.

" The actual status of the monk seal (*Monachus monachus*) in the archipelago of Madeira and the future conservation strategy "

By: H. Costa Neves



"Meeting of Experts on the evaluation of the implementation of the Action Plan for the Management of the Mediterranean Monk Seal"

Rabat, 7 - 9 October 1994

Cover photo Juvenile monk seal at the nature reserve of the Desertas islands

"The actual status of the monk seal (*Monachus monachus*) in the archipelago of Madeira and the future conservation strategy"

The Monk seal (*Monachus monachus*) is one of the likeliest world species in danger of extinction today, being only about 500 of these animals in the world. It is considered to be the vertebrate which is most threatened with extinction in the countries of the European Community. In Europe they can only be found in Portugal (Madeira) and Greece. In the "Directive Habitats" (93/43/EEC) more precisely in Annex II, the species is given the highest priority.

In the Autonomous Region of Madeira, the main habitat of the Monk seal is the Desertas islands which have been declared a Natural Reserve by the Legal Regional Decree of 23rd May 1990. The reserve is protected and controlled by Nature Vigilantes who stay at the Doca biological station on the Deserta Grande. The Desertas are also a Biogenetic Reserve of the Council of Europe and were recent candidates to Unesco World Natural Patrimony.

The Monk seals of the Desertas are the only Atlantic colony of this species outside the African coast and at this moment are recovering in numbers.

Since the establishment of the nature reserve of the Desertas islands, the monk seal colony has been fully protected, controlled and monitored. To the monitoring of the seals non disturbing techniques are used, and for this a number of 12 observatories were established around the shore of the three islands that constitutes the reserve (see annex I). No visits to caves have been undertaken.

From this observatories we have been able to observe the seals and their evolution, and since they are completed relaxed, ignoring our presence on shore, the identification, feeding behaviour and dynamics of the seals is much more facilitated.

Since the nature reserve of the Desertas was implemented, a total ban of fishing activity was imposed in one zone, and a strict control of fisheries in the other zone, giving an opportunity to the fish stock recover generously, providing the suitable food resource to the seals. As a result of this, the monk seal are showing a more gradual sedentary behaviour.

According the data obtained during the monk seal monitoring, we are in a position to say that the monk seal colony of the Desertas islands is slowly recovering. In the last census of January 1994, we were able to identify 12 individuals, including a pup: It is an encouraging evidence if compared with 6 to 8 individuals estimated at 1990. At moment the minimum seal population estimated to the Desertas is 12 animals, and a maximum of 20. One or two pups occurs every year by October/November, and from January until the end of May the monk seals of the Desertas adopt a more gregarious behaviour forming groups of five and sometimes seven seals, (Costa Neves *in prep*). No dead seals have been found in the area.

The northern part of Madeira island consists on a rocky peninsula named Ponta de São Lourenço. It is a remote area characterized by high rocky cliffs along 30 km and facing the northeast trade wind. The shore line presents many caves carved into the basalt structure by the impact of the sea, wich is normaly rough in the area. No access is possible through land to the littoral shore line of Ponta de São Lourenço.

Since long time monk seals have been reported on this area, but due to its remoteness, very little is known about their status and numbers. However a small seal colony is supposed to be living there, according the recent observations made by yatchmen and fishermen and also by the light house keepers located on the extreme of the peninsula.

The Parque Natural da Madeira made several attempts to survey the area using the research boat "Buteo", but due to the difficult sea conditions only recently we were able to visit and stay in the area allong four days. The entire coast line was then carefully surveyed and all the caves, in a total of 61, were visited and checked. From this 61 caves, 17 are considered suitable to be used by the seals and four of them show very good conditions to house monk seals, (Costa Neves *in prep*). During this survey we were not able to see any seal. Recently a juvenile monk seal was seen on the south coast of Ponta de São Lourenço, trying to come ashore near the fishing village of Caniçal.

The future monk seal conservation strategy on Madeira will be based in two principal items:

- 1 - Maintain the actual status of the monk seal colony at the Nature Reserve of the Desertas Islands, in order to assure at long term its protection, monitoring and recovering.
- 2 - Continue the study and monitoring of the Ponta de São Lourenço at Madeira Island, and to promote the necessary legal steps in order to create a nature reserve in the area, with the aim of the protection of the monk seals.

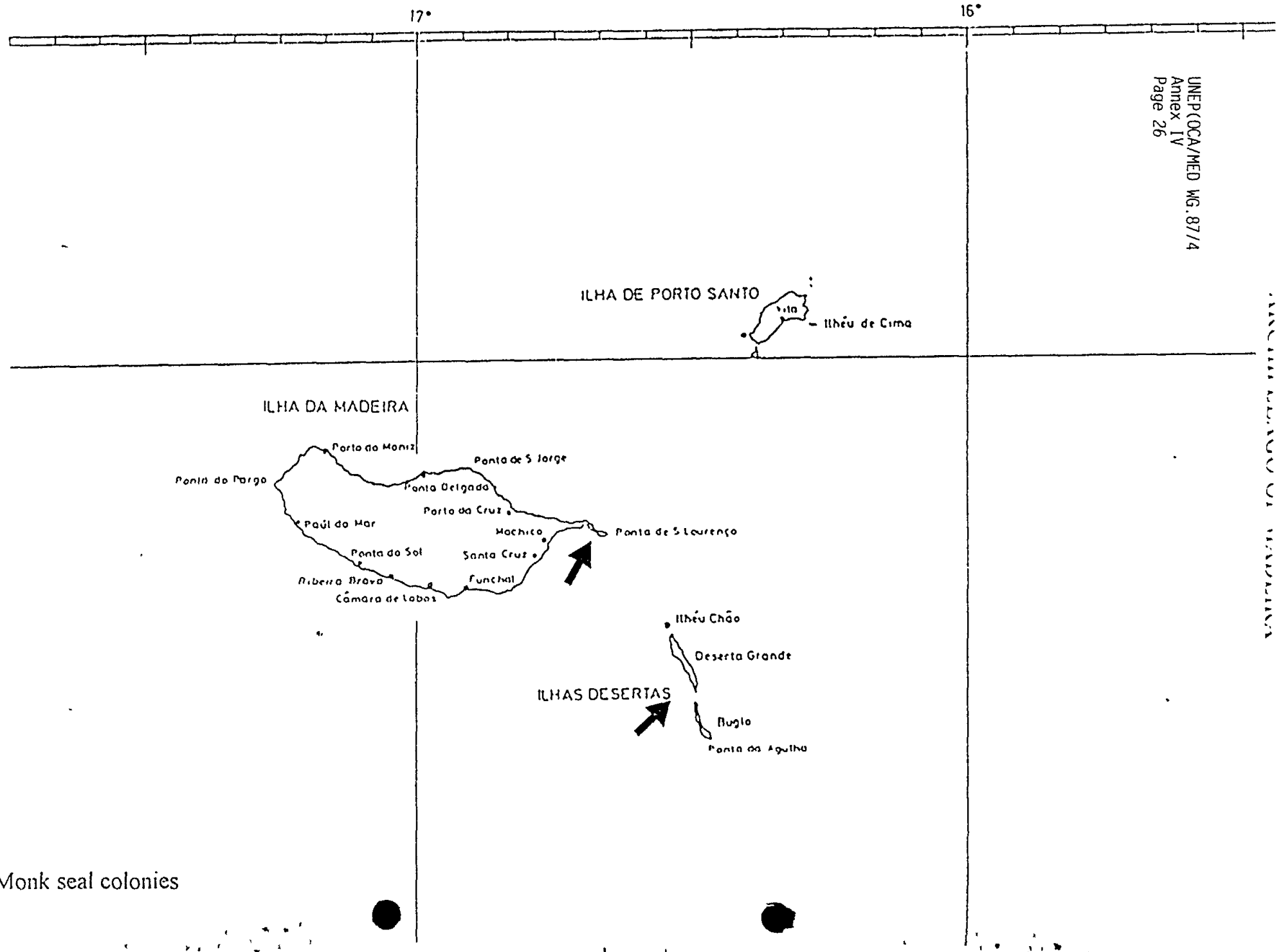
The proposed reserve (see annex II) will include all the north part of Ponta de São Lourenço, from Ponta do Espigão Amarelo on the west, until the light house islet at the east, and also a part of the south coast from Ponta das Gaivotas on the west, until the light house islet.

The nature reserve will be extended on the sea until the depth of 50 meters. A biological station will be built in the area, using the old construction of a house at "casa do Sardinha", and wardens will be provided to live there and to look out the area.

Compensation to the fishermen that eventually became affected by the creation of the reserve, is foreseen.

