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**MEDITERRANEAN ACTION PLAN**

Fourth Meeting of National Focal  
Points for Specially Protected Areas

Tunis, 12-14 April 1999

**REPORT OF THE FOURTH MEETING  
OF NATIONAL FOCAL POINTS FOR  
SPECIALLY PROTECTED AREAS**

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## Introduction

1. In accordance with the decisions of the Tenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols (Tunis, 18-21 November 1997), the Regional Activity Centre for Specially Protected Areas (RAC/SPA) invited the National Focal Points for Specially Protected Areas to hold their fourth meeting in Tunis from 12-14 April 1999. The Meeting was held at the Oriental Palace Hotel in Tunis.

## Participation

2. The Meeting was attended by representatives of the following Contracting Parties: Bosnia and Herzegovina, Croatia, Egypt, European Community, France, Greece, Italy, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Slovenia, Spain, Tunisia and Turkey.

3. The following international organization was represented by an observer: United Nations Environment Programme, Coordinating Unit for the Mediterranean Action Plan (UNEP/MEDU).

4. The following institutions and non-governmental organizations were represented by observers: Association des amis du Parc Naturel Régional de Corse; ICRAM; MEDMARAVIS; MEDPAN; MEDWET; MIO-ECSDE; Parc National de Port Cros; and WWF.

5. RAC/SPA acted as the Secretariat for the Meeting.

6. The list of participants is attached as Annex I to the present report.

## Agenda item 1 - Opening of the Meeting

7. Mr Mohamed Adel Hentati, Director of RAC/SPA, welcomed the participants and, on behalf of all the participants, he thanked Mr Mohamed Mehdi Mlika, Minister of the Environment and Land Planning and President of the Bureau of MAP, for his uninterrupted support to RAC/SPA, which allowed the centre to play the role assigned to it by the Contracting Parties to the Barcelona Convention. He then enumerated the main issues to be examined by the Focal Points during the Fourth Meeting.

8. The next speaker, Mr Ibrahim Dharat, the Representative for the Coordinating Unit for the Mediterranean Action Plan, thanked the Tunisian Government for the support it provided to MAP, which had largely contributed to the success of RAC/SPA.

9. He expressed his great satisfaction with the remarkable contribution of the Centre to the implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and the elaboration of technical tools for the establishment of inventories, as a first step towards the setting up of an efficient protection strategy.

10. Mr Dharat stressed the quality of the working documents before the Meeting, which covered the great wealth of the activities of RAC/SPA. He listed the activities carried out by the Centre since the previous meeting of the National Focal Points in March 1996. Those activities consisted mainly in assisting the Mediterranean countries in the development of protected areas; in the implementation of various Action Plans for the conservation of marine turtles as well as the management of the monk seal or the conservation of cetaceans in the Mediterranean Sea; in the preparation of syntheses of the marine components of biological diversity and of national action plans for biodiversity; and in the establishment of inventories. Thanks to these efforts, said the representative of the Coordinating Unit for MAP, significant progress had been made for the protection of endangered species. However, some gaps

persisted which stressed the necessity for further coordination of efforts and the need to reduce the deficiencies at the level of legislation concerning threatened habitats. That, he said, highlighted the importance of the coordination and cooperation agreements with other international organizations, such as the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), whose interim secretariat had initiated contact with the Coordinating Unit in order to examine the possibility of RAC/SPA assuming the duties of Subregional Unit for the Mediterranean. That possibility had been examined by the Contracting Parties at their Tenth Ordinary Meeting in Tunis (November 1997).

11. Mr Dharat noted that it was the intention of the Coordinating Unit for MAP to present to the Contracting Parties a proposal to allocate additional funds to RAC/SPA in order to help it carry out its numerous tasks.

12. He stressed, on the other hand, the necessity for Governments which had not ratified the 1995 Protocol to speed up the process of ratification, in order to ensure the legal foundation for any future work.