Funchal, 4th October 1994

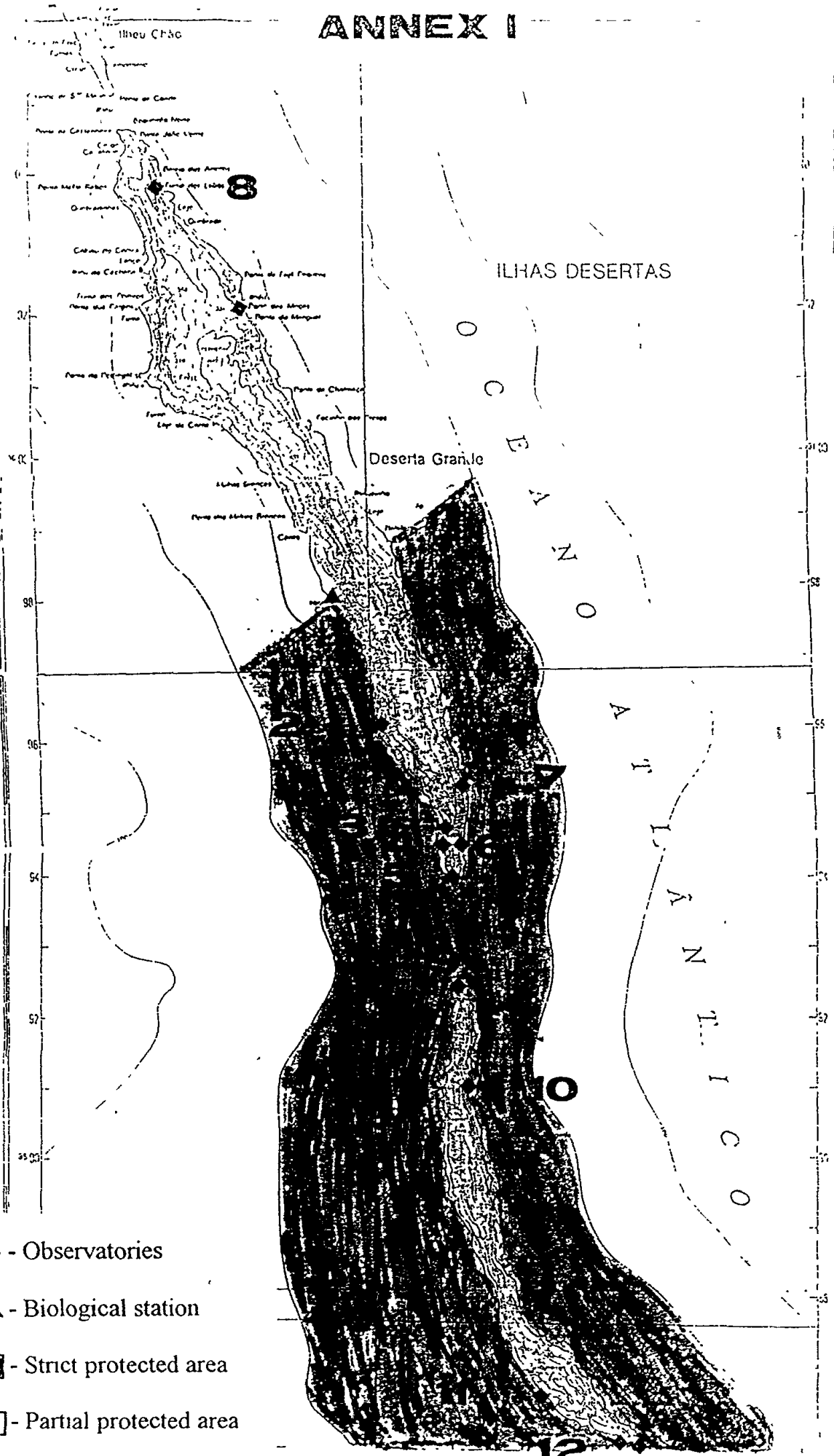
Henrique Costa Neves
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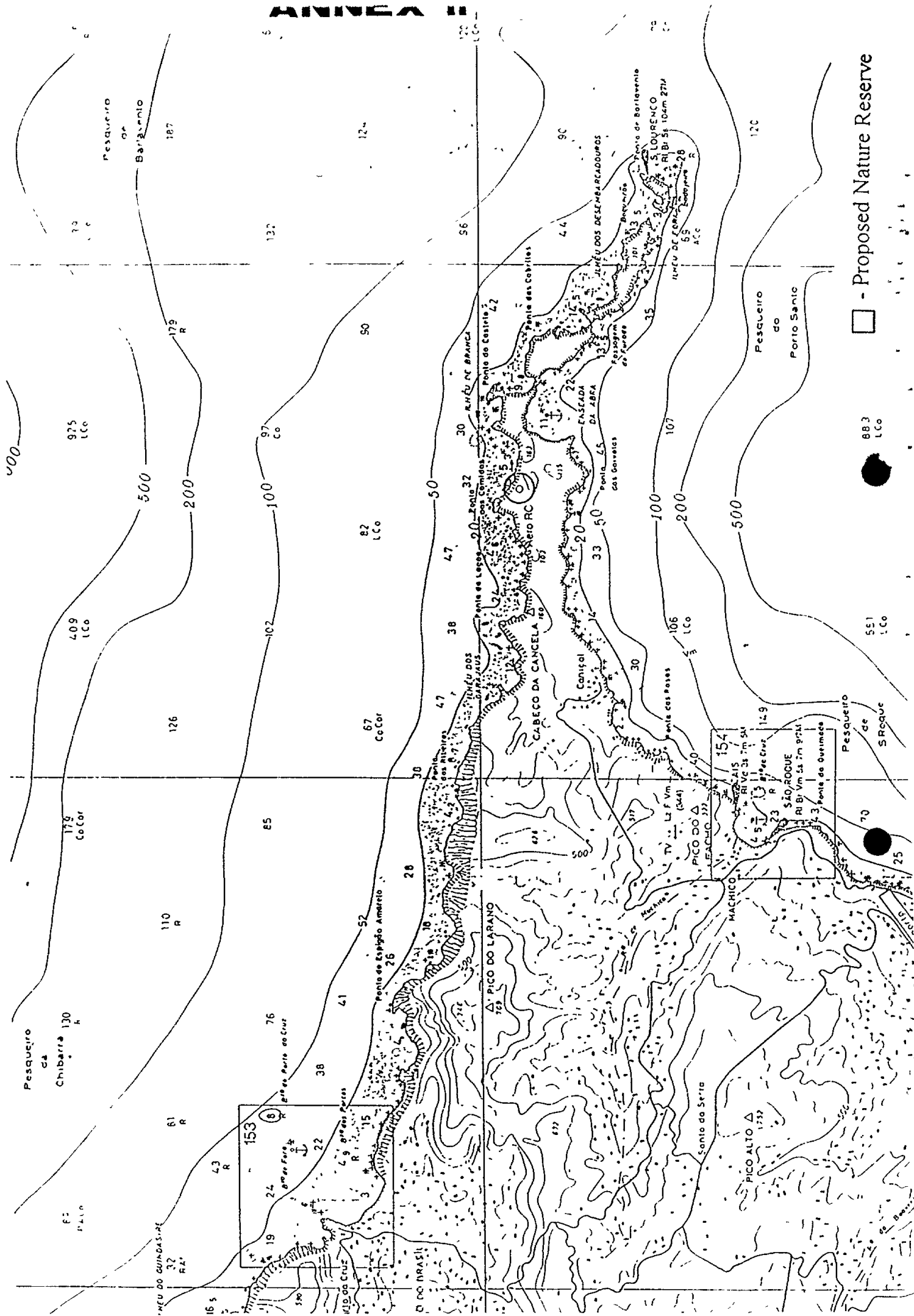
➔ Monk seal colonies

ANEXO IV DO RELATÓRIO

ANNEX I



- ◆ - Observatories
- ▲ - Biological station
- ▨ - Strict protected area
- - Partial protected area



□ - Proposed Nature Reserve

883 LCo

551 LCo

70

25

THE MEDITERRANEAN MONK SEAL IN TURKEY

Document presented by the Turkish Ministry of Environment

The Mediterranean monk seal has been classified by the Species Survival Commission of the World Conservation Union (IUCN) as "Endangered" species in 1966 and this allows the studies about the Conservation of the monk seals in Turkey. The Conservation of the Mediterranean monk seal is subject to legal regulations since the second half of 1970. The Water Products Circular which is published every year according to code no 1380-Law of Water Products and code no 3167-Hunting law prohibits the hunting of the Mediterranean monk seal on all Turkish coasts. The use of explosives and other fire-arms in fishing operation is also prohibited.