13. Speaking on behalf of Mr Mohamed Mehdi Mlika, Minister for the Environment and Land Planning, Mr Habib Dimassi, Chef de Cabinet, officially opened the meeting.

14. Mr Dimassi expressed greetings from Mr Mohamed Mehdi Mlika, who sent his best wishes for the success of the Meeting and explained that his duties did not allow him to attend. Mr Dimassi read the opening speech in which Mr Mlika stressed the fact that, through the activities it carried out for the conservation of the environment in the Mediterranean area, MAP was an important instrument of rapprochement between the Mediterranean countries and a means towards the reinforcement of the links of solidarity and cooperation between them.

15. The Minister said that Tunisia, President of the Bureau of MAP since November 1997, tried to confer more efficiency on the action of this regional programme and initiated, with the cooperation of the Coordinating Unit, a process of reflection on the means of promoting the concrete contribution of the various centres and programmes of MAP to the national efforts of the Mediterranean countries.

16. The Minister stressed, on the other hand, the importance of the efforts to inventory the constituent elements of biological diversity and called on participants to refine the instruments established in the framework of RAC/SPA so that they could be implemented as soon as possible, especially as the acquisition of reliable data was a prerequisite for the efficiency of the protection and conservation measures.

17. In conclusion, Mr Mohamed Mehdi Mlika called on the Focal Points to promote new approaches to protecting and enhancing biodiversity, especially because the principle of integral protection and total prohibition was no longer accepted as an efficient means for the conservation of natural sites. The protection of nature, he said, should be dealt with according to the participative approach which enhanced sites, opened them to the public under strict control and integrated them into the socio-economic context at the local and national levels.

## **Agenda item 2 - Rules of Procedure**

18. The Meeting noted that the Rules of Procedure adopted for Meetings and Conferences of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Protocols (UNEP(OCA)/IG.43/6, Annex XI) would apply *mutatis mutandis* to its deliberations.

**Agenda item 3 - Election of officers**

19. After informal consultations, the Meeting unanimously elected the following officers:

Chairperson :	Mr Abdul Fatah BOARGOB	(Libyan Arab Jamahiriya)
Vice-Chairpersons:	Mr Tahar OU-RABAH	(France)
	Ms Ladislava KLASIC-STANKOVIC	(Croatia)
Rapporteur :	Ms Marie Christine VAN KLAVEREN	(Monaco)

**Agenda item 4 - Adoption of the agenda and organization of work**

20. The Meeting adopted the provisional agenda contained in document UNEP(OCA)/MED WG.154/1 and approved the organization of work proposed by the Secretariat in document UNEP(OCA)/MED WG.154/2. The agenda is attached as Annex II to the present report.

**Agenda item 5 - Conservation of natural sites and species in the Mediterranean countries**

21. In the course of the consideration of the above item of the agenda, representatives of Contracting Parties gave presentations of their country reports, which had been drawn up in conformity with the guidelines set out by the Secretariat in Annex 1 to document UNEP(OCA)/MED WG.154/2. The texts of the reports which were provided to the Secretariat are contained in Annex X to the present report.

**Institutional Framework**

22. Several delegations said that the institutional framework governing the conservation and protection of species and sites was anchored in the Constitution of their country, granting broad powers to Parliament in the regulating of environmental matters. In some countries, the Ministry in charge of the environment was the central body for such questions, although in some others competencies were shared by other Ministries, such as the Ministry of Agriculture, the Ministry for Cultural Heritage, etc.

**Legal framework governing the conservation of species and sites**

23. The delegations reported on the range of legal instruments that existed in their countries to govern the general protection of the environment and, in particular, the conservation of species and sites. It was pointed out that the relevant European Union directives also gave guidelines for development, sustainable use and protection of areas.

24. In countries with a high degree of administrative decentralization, the provincial authorities were the institutions responsible for enacting regulations and applying directives emanating from regional or international legislation. These bodies were complemented by specialized offices, dealing with particular areas or issues. In addition, in some countries academic institutions and NGOs played a significant supporting role. One delegation said that, in his country, management bodies were not foreseen for all protected areas, but solely for national and regional parks.