This species is also protected through a series of international arrangements which Turkey takes part, such as Bern Convention, Barcelona Convention and Genoa Declaration, Action Plan for the Management of the Mediterranean monk seal.

The studies on the protection of the Mediterranean monk seal and their habitats are fairly old in Turkey. Monk seals have been started to be protected in Mediterranean coasts in 1966 when Dilek Peninsula and in 1978 Cape Gelidonya (Bey Daglari) were designated as "National Parks". In 1977 it has been protected on all Turkish coasts by Law of Water Products and Hunting Law and it is still continuing. In the last few years, after the setting up of Local Committees in Foça and Yalikhavak, research and monitoring activities are taking place especially in high monk seal population areas. Also Middle East Technical University/Subaqua Society makes diving activities related to the monk seals in Foça.

Since Turkey is one of the few countries that still has an important monk seal population, a "National Strategy" has been prepared in order to coordinate all the efforts for the survival of this species and to develop a comprehensive policy and connected projects that could be supported and funded at the national and international level. So, in 1991 this National Strategy was adopted and a National Committee consisting of the representatives from governmental agencies, local authorities, universities and NGOs concerned has been set up under the coordination of Ministry of Environment.

The National Strategy consists of three main issues:

1. Research and Data Collection; It has to be developed both at national and international level.
2. Conservation and rehabilitation;
3. Training, Enhancement of public awareness and participation.

In May 1991, an international seminar on the conservation of the Mediterranean

monk seal was organized in Antalya under the auspices of Council of Europe/Bern Convention Secretariat.

In the framework of the efforts towards implementation of the National Strategy, Foça (its name coming from the seal), which is a small town consists of suitable habitats for monk seals, has been selected as a Pilot Area. The sensitivity of local authorities and fishermen in Foça has been culminated in the creation of a Local Committee which works in collaboration with the National Committee.

On the other hand, a national project named "Implementation of National Strategy in Turkey and Foça Pilot Project" has been conducted with the financial support of Ministry of Environment in 1991 and it is still continued by Istanbul University Water Products Faculty. Through this project, conservation, research and public awareness have been taken in a comprehensive and integrated manner. One the project is finalized, Turkey will be pleased to share its outcomes and experiences with other Mediterranean countries.

Also, a number of coastal areas have been visited by a boat called "Environment" which has been granted by Ministry of Environment to Foça Municipality in order to investigate the existing situation of the Mediterranean monk seal and their habitats and to identify the main problems leading to decline. This investigation by the boat is also very effective against the illegal and over fishing.

Public awareness has also been enhanced through local campaigns and inventories. In order to improve the public awareness and local people's knowledge about the monk seals, a booklet is going to be published systematically. On the other hand, there is a good exchange of information among fishermen in live with growing concern and they try to inform each other regarding the monk seal conservation in the area.

Furthermore, in 1993, another project has been started in Foça with the financial support of WWF International. For this financial support we thank to WWF.

WWF project is being carried out in cooperation with the Municipality of Foça, the Society of Fishermen and the Cooperative of Marine Products of Foça, Foça Bureau of the Society of the Protection of Nature of Turkey and the Local Monk Seal Committee of Foça which consists of the representatives of local divers. The aims of Foça pilot Project are as follows :

1. To gather information on the presence of the seals in the region, their status in the present and in the past, to determine the habitat and the behaviour;
2. To put the laws and sanctions about the conservation of the monk seals into action;
3. To propose new legal arrangements, as appropriate and necessary;

4. To raise public awareness on the conservation of the Mediterranean monk seals and the sea;

5. To determine new areas of marine conservation;

6. To form new arrangements about the usage of fishing sources around Foça;

7. To make a feasibility study on the conservative influences of artificial reefs.

At the beginning of 1993, a second Local Committee has been set up in Bodrum-Yalikhavak which possesses important monk seal habitats on the Aegean coasts.

The National Committee comes together once or twice a year by coordination of Ministry of Environment and take decisions related to the conservation of the monk seals.

The threats to the monk seals in Turkey can be listed as follows :

- Over urbanisation resulting in disturbance and loss of habitat;

- Illegal and over fishing leading to a considerable decrease in fish stocks ;

- Human disturbance to seal caves resulting in the disturbance of the seals (activities in and around the coastal caves, which are used by the monk seal for resting, breeding and for raising their youngs, have negative influence on the seals in the area);

- Deliberate killing ;

- Marine pollution.

The National Committee is going to come together in the last week of October under the coordination of Ministry of Environment. In this meeting the reports with regard to WWF Project in Foça will be covered and discussed (whether it is going to be continued or not). Also the problems related to illegal fishing both in Foça and Yalikhavak will be discussed. Furthermore, the decisions and the results of this meeting in Rabat is going to be discussed.

The urgent action to be considered for long-term survival to the species can be composed of the following:

1. Governments should enforce their existing legislation to ensure strict conservation of the species and if necessary, make amendments and revisions.

2. It is necessary to increase the number of marine reserves which are rare in the Mediterranean. The guidelines for the selection, establishment, creation and notification of information on marine and coastal protected areas can be helpful for this activity

3. Creation of a network of protected areas/reserves is the most important factor to guarantee the survival of the species. It has to be ensured that protection measures are strictly implemented in these areas and no infringement occurred.
4. The Action Plan for the Management of the Mediterranean monk seal provides a good basis to orient and coordinate efforts for the conservation of this species. While countries with monk seal population should endeavour to implement this Action Plan, other countries and financial institutions should support them by all means.
5. Education and training are integral parts of conservation. In this frame, it is necessary to ensure availability of trained personnel at all levels, such as wardens, park managers, wildlife specialities etc. to safeguard the species.
6. Public awareness campaigns directed towards the local people, especially enlisting the support of fishermen are needed in several areas. Collaboration with fishermen and local authorities is a prerequisite. They should be informed of the protection activities and encouraged to keep monk seals alive in the region.
7. Socio-economic evaluation of damage caused by seals is needed and the feasibility of compensating fishermen for damage to nets should be investigated.
8. Considering that these animals do not recognize national borders and they are the common living heritage for all Mediterranean, the countries should closely cooperate and coordinate their efforts in order to keep monk seals alive. Exchange of information and experience are the best forms of cooperation. Coordination function of Regional Activity Centre for Specially Protected Areas (RAC/SPA) can be supported in this respect.
9. Recognizing the adverse effects and irreversible damages of pollution to the species, Mediterranean countries should take all necessary measures to bring it down to acceptable levels immediately

EVALUATION OF THE PRESENT STATUS AND TREND OF MONK SEAL POPULATIONS IN TURKEY

By Mr. Bayram OZTURK

In Turkey the protection of monk seals is continuing under the coordination of the Ministry of Environment.

There are two projects in Turkey related to the protection of the monk seal. The first one is carried out by Istanbul University and covers all Turkey. This project consists of research, monitoring, public awareness and establishment of specially protected areas. The other project is supported by WWF International in Foça Pilot region and it is carried out by the concerned NGO.

From 1987 to 1994 42 individuals were identified. Our field studies are still going on.

There are 4 main monk seal habitat regions in Turkey :

1. North Aegean (this includes Gokceada and Foça)
2. The region between Cesme and Sigacik
3. Bodrum-Yalikavak (we also want another WWF project here)
4. In eastern Mediterranean the region between Gazipasa and Mersin.

The distribution of the monk seals in the regions is as follows :

- 12 individuals in North Aegean including Foça
- 9 individuals between Cesme and Sigacik (there are 3 pups in one cave)
- 6 individuals in Bodrum Peninsula
- 11 individuals between Gasipasa and Mersin, and 4 of them are pups.

Finally, two individuals have been recorded in the Black Sea (one is juvenile), and two individuals still survive in the Sea of Marmara. In June a symposium was organized about sea mammals in Black Sea. At the end of this symposium it was clarified that there is no more monk seal population in Bulgaria, Rumania and Ukraine.

On the other hand, in north part of Cyprus, in the islands of Cape Zafer 4 individuals have been observed. Probably these animals have relations with the population on Turkish coast.

Between 1987 and 1994 12 dead animals have been reported. Among these, 7 had drowned in fishing nets, 5 had been killed deliberately; 3 of them were juveniles.

The studies in the national parks which are considered as habitats of monk seals are continued (2 boats were taken and the personnel is being qualified).

Public awareness initiatives related to the protection of monk seal are continued. For this purpose during 1991, booklets, stickers, posters, pin, etc. has been distributed.

GREEK NATIONAL PROGRAMME FOR THE PROTECTION OF THE MEDITERRANEAN MONK SEAL (*Monachus monachus*) - FIRST RESULTS

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ABSTRACT

Since January 1991, Elliniki Etairia (The Hellenic Society for the Protection of the Environment and the Cultural Heritage) has the co-ordination of the Greek National Programme for the Protection of the Mediterranean Monk Seal, which aims to organize all the groups carrying out fieldwork and research in sensitive areas and important Monk Seal habitats and/or run public awareness campaign, and to create a central data base of all surveys carried out in the Greek space and their results.

The project "Monitoring Surveys of Monk seal in Greece except in N. Sporades" was the first "pilot project" carried out in this framework between 7.11.91 - 30.6.92 by five different groups. Its main objective was to assess the status of the population and habitat of the Monk Seal in the Aegean Sea.

The main principal of a harmonized National coordination is not to implement common uniform practises and ready made solutions in each one of the areas where Monk Seal habitats exists but to secure a coordination in institutional approaches (as it concerns e.g. fishing or incentives-disincentives etc.), to facilitate exchange of information and expertise, to promote a balanced coverage of the Greek space and to encourage the development of a "Greek School" of Management of Monk Seal habitats.

Key Words: monk seal, endangered species, habitat assessment, wildlife conservation, National programme.

INTRODUCTION

The Mediterranean Monk Seal (*Monachus monachus*) is the No 1 endangered species in the E.C. and the 10th most endangered species in the world. It was once found along all shores of the Mediterranean, the Black Sea, the coasts of Northwest Africa, around Madeira and the Canary Islands.

The main reasons for its extinction are overfishing, uncontrolled tourism, the pollution of coastal and marine environment and the hostile attitude of the local fishermen including also, particularly in the past, deliberate killing. Recent development of coastal infrastructures has destroyed many areas that females once used for pupping, forcing them to more remote spots. The last surviving population live mainly in Greece, although small populations also exists in other parts of the Mediterranean coast.

1. THE NATIONAL PROGRAMME

1.1 LAUNCHING OF THE NATIONAL PROGRAMME - PARTICIPATING GROUPS - COMPETENT AUTHORITIES

In order to protect this animal at a National level, Elliniki Etairia was called to undertake the coordination of a consorted effort of the Greek Government, the European Community and the environmental groups active on various aspects of protection of the animal in the entire Greek space and in this way the National Programme for the Protection of the Monk Seal was launched.

The groups working for the Monk Seal carrying out fieldwork in sensitive areas and important Monk Seal habitats and/or running public awareness campaign, participating in the Project (No: 4-3010(92)7829-E.C. contract) supported financially (75%) by the Commission of the European Communities are listed Table 1.

Apart from these groups, some other local initiatives exist and their representatives are often invited in the relevant meetings.

The PUBLIC AUTHORITIES involved are:

- THE MINISTRY OF THE ENVIRONMENT AND PUBLIC WORKS
- THE MINISTRY OF AGRICULTURE
- THE MINISTRY OF MERCANTILE MARINE
- THE PREFECTURE OF MAGNESIA
- THE MUNICIPALITY OF ALONNISOS.

1.2 AIMS - GUIDELINES

One of the first aims of the Coordination was to define a number of realistic goals and guidelines for the protection of the Monk Seal in Greece which would provide a workable common ground to be taken into account by all groups for the development of their own projects.

For this purpose Elliniki Etairia organized in 1991, 3 National Meetings with the relevant groups and the competent authorities, the output of which formed the guidelines of the Greek National Programme. These guidelines are:

1. Active protection by legal and practical means, guarding etc. of the Monk Seal

populations in the two most important areas identified until now:

(a) In N. Sporades (Aegean sea): Continuation of the monitoring - Operation of the Biological Station in Gerakas - Continuation of the Rescue Centre functioning and provision to expand it to cover the Greek space and the entire Eastern Mediterranean - Future establishment of a captivity breeding centre.

(b) In the Ionian islands: Continuation of the monitoring - Designation of the area under a legal form of protection.

2. Promotion of the awareness of fishermen, and the general public throughout Greece, on the importance of the Monk Seal and of the various protection measures. Study of the interaction between fisheries and Monk Seal and promotion of incentives such as exclusive fishing rights for the active protection of the species.

3. Expansion of monitoring surveys to cover the entire Greek space, and in depth study of the Monk Seal populations.

4. Increase of the critical mass of people (inside and outside universities) involved in Monk Seal research and protection and of the scientific potential of the different teams working in the field.

5. Establishment of facilities to keep dead animals (dolphins or monk seals), and a bank of samples. Supply of the working teams with mobile kit for taking samples *in situ*.

6. Continuation of the work of centralization and treatment of data, including some historical ones.

7. Further studies of interaction among populations of Monk Seals and other parameters, such as pollution etc.

1.3 ACTIVITIES

The area of N. Sporades has been declared a National Marine Park and it is protected under the Greek Law by a Presidential Decree issued on 28th of May 1992 after persistent pressure and a lot of continuous efforts by everyone involved in the Monk Seal Protection and a lot of preparatory work provided by Elliniki Etairia and others.

A Rescue network covers the entire Greek space supported by all groups. Furthermore a rescue and rehabilitation station is operating in Alonnisos island (N. Sporades), under the responsibility of the Hellenic Society for the Study and the Protection of the Monk Seal, which is the group working in that area.

The Coordinator has managed to secure the largest proportion of funds contributed by the Commission of the European Communities for the period '92-'94 for the protection of the Monk Seal, by presenting a thoroughly prepared and harmonized project covering in a relatively balanced way the entire Greek Space. We must point out the fact that this was the first time that a central coordination and management of funds took place, through

which a large number of groups were supported to work in this field while few years ago only one or two groups had the possibility to secure funds from the E.C.

2. FIRST RESULTS

During 7/11/91 - 30/6/92 the first pilot project "Monitoring Surveys in Greece except in N. Sporades" was completed with main objective to assess the status of the population and the habitats of the Monk Seal in the Aegean Sea.

Five teams undertook the field work (monitoring and research surveys), covering the following regions of the Aegean Sea, respectively :

- A. The Hellenic Society for the Study and the Protection of the Monk Seal (HSSPMS), in the Dodecanese islands, namely Nissiros, Yaili, Stroglyo, Tilos, Halki, Alimnia, Symi, Rodhos, Karpathos, Saria and Kasos,
- B. The Environmental Research Bureau, in the Cyclades islands, namely Milos, Antimilos, Kimolos, Poliaigos, Sikinos, Folegandros, Santorini, Anafi, Paros and Andiparos,
- C. The Ecological Society of Hydra "Hydraisa Phokia", in the island of Hydra and the Myrtoon Sea, and more specially the coast of Peloponnisos from Monemvasia to the island of Spetses,
- D. A research team under the supervision of Prof. A. Koukouras of the University of Thessaloniki in the Northern Aegean, except Samothraki island. This team worked surveyed the islands of Limnos, Ayios Evstratios, Lesvos, Chios, Euvia and also the peninsula of Sithonia and Athos, in Chalkidiki,
- E. A research team under the supervision of Prof. T. Alifakiotis of the University of Thessaly surveyed the Samothraki island.

The teams worked independently but in close contact with the Elliniki Etairia. Several meetings were organized with the groups during the study period.

2.1 METHODS OF COLLECTING DATA

The teams worked using both indirect and direct methods to collect data about the Monk Seal in the area they examined with relatively small differences in their methodologies and processes followed.

The indirect method is based on interviews with the local fishermen, concerning the area, the number of seals, their mortality and natality and also the damages they cause to nets. All groups were well aware of the problems of this method and therefore great care was taken in order to secure that the assessment reflects the minimum number of individuals in the examined area. Information was double checked and cross-checked with the descriptions provided by various fishermen, on specific seals.

The direct methods included examination of all the hollows, rock openings and caves of the surveyed area by snorkeling, by boat and by using diving equipment when available. All, or at least most of the caves considered as suitable shelters for mating and resting for the seals, were recorded and photographed and every evidence of seal presence in the examined area was recorded. Two teams (HSSPMS and ERB) presented, also, sketch diagrams of the caves which they considered as very important.

2.2 PUBLIC AWARENESS

In the framework of the project, important work has been done by all teams in the sector of environmental education and public awareness, concerning the monk seal. The latter was used as a symbol through which the protection of the entire marine environment was promoted. In that direction rescue networks for the monk seal were organized in most of the areas, based on volunteers.