25. However, some delegations pointed to problems in the enactment and administration of environmental legislation due to the fragmented and complex administrative structure that existed in their countries. One said that, to overcome that problem, an updated law on the natural and cultural heritage would be put to the Parliament of his country in the coming months.

#### Status of signature/ratification of the relevant international agreements

26. Many Contracting Parties had signed and ratified the relevant international agreements, some by virtue of succession, and several were in the process of preparing to sign or accede to such agreements. Only two Parties reported that they had ratified the new Protocol concerning Specially Protected Areas and Biodiversity in the Mediterranean (SPA Protocol), although two others said that their Governments were in the process of preparing to deposit their instruments of ratification in the near future. Several delegations noted that the procedures relating to the signature and/or ratification of the ACCOBAMS Agreement were underway.

#### Marine and coastal protected areas (new developments 1996 – 1998)

27. Several delegations reported that they had established one or more protected areas or extended existing protected areas since the Third Meeting of SPA Focal Points. Several others had identified sites which were currently being studied with a view to possible future designation as protected areas. Some of those activities were carried out with the assistance of RAC/SPA and delegations expressed thanks to RAC/SPA for its efforts. Some Contracting Parties were in the process of cooperating with other Parties to study the possibility of establishing transboundary protected areas.

#### Protected marine species of flora and fauna

28. Several delegations said that their countries had enacted legislation to protect *Monachus monachus* and/or *Caretta caretta*, while one reported on legislation to protect *Posidonia* meadows. Some delegations said that their countries had not enacted legislation, but noted that the relevant annexes of the international agreements to which they were party would apply for the purpose of protecting specific species. Other delegations were in the process of preparing legislation.

#### Elaboration and implementation of the National Biodiversity Strategy and Action Plans

29. Several delegations reported that they had completed the elaboration of their National Biodiversity Strategy and had completed action plans. One delegation was in the process of completing action plans for cetaceans and the monk seal and hoped to upgrade the plans for other species. Others said they were in the process of preparing the Strategy and a directory of habitats. Some had established special bodies or committees to that end. One delegation said that a questionnaire had been sent out to interested government bodies and NGOs. One delegation reported that work was ongoing within the framework of the World Conservation Union (IUCN) North Africa Biodiversity Programme.

#### Preparation and updating of relevant inventories

30. Several delegations had completed various inventories and checklists of species and habitats and others were in the process of completing or updating such inventories and had set up projects to that end. Other delegations reported that they were in possession of only fragmentary studies and were just starting out on the preparation of inventories. One delegation pointed to the importance of funding from the EU, World Bank and Global Environment Facility for such work. The problem of insufficient expertise for the preparation of inventories was also highlighted.

**Agenda item 6 - Review of the recommendations and technical instruments elaborated within the framework of the meetings of experts and/or following recommendations of the Contracting Parties**

**6.1 – Draft revised Action Plan for the Conservation of Mediterranean Marine Turtles and priority actions for its implementation**

31. The representative of the Secretariat introduced this item and gave a summary of the process that had led to the establishment of a draft revised Action Plan for the Conservation of Mediterranean Marine Turtles and a list of priority actions for the implementation of this Action Plan, to be annexed to it. He stressed, in particular, the results of the meetings of experts held at Arta, Greece (27-29 October 1998) and in Tunis (18-20 February 1999). These documents were submitted to the Fourth Meeting of National Focal Points for SPA to be reviewed and finalized.

32. The Meeting examined the documents and introduced some modifications. The texts, as approved by the Meeting, are reproduced in Annex III to the present report.

33. Concerning the convening of the first Mediterranean conference on marine turtles, it was suggested that such a conference be organized with the support and cooperation of the appropriate international organizations. It should take particular account of the aspects of research and conservation of the species. The representative of Greece explained that the Greek Government would provide the necessary support for the convening of this Conference in Greece, on the island of Crete.