2.3 MAIN CONCLUSIONS OF THE SURVEYS

In broad lines we should mention that the number of suitable shelters identified (about 100 so far) in proportion to the length to the coastline examined and the total number of caves recorded, was not impressive. It should be stressed, however, that caves with submarine entrances have not been identified during this phase.

Concerning the Monk Seal population, we can conclude that, a considerable number of Monk Seals still live in the part of the Aegean studies and also pupping occurs in several areas. A moderate assessment gives 80-100 adult Monk Seals without counting the Sporades islands and many other large areas, such as Crete and the small islands of S. Aegean, where monk seal populations occur but they remain virtually unstudied, so far. The present results are comparable with those published by the Royal Institute of Natural Science of Belgium.

Illegal fishing, destruction of the habitats mainly due to tourist development and marine pollution, together with still going on deliberate killing by fishermen present acute pressures responsible for the shrinking of the original Monk Seal population of the Aegean.

EPILOGUE

The main principal of a harmonized National coordination is not to implement common uniform practises and ready made solutions in each one of the areas where Monk Seal habitats exist but to secure a coordination in institutional approaches (as it concerns e.g. fishing or incentives-disincentives etc.), to facilitate exchange of information and expertise, to promote a balanced coverage of the Greek space and to encourage the development of a "Greek School" of Management of Monk Seal habitats. Given that the vast majority of the animals live in the Greek waters the aforementioned activities and the Greek Coordination is hoped to contribute substantially to the protection and safe survival of this species, which has become a symbol of the vulnerability of our Environment in the entire Mediterranean.

TABLE 1

1. HELLENIC SOCIETY FOR THE STUDY AND THE PROTECTION OF THE MONK SEAL	N.SPORADES	a. MONITORING b. SAFEGUARDING c. PUBLIC AWARENESS d. RESCUE CENTRE
2. ENVIRONMENTAL RESEARCH BUREAU	CYCLADES ISLANDS	a. MONITORING b. PUBLIC AWARENESS
3. SCIENTIFIC GROUP FROM THE UNIVERSITY OF AEGEAN	N. AEGEAN ISLANDS	a. MONITORING b. PUBLIC AWARENESS
4. SCIENTIFIC GROUP FROM THE UNIVERSITY OF THESSALONIKI	SKYROS ISLAND	a. MONITORING B. PUBLIC AWARENESS
5. ECOLOGICAL SOCIETY OF HYDRA "HYDRAISA PHOKIA"	MYRTOON AREA	a. MONITORING b. PUBLIC AWARENESS
6. EUROPEAN NATURE HERITAGE FUND		PUBLIC AWARENESS
7. HELLENIC SOCIETY FOR THE PROTECTION OF NATURE		PUBLIC AWARENESS
8. FISHERMEN COOPERATION OF ALONNISOS	ALONNISOS ISLAND	ACTIVE PARTICIPATION IN THE PROTECTION OF THE ANIMALS
9. ELLINIKI ETAIRIA THE HELLENIC SOCIETY FOR THE PROTECTION OF THE ENVIRONMENT AND THE CULTURAL HERITAGE		a. COORDINATION b. RUNNING OF THE BIOLOGICAL STATION IN GERAKAS ALONNISOS c. BOOK-DIRECTORY d. REGISTER

WWF-GREECE *	IONIAN SEA	a. MONITORING b. PUBLIC AWARENESS
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* Funded under another budget line from the E.C. through WWF-International.

PROJECTS RUNNED BY ELLINIKI ETAIRIA IN THE TERMS OF THE GNPPMS.

SUBPROJECT 1

Title : BIOLOGICAL STATION IN GERAKAS BAY

In the North side of Alonnisos island, situated in a place with panoramic view over the Gulf of Gerakas the Biological Station of the National Marine Park of Alonnisos N Sporades has been built. The Elliniki Etairia is responsible for the maintenance and running of the Station for the period 92-94, under the supervision of the Ministry for the Environment.

The Station is able to host at least 12 scientists and serve as a scientific and research post for people who want to work in the area of the Park. It has a laboratory room for biological scientific research and a deep freezer for preserving samples. There are 3 fully furnished bedrooms in the building, an operational kitchen with all the necessary facilities for cooking and a dining-living room. The central heating installation allows the functioning of the Station even during winter months.

Since 1.4.1992 a resident keeper has been hired by the Elliniki Etairia for the Biological Station in Gerakas bay. He is staying at the premises of the Station with his wife, and he is responsible for the maintenance of the building and for doing small repairs where and when it is needed, where his wife is responsible for cleaning the place.

In order to promote the parallel use of wind energy in the Marine Park, a survey is carried out by the Elliniki Etairia, on the possibility of installing a wind generator in the area of the Biological Station.

Our aim is to make the Station a Centre for the protection of the National Marine Park, and able to host National and international meetings on subjects relevant to coastal management and protection of endangered species. Also to serve as a Scientific and research post for people who want to work in the area of the Marine Park.

The first International training course took place at the Biological Station in Gerakas Alonnisos during the first week of September 1993. The meeting was jointly organized by the UNEP/SPA, Elliniki Etairia, the Ministry of the Environment and the H.S.S.P.M.S.

SUBPROJECT 2

Title : PREPARATION OF A BOOK-DIRECTORY FOR THE PROTECTION OF THE MONK SEAL IN GREECE

The aim of this project is to present in a comprehensive way all the research and conservation work carried out and currently being done on the Monk Seal in Greece by all relevant groups, Universities and Institutions that are active on this subject in the Greek space.

The first step to this direction is the review of all the work completed and the gathering of the existing material.

Several personal contacts have been made with the groups and a considerable amount of material has been collected. A beautiful collection of old gravures depicting various seals has been identified and purchased in order to be used for the publication. The layout has been made. The next step will be the classification of all the information collected and the detailed designing of the publication in order to be printed before the end of the year.

A pamphlet has been published, in order to promote the National Programme for the Protection of the Monk Seal, and to present it in a short and easily understandable way, giving brief information about each one of the participating groups, contact persons, tel., fax etc. This pamphlet is going to be distributed to all public services and other administrations and the coastal Greek municipalities, especially those important for the Monk Seal.

SUBPROJECT 3

Title: FUNCTIONING OF A DOCUMENTATION CENTRE

Upon the approval of this project the Elliniki Etairia became also responsible for the functioning of the Documentation Centre, which was until recently located at the University of Volos under a joint programme with the I.R.S.N.B. Due to this commitment the Elliniki Etairia organized two National meetings (July'92 - March'93) with all the concerned groups, to discuss in length all the issues regarding the Documentation Centre and our cooperation with the I.R.S.N.B. The meaning of the intervention of the E.E. is to collect nationally all the available relevant information which is needed for the assessment of the activities undertaken, the management introduced and the design of future policies.

The E.E. worked closely with the Royal Institute to formulate a protocol for the Register, acceptable by every one participating to it, and also to arrange all the relevant details for the transfer of all the documentation facilities.

All the existing information and data on the monk seal surveys in Greece have been inserted in the Greek Register and they are available to all working groups and they are continually updating.

During the period 1984-1993, the Monk Seal Register was filled with, approximately, 1150 seal encounters recorded in the entire Greek territory. Almost 40 % of the data concerns sightings made directly by scientists, where the rest were reported by fishermen and recorded by scientists. 75 % of the data were collected in the period 1991-1993 in the terms of the GNPPMS. The recent inputs for the period 1993-94 are very promising. Concerning data on the habitat, 882 caves are recorded and fluently described in the Register. These data are expected to lead in the identification of the suitable for breeding caves.

SUBPROJECT 4

Title: RUNNING - COORDINATION OF THE PROJECT

In the framework of the Coordination of the National Programme for the Protection of the Monk Seal, the Elliniki Etairia has organized of took active part in the following activities.

- Organization of 3 National meetings with all the participating groups and the competent authorities to discuss, organize and decide upon the priorities of the Programme and every other relevant issue. Several meetings have been also organized before the official beginning of the project in order to prepare it thoroughly and harmonize the various views.
- The President of the Elliniki Etairia made several trips to Brussels, to participate in the Experts meetings, to present and support the Programme and follow closely the issues.
- A lot of preparatory work had been done by the Elliniki Etairia and others participating in the Programme, for the drafting, finalization and issuing of the Presidential Decree for the Establishment of the Marine Park which was finally issued on 28 May 1992 (EK 519).
- A lot of work has been invested by the Elliniki Etairia for the preparation of the new supplementary Presidential Decree needed, concerning the Management Body of the Park and a number of technical issues.
- Implementation of the Management Plan of the National Park:
 1. Support of the safeguarding of the Park (Radar, VHF-retransmittor)
 2. Installation of a system of signs all through the Park area.
 3. Preparation of an eco-tourism guide.
- A small project of the Hellenic Society for the Protection of Nature concerning the production of public awareness material was funded.
- Participation in the events of the release of the monk seals "Thodoris" and "Efstratia", in Alonnisos. These events were of great importance and there were attended by the Minister of the Environment and the Prince Satur din Aga Han.
- Participation in Seminars: 25/27.9.92, in island Ustica N Sicily : "Management of Marine Protected areas - Touristic Development". The National Programme and the Marine Park of Alonnisos N. Sporades were presented. 5/7/.11.92, the 3rd annual meeting of MEDPAN network was held in Alicante-Spain. The National Marine Park of Alonnisos N.Sporades was presented.
- A visit to the Seal Rehabilitation and Research Centre in Pieterburen and in ecoMare in Texel-Netherlands was made in order to have a closer look on the

different activities and on the organization of these Centres.

- A Seminar on the Morbillivirus in Dolphins" has been organized due to the significance of this incident to the marine environment and to the Mediterranean Monk seal itself. Experts on autopsy procedure and sampling from dead animals were invited to give lecture together with the groups that have field experience. Representatives from the Ministries of Environment and Agriculture were also present. Participation on a Seminar on the same subject organized by the Society of Oceanographers in the Athens University.
- Several press conference an interviews had been given by Prof. M. Scoullos on the subject of the protection of the Monk Seal and the National Programme in Greek and foreign radio stations and newspapers. A presentation was also made in the Super Channel-UK on the Mediterranean including the Monk Seal.
- Gathering of material relevant to the issues of Monk Seal Protection, and management of endangered species, their ecosystems and protected areas.
- A chapter on protection of endangered species is drafted to be included in the Greek National Strategy for the Protection of Nature, now under preparation.
- A stand presenting the National Programme was exhibited in the International Exhibition and Conference HELECO'93, which was held in Athens between 1-4 April 1993.
- The National Programme for the Protection of the Monk Seal was presented to the participants of the two Residential workshops organized by the Mediterranean Information Office in Athens with NGO delegates from different European and non-European Mediterranean countries.
- The concept of the National Programme and the status of the Mediterranean Monk Seal in Greece was briefly presented by Prof. M. Scoullos in several occasions in international meetings.

**HELLENIC SOCIETY FOR THE STUDY AND THE PROTECTION OF THE
MONK SEAL/MOM**

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Thank you, Mr. Chairman

On behalf of the HSSPMS, I would like to thank UNEP MAP/RAC/SPA and the Council of Europe for inviting us to attend this meeting, as well as the representatives of the host country of Morocco for their hospitality.

In the late eighties the status of the monk seal protection in Greece was far from ideal. The reasons of its decline continued uncontrollably and protection proposals were not implemented. It was becoming obvious that an organization with sole aim the protection of the No 1 endangered species in Europe, was necessary. Thus the HSSPMS was established in 1988, as a non-profit and non-governmental organization, by a group of biologists and researchers. Today all Society's efforts are supported by 2500 members in Greece and abroad.

Recently, the HSSPMS, in its effort to expand its activities and increase the effectiveness of its research work, established the International Scientific Advisory Committee consisting of experts on different aspects of Marine and Seal Biology. The members of the committee are:

Prof. A.D.M.E. Osterhaus, from the Seal Rehabilitation and Research Center, The Netherlands.

Prof. P. van Bree, from the Institute of Taxonomic Zoology, University of Amsterdam, The Netherlands.

Dr. J. Harwood, from Sea Mammal Research Unit, Cambridge, United Kingdom.

Prof. D. Lavigne, from the International Marine Mammal Association, Canada.

Prof. A. Legakis, from the Zoological Museum, Department of Biology, University of Athens, Greece.

Dr. P. Reijnders, from the Institute of Forestry and Natural Management, Texel, The Netherlands.

Prof. E. Trillmich, from the Department of Behavioral Ecology, University of Bielefeld, Germany.

The task of this Committee is to:

- advise on the scientific research priorities related to the goals of the HSSPMS
- advise on the development and implementation of active scientific research plans, according to research priorities
- play an active role in the establishment of a national and international collaborative network with organizations, relevant research groups for the benefit of the study and protection of the monk seal.

The international scientific community, due to the highly endangered status of the Monk Seal has, several times during the last two decades, addressed the main threats to this species and proposed plans of action for its conservation.

Throughout these plans there are several common points that make up a complete strategy for the conservation of the monk seal and its habitat. These are:

- The establishment and enforcement of legislation aiming at the prevention of the killing and for the full protection of the species.
- The establishment of a network of monk seal reserves.
- The effective protection of the existing conservation areas.
- The operation of facilities for the survival of orphans or wounded seals.
- The raising of public's awareness through campaigns targeting all levels of society, governments, public, children etc.
- The involvement of fishermen in the protection of the species, aiming at changing their attitude towards seals and thus eliminating deliberate killing.
- The determination of the distribution, current status, level of interchange between population as well as study of the factors affecting the ecology of the species.

HSSPMS since its creation considered that the only possibility for the success of this strategy is the continuous and simultaneous implementation of all the above points. In this spirit we took the initiative to operate on all these levels with direct actions at national and local levels through specific activities which are:

- Study of the biology and ecology of the species.
- Contribution on the establishment and operation of the National Marine Park of Alonnisos - N. Sporades.
- Establishment and operation of an Information and Rescue Network, throughout coastal Greece.
- Establishment and operation of the Seal Treatment and Rehabilitation Center, in collaboration with the Seal Rehabilitation and Research Center of Pieterburen, the Netherlands.
- Public awareness at a national and local level.
- Environmental education in schools of Athens and coastal Greece.

Please allow me, at this point, to briefly describe the rational, and some of the up till now results of these activities which are part of the efforts for the protection of the Monk Seal in Greece.

PUBLIC AWARENESS

Few years ago only a handful of people were aware of even the existence of the monk seal in Greece. When we first started our campaigns, the common reaction from the public was to ask "Are there seals in Greece?" This is part of the past. During the last years a huge effort has been carried out by the HSSPMS to inform the public through the mass-media as well as through presentations lectures, exhibitions and slides-shows, documentaries productions and printed informative material.

It is difficult to have an exact measure of the effectiveness of such a campaign, however some indicative figures may show the response by the mass-media and by the public:

- Over 500 articles have been published in local, national and international newspapers and magazines in the last four years.
- More than 100 radio interviews have been given by Society members addressing the threats of the Mediterranean Monk Seal in Greece.
- 50 television appearances have been made in several local, all national, and some international television stations.
- In the last two years 40 lectures and presentations with slides shows have been given throughout Greece.
- 20 times the HSSPMS exhibition on the monk seal, consisting of photographic and informative material panels, was presented in various cities of Greece. It is worthwhile to mention that only in Thessaloniki and Athens, more than 10.000 people attended these exhibitions, last year.
- More that 250.000 people have visited the HSSPMS informative kiosks which are operating in the National Marine Park of Alonnisos - N. Sporades for the last 5 summers.

The above efforts have contributed to the fact that today the name "Monachus monachus" is widely known to the public.

Lastly a major part of the HSSPMS campaign has concentrated on sensitizing the Greek children:

ENVIRONMENTAL EDUCATION

Considering that Environmental Education (EE) is a new educational system aiming at the formation of conscious citizens equipped with knowledge, sensitivities, imagination and awareness of their links with the natural environment, ready to propose solutions and participate in making and applying decisions, the HSSPMS decided to invest considerable energy in this field.

For five consecutive years the Society is applying programs of environmental education systematically and throughout the school year on students of all educational levels with daily presentations in Athens and in coastal Greece. Especially during the last two years great emphasis was given to schools in coastal Greece, since this target group has close contact with the species.

These programmes even though they deal mainly with the monk seal they were designed to be vivid and interesting to the children but also to address other environmental issues like sea pollution-over fishing, recycling and environmental protection in general.

More specifically, the EE team run three environmental education programs. Each program explores the children's questions and tries to show them that we are all responsible for what is happening to the environment today.

During the 92-94 school years more than 35.000 children have participated in all above programs. Overall throughout the operation of the environmental education campaign 60.000 pupils have attended our presentations. Based on this work it has become obvious that there is a need to educate the teachers themselves on matter of environmental protection this is a direction that the society, together with the children's presentations, foresees for the future.