**6.2 – Further implementation of the Action Plan for the Conservation of Cetaceans and priority themes for reinforcing the implementation of the Action Plan for the Management of the Mediterranean Monk Seal**

34. The representative of the Secretariat explained the background to the recommendations of the Meeting of Experts on the Implementation of the Action Plans for Marine Mammals (Arta, 29-31 October 1998), which were before the current Meeting of National Focal Points for approval. The recommendations on topics to be addressed as a matter of urgency in the further implementation of the Action Plan for the Management of the Mediterranean Monk Seal were contained in document UNEP(OCA)/MED WG 154/3, Annex II. The recommendations for further implementation of the Action Plan for the Conservation of Cetaceans in the Mediterranean were contained in Annex III of the same document.

35. Following the discussion, the recommendations on the Mediterranean monk seal were approved with an amendment to those relevant to items 20, and 21-22. The text of the recommendations is contained in Annex IV to the present report.

36. In connection with the recommendation concerning an emergency plan (items 21-22), the delegation of Morocco asked that RAC/SPA refer to the meeting of the Contracting Parties the proposal to extend its activities pertaining to populations of *Monachus monachus* outside the Mediterranean region, notably, the population on the Moroccan Atlantic coast.

37. With respect to the latter recommendation, the representative of the Coordinating Unit of MAP cautioned that such activities went beyond the remit of Article 1 of the Barcelona Convention, and might also give rise to problems regarding their financial implications.

38. One delegation recommended that coordinated campaigns be conceived and carried out to ascertain the current status of monk seal populations in the Mediterranean and their distribution, especially along the Southern Mediterranean coast from Egypt to Morocco.

39. One delegation recommended that studies be undertaken, in close cooperation with the General Fisheries Council for the Mediterranean (GFCM), the International Commission for the Conservation of Atlantic Tunas (ICCAT) and any other competent fisheries organization, to examine the possibilities of reducing by-catch of threatened species, particularly cetaceans, and that the Secretariat contact the above organizations in order to take into account these concerns.

40. The Meeting also approved the recommendations for conservation of cetaceans. The text of the recommendations is contained in Annex V to the present report.

### **6.3 – Technical instruments for the establishment of national inventories of natural sites (data form, reference classification of marine habitat types, reference lists of habitats and species)**

41. The representative of the Secretariat explained that, following a specific provision of MAP Phase II to prepare inventories according to common criteria, the Tenth Ordinary Meeting of the Contracting Parties (Tunis, 18-21 November 1997) adopted criteria for the establishment of national inventories of natural sites of conservation interest. The criteria provided for the establishment of the following tools: a reference list of marine and coastal natural habitat types, to be drafted on the basis of a model classification to be established by RAC/SPA; a reference list of species for the selection of sites to be included in the national inventories; and a standard data-entry form (SDF). At the same meeting, the Contracting Parties invited RAC/SPA to work on the elaboration of such tools. Also in line with a decision of the Tenth Ordinary Meeting of the Contracting Parties, the technical instruments were before the Fourth Meeting of National Focal Points for SPA for finalization and would be adopted at the level of the Meeting of the Contracting Parties.

#### Reference classification of marine habitat types for the Mediterranean region

42. A Meeting of Experts on Marine Habitat Types in the Mediterranean had been held in Hyères (France) from 18-20 November 1998. The draft classification of benthic marine habitats resulting from that meeting were contained in document UNEP(OCA)/MED WG.. 154/3, Annex IV. The addendum to that Annex contained proposed supplements on the Eastern Mediterranean, resulting from an exchange of information via e-mail for the countries of the Eastern Mediterranean region, coordinated by Ms Bellan Santini (France), held subsequent to the Hyères meeting.

43. Following a discussion, the Meeting approved the draft classification of benthic marine habitats, as amended. The text of that draft classification, together with three appendices, dealing with, respectively, zonation of biocenoses in the Mediterranean region, types of sediments selected, and lexicon, is contained in Annex VI to the present report.