INFORMATION AND RESCUE NETWORK FOR COASTAL GREECE

A realistic strategy for the protection of the monk seal in Greece, has to take under consideration the distribution of the species and the unique morphology of the country. Within its 3.000 islands and 15.000 kilometers of coastline, lives and breeds major the largest population of the species in the Mediterranean (Reijnders et al., 1993). Past estimates of the size of the monk seal population in Greek waters give results between 200 to 500 individuals (Marchessaux and Duguy, 1979; Vamvakas et al., 1979), while more recently the population has been estimated to be between 200 to 250 (Reijnders et al., 1993). This population is distributed throughout the coasts of Greece in small populations.

Furthermore, it is necessary to mention that one of the most important causes of decline is still the deliberate killing of individuals, mainly by fishermen (HSSPMS, unpubl. results; Panou et al., 1993).

For the above reasons it is imperative to involve the local people, fishermen and authorities, within the species range, in the conservation strategy and to build a continuous good working relationship with them.

This project which started in 1991, establishes, promotes and maintains a working relationship with locals, local communities, fishermen, fishing cooperatives, local environmental organizations and port police authorities by directly contacting them. This relationship serves a dual purpose:

- Sensitize the local public on the endangered status of the species, the reasons for its decline and the uniqueness of the existence of the monk seal in their area, in order to alter their attitude and involve them in the effort to conserve it.

- Continuously receive information valuable for the conservation of the species, from throughout its range, in order to:
 - determine the monk seal distribution in Greece
 - estimate the size of the Greek population
 - monitor changes in the status of the population
 - record fishing activities relevant to the monk seal
 - act immediately when needed:
 - in cases of dead animals by performing autopsies collect information on causes of mortality, feeding biology, and aspects of taxonomy, genetics, virology, biology and parasitology of the monk seal
 - in cases of alive animals needing treatment, rescue, provide veterinary care and when necessary rehabilitate them.
 - identify and propose potential areas for protection

The team responsible for the implementation of this project made contact with more than 700 Greek port police departments, coastal communities, municipalities, fishery services, as well as fishing cooperatives, by sending the campaign's information package and by visiting 50 different islands and coastal areas during which more than 70 public lectures and presentations were given. In total more than 700 local authorities have been contacted through out coastal Greece.

In addition to the results from the direct visits to the areas, the response of the people to the "monk seal sighting" questionnaire indicates the effectiveness of this relationship. Since 1990, apart from the N. Sporades and Kefalonia and Zakynthos in the Ionian, 168 reports were received by the HSSPMS regarding specific and recent sightings of alive monk seals and 36 times dead animals were found and reported by locals, fishermen and port police authorities.

The significance of these reports in the determination of the distribution of the species is obvious, when one considers that the estimated size of the Greek monk seal population is between 200-250 individuals (Reijnders et al, 1993).

A study using the above data and older reports of the dead animals, out of which 17 times autopsies were performed and samples were taken for analyses, suggests that deliberate and accidental killing still remains the major threat to the monk seal.

Apart from the results related to the monk seal the team has received more that (235) two hundred and thirty five reports of stranded cetaceans. The above reports and the autopsies that were performed in some of these individuals gave important evidence for the spread of the dolphin morbillivirus epidemic in the Mediterranean (Van Bresseem, et al 1993).

Possibly the most important result of this campaign is that we have managed to initiate a productive working relationship with the locals of coastal Greece.

It was almost a unanimous consensus of the fishermen of all areas visited, that they do not consider the damages caused by the monk seal as the major problem but the decrease in the fish stock by illegal and industrial fishing (dynamite, chemicals, night speargun fishing, trawlers, purse-seine boats).

The experience gained, made clear to us that the fishermen should and can play one of the most important roles in the conservation strategy. Thus, any conservation measure for the monk seal must also ensure the conservation of the fish stock of the areas of interest.

RESCUE - TREATMENT AND REHABILITATION

One of the reasons contributing to the decrease of the monk seal is infant mortality due to the mother's death or the loss of the pup due to bad weather conditions.

Bearing in mind the low population numbers the rescue and rehabilitation of orphan and wounded animals is an important conservation measure. The HSSPMS facing this problem in collaboration with the Seal Rehabilitation and Research Centre of Pieterburen, the Netherlands (SRRC), installed a mobile intensive care unit on Alonnisos, N. Sporades in the fall of 1990.

The team working in the Centre has been specially trained in handling and treating seals in the Netherlands. During their stay valuable experience and information has been gained on the rates of development and behavior of pups in captivity.

Additionally blood samples of these animals were used for virological analyses.

A study using these samples provided evidence which suggest that the monk seal may be less susceptible to the DMV epidemic as was originally feared (Osterhaus et al., 1992).

The area of release of the pups was chosen taking into consideration:

- the state of environment
- the existence of a breeding population
- and the protection status of the area.

The above requirements existed only in the National Marine Park of Alonnisos - N. Sporades, the area where they were released.

NATIONAL MARINE PARK OF ALONNISSOS - N. SPORADES

The National Marine Park of Aloneness Northern Sporades is located in the North Aegean sea and includes seven islands and several smaller islets. It is the first National Marine Park of Greece.

After long term lobbying in which HSSPMS played an active role it was declared as such on the 28th of May 1992 by a Presidential Decree. Since 1992 the area is protected by the restrictions included with the Presidential Decree, and the park will be governed and operated by an administrative body that is long overdue.

Since it was obvious that the regulations of the NMPANS need to be implemented the HSSPMS since 1993, operates a project of surveillance and safeguarding of the area against violators.

Under the approval of the Ministry of Environment and Merchant Marine, the HSSPMS guarding crew consisting of two guards and assisted by a port police officer, using the Society's patrol speed-boat "ALONNISSOS" an IFAW donation, performed daily patrols throughout the NMPANS checking for any violations.

From the first months of operation, it became evident that in order to effectively perform its task the guarding team needed to extend its activities in matters that were not originally anticipated. In particular, after a violator was found and the port police officer took the necessary action against him, the prosecuting procedure was greatly assisted, if the guards contributed in the legal procedure. Thus, members of the guarding team often signed sworn statements and testified against violators at the Alonissos Port Police, and traveled to court during the trials of violators as prosecution witnesses.

From March until the end of December 1993, the guarding team performed 127 patrols in the park area for a total of 524 patrolling hours. The "ALONNISSOS" covered more than 13.000 nautical miles throughout the protection zones of the NMPANS.

During the operation of the project, 55 incident were recorded at which the Port Police officer took some action.

The results show that we managed to large extend to control illegal activities not only during the summer season, but throughout the year as well. The public awareness efforts as well as the fines, confiscation and prosecution of the violators, contributed greatly not only to the present, but also to the future protection of the NMPANS.

STUDY OF THE BIOLOGY AND ECOLOGY OF THE SPECIES

The fact that within the NMPANS the seal population is of considerable size and breeds regularly provides a unique opportunity to study in detail the biology-ecology and behavior in the wild.

Apart from several survey expeditions in other Greek areas (Ag. Efstratios, Cyclades, Dodecanese, SW Peloponnese), the Society in the last few years has concentrated its research work in the NMPANS and the neighboring areas.

The study is performed by the research team of HSSPMS, using the Society's research boat "IFAW-ODYSSIA". Initially all caves of the area were examined and the possible sea shelters were determined and mapped. The methodology used for monitoring the seal population consists of a combination of direct and indirect observations. In addition in certain cases preprogrammed cave camera equipment is used (built and supplied as part of Contract No. ACE 6611/28 between the European Commission and the Institute Royal des Sciences Naturelles de Belgique).

The aim of the above activities is multiple:

- to monitor the status of the individuals of the local population, record any deaths, births, injuries etc. In case of emergency to be able to inform the HSSPMS rescue team to take the necessary actions.
- to identify and estimate accurately the individuals and the size of the current local seal population.
- to identify and monitor the importance of different sites (caves, beaches, islands) as important seal shelters.

Most of the results obtained are from 32 different shelters which have been identified and regularly visited. The team has conducted close to 1200 visits to the above caves which have been performed throughout the day and night period. During these visits 300 times animals have been sighted and recorded by members of the team. At these sightings the team has managed to photograph with hand cameras more than 300 times pups and adult monk seals. In addition more than 50 films from the pre-programmed cameras have been collected (representing approx. 4.500 hours of cave coverage).

The research team, using the information from the direct observations, sketches and photographs has managed up to date to identify 35 adults, juveniles or pups as distinct individuals. You should note that 25 more animals have been observed. However, the ~~evidence collected for these~~ are not sufficient for an exact identification.

Possibly the most important and encouraging observation is the fifth year in a row that births are recorded within the area of N. Sporades. Apart from the data collected on the identification of the local population, information has been gathered related to preference in habitat choice, daily and seasonal activity patterns as well as movements of individuals in the wider area.

Ladies and gentlemen, I am aware that it was a dense and long presentation. However, I can assure you that it was the briefest way to describe the efforts of HSSPMS team over the last six years. I hope that we showed you how the HSSPMS a non governmental organization translates designed conservation plans into action. I will repeat our belief that only implementation of integrated complete conservation strategies will ensure the conservation of the Mediterranean Monk Seal and its habitat/

Thank you very much for your attention.

THE MONK SEAL REGISTER

(Presentation by the "Institut Royal des Sciences Naturelles de Belgique")

The Monk Seal Register is a project coordinated by the Institut Royal des Sciences Naturelles de Belgique in collaboration with the Sea Mammal Research Unit. The European Commission has agreed to provide a large proportion of the funding for the project until the end of 1994. The Register is a service which is offered to all groups who are engaged in efforts to conserve the Mediterranean monk seal. It provides three complementary functions:

1. An archive, in standard format, of all available information on the conservation of the monk seal.
2. A facility for exchanging information between all of the groups involved in monk seal conservation.
3. Standardized methodologies for data collection, data extraction and presentation, and data analysis.

Archiving is the primary function of the Register. For a rare and widely distributed species, which is difficult to study and which has been investigated by many different groups over a long period like the monk seal, it is important that all observations are used effectively. It provides a relational database for handling information on surveys, site descriptions, records of visits to sites, encounters with seals, descriptions of individual animals, post-mortem reports and associated analyses, and on individual research workers in an integrated way.

The Register provides a mean of communication between national and international authorities, scientific institutions, teams working in the field, and all individuals who have contacts with the species. At present, the Register includes information from more than 50 collaborators in 8 countries.

The development and evaluation of conservation measures for the monk seal requires the best possible information on the ecology and population dynamics of the species. The concept of the Register was developed in order to respond to this need. The information in the Register is being used to guide a number of specific actions :

1. The choice of important sites for the conservation of the monk seal and the marine resources associated with it, particularly in the framework of the CORINE Classification of habitat types and NATURA 2000, a European Union programme associated with the Commission's Habitats Directive.
2. an analysis of population trends, ecological constraints and factors affecting population vulnerability.
3. The development of non-intrusive techniques (such as the use of automatic cameras and videocameras in the caves used by seals) to identify individuals and determine habitat preferences, the use of GPS technology to determine the location of caves more precisely, and the estimation of observer effort in different areas.

Statement by the Seal Rehabilitation and Research Centre (Pieterburen, the Netherlands)

The SRRC has been active in the rescue, rehabilitation and reintroduction of both harbour seals and grey seals along the Dutch coastline for over 20 years. During this time, more than 1,000 animals have been rehabilitated and returned to the Dutch Wadden Sea. Such measures have been undertaken as a means of enhancing population numbers, and is viewed as only one step towards overall management of the seal populations in the Wadden Sea.

Given then priorities established previously in the Marine Mammal Action Plan, and the critical situation of the Monk seal in the Mediterranean Sea, the SRRC feels strongly that *in situ* protection of Monk seal habitat areas is of the utmost importance; that the rescue, rehabilitation and reintroduction of sick or stranded individuals (mainly pups) is a tangible contribution to the future viability of populations, particularly at Côte des Phoques in the Atlantic Ocean; and finally, as a measure to be undertaken should all other fail, a captive breeding programme should be undertaken.

As a direct contribution to the survival of the Mediterranean Monk seal, the SRRC expresses its willingness to supply its expertise to a comprehensive collaborative measure between partners active in the habitat areas. Legal protection measures, *in situ* protection, and educational and public awareness projects, must be undertaken in conjunction with a concrete rescue and rehabilitation program. The SRRC has a proven track record with regard to scientific research programs related to seal virology, immunology, pathology and toxicology, and strives on an ongoing basis to apply such knowledge to the physiological health of seals (e.g. immunization of rehabilitated seals in Holland against PDV infection). Such a program will be of an international nature, and must be carried out with the collaboration of other existing groups with complementary expertise. Open dialogue, ongoing exchange, and an element of coordination are aspects needed in order to avoid confusion which could lead to negative biological consequences. Collaboration is essential, and the SRRC is ready and willing to undertake collaborative measures with any active and constructive group involved in Monk seal or ecologically-related issues.

WWF ACTIVITIES FOR THE CONSERVATION OF THE MEDITERRANEAN MONK SEAL

Mediterranean Programme
October 1994

WWF conservation work in the Region is conducted under the umbrella of the Mediterranean Programme, an International Structure which is responsible for coordination and development of most part of the projects of the National Offices present in the Basin. The Coordination Office is in Rome, c/o WWF Italy.

At present, the Mediterranean Programme includes 3 active projects for the conservation of the monk seal in 3 different countries: Greece, Turkey and Italy.

Greece

The WWF Greece project is part of a larger programme launched in 1992, as a continuation of previous monk seal and sea turtle work, which aims to an integrated coastal management scheme in the Ionian Islands. Inside this Programme, specific activities for the protection of the monk seal are being conducted in the islands of Zakyntos, Kefalonia and Ithaki.

Research and public awareness work is carried out in this project.

Research activities could be summarised in :

- substantiating priorities for future monk seal research and conservation efforts;
- directing conservation efforts in the most effective and appropriate manner;
- continuously monitoring the coast and the caves to confirm and extend information on population size; distribution and habitat range; biology; ecology and ethology of the species;
- assess the nature of the monk seal interaction with fisheries and of the fishery itself;
- assess all other human activities affecting seals like habitat degradation and boat traffic;

Public awareness could be summarised in:

- obtain the trust and support of the local fishermen;
- offer tangible assistance to the fishermen community in any possible way to compensate and remove the conflict with the monk seal;
- organisation of presentations for schools, local authorities and people, tourists groups, diving centres, etc. and distribution of printed information material.

Results obtained and side activities:

- Present population size is approximately 20 individuals for the central and southern Ionian;
- In Zakyntos a total of 10 deaths has been recorded since 1988, 7 of these were deliberate killing by fishermen.
- A trend with the birth of 2 pups every year seems to have developed in Zakyntos;

- Seal sightings in caves are decreasing in summer and spring, probably because of negative influence of increased human disturbance along the coastline;
- Frequency of damage to nets caused by seals is variable but not negligible, particularly in the Southeast and western parts of Zakynthos island;
- A management plan for the whole Ionian, including protection measures for the monk seal, establishment of marine parks and granting of exclusive fishing rights to local fishermen is being presented to the Greek Ministry of Environment;
- Alternative forms of development (e.g. ecotourism) not in conflict with the species and its respective habitat are being promoted through the whole Ionian Programme.

Turkey

Following the indications of the Turkish National Committee for the Conservation of the Monk Seal formed in 1991, WWF Mediterranean Programme financed and directly started in 1993 a 3 year Pilot Project in Foça (Izmir) for the study and protection of the monk seal.

The activities are coordinated by the University of Dokuz Eylul/Institute of Marine Sciences and Technology in the person of Prof. Sukran Cirik (Project Leader) and carried out in the field by Yalçın Savas (Project Executant) from the Middle East Technical University - Subaqua Society / Mediterranean Monk Seal Research Group. Cooperation with the Municipality of Foça, the Society of Fishermen and the Cooperative of Marine Products of Foça, the Society for the Protection of Nature of Turkey and the Local Seal Committee of Foça has also been established.

The main objectives of the Foça Project are

- determine the population, distribution and habitats of the monk seal within the area;
- obtain more biological information about the species;
- assess and evaluate the interactions between monk seals and fishermen;
- initiate and carry out formal and non-formal education programmes for monk seal conservation;
- explore and determine possible other suitable areas to start and enlarge similar projects.
- put into action the existing laws and sanctions about the conservation of this species and propose new ones following to the Project results.

Activities conducted and preliminary results obtained:

- 12 coastal caves and several hidden shores suitable for monk seal use were found in Foça and its nearby surroundings;
- From observations and monitoring, the local population size could be estimated from a minimum of 4 to a maximum of 6 animals;
- These individuals use a much longer coastline than the one included in the Pilot Area in order to feed and take shelter and are probably in contact with other small groups observed in the Southeast;
- Seminars for teachers of primary schools, presentations for general public, specific study programs for children and specific information material on the monk seal (6.000 brochures) has been organised and distributed in Foça.

- In order to enforce the local ban on large scale fisheries (mainly trawlers) in force since 1991, a patrol boat was provided by the Ministry of Environment to Foça Municipality and an experimental artificial anti-trawling and repopulating reef has been settled around the boundaries of the Pilot Area by the University of Dokuz Eylul.