44. The Meeting also recommended that, in continuation of the mandate given by the Contracting Parties and which had not been completed by the Hyères meeting, RAC/SPA should organize a working group on the subject of pelagic habitats. To this end, the Focal Points will be invited to identify experts in this domain. It was agreed that, the experts within the group would communicate via e-mail and that the group would be coordinated by Ms Bellan Santini (France).



Reference list of habitat types for the selection of sites to be included in the inventories of natural sites of conservation interest

45. The meeting of experts at Hyères also proposed criteria for the evaluation of the conservation interest of each habitat type and a proposal of rating. The draft reference list of habitat types for the selection of sites to be included in the inventories was contained in document UNEP(OCA)/MED WG. 154/4.

46. The Meeting approved the draft reference list of habitat types. The text of the draft list is contained in Annex VII to the present report.

Reference list of species for the selection of sites to be included in the inventories of natural sites of conservation interest

47. The representative of the Secretariat drew attention to the proposed list contained in document UNEP(OCA)/MED WG 154/3, Annex V. He explained that, with a view to elaborating a working proposal for the current Meeting, RAC/SPA had requested guidance from the Contracting Parties, through the National Focal Points, in August 1998. Relevant replies had been received from four Parties, which had shown a tendency to favour the inclusion in the list the species set out in Annexes II and III of the SPA Protocol, and the present proposal had taken that into account.

48. The Meeting approved the draft reference list of species for the selection of sites to be included in the inventories of natural sites of conservation interest. The text of the list is contained in Annex VIII to the present report.

Standard Data-Entry Form for national inventories of natural sites of conservation interest

49. The representative of the Secretariat introduced the Standard Data-Entry form (SDF) for national inventories of natural sites of conservation interest, contained in document UNEP(OCA)/MED WG 154/5. He noted that a first draft of the form, including explanatory notes, had been submitted to the Contracting Parties for comment, through the National Focal Points for SPA, in August 1998. On the basis of the comments received, a revision of the form had been undertaken, leading to the version that was before the current Meeting for finalization.

50. Several delegations, while expressing appreciation for the Secretariat's work, considered that the proposed draft SDF was not adequately specific to the Mediterranean region and, from a technical perspective, did not correspond to its environment.

51. Some delegations considered that the work of the Secretariat provided satisfactory guidelines for use by countries which had not yet begun to undertake inventories.

52. The representative of Turkey made the following statement:

"I would like to state that Turkey's national inventories would not be accessible for comparative evaluation and regional integration if only Natura 2000 or Emerald site networks were to be used as a database. The designation of sites in the Natura 2000 network and the use of SDFs of Natura 2000 in the Emerald network and in the national inventories of natural sites of conservation interest of the Barcelona Convention can in no way constitute a basis for claims of sovereignty, nor could they be referred to as such in the future."

53. The representative of Greece wished the following statement to be included in the report of the Meeting:

“In reply to the Turkish delegation, Greece would like to reiterate the text of the declaration made by the delegate of the European Commission at Strasbourg on the occasion of the 18<sup>th</sup> Meeting of the Contracting Parties to the Bern Convention: ‘In conformity with Council Directive 92/43/CEE of 21 May 1992 concerning the conservation of natural habitats and of wild fauna and flora, the Natura 2000 Network is made up of zones which are part of the territories of the States members and is applicable on those territories’ (T-PVS (98) Misc. 1, Chapter 5.4, page 14, last paragraph).

Further, Greece would like to declare that it considers the Turkish declaration to be without meaning. Of course, the designation of sites for environmental purposes would not per se constitute a basis for claims of sovereignty. This latter is founded on texts which impose far greater legal constraints, such as peace treaties and protocols which delimit terrestrial and maritime borders.”

54. The representative of Turkey wished the following statement to be included in the report of the Meeting :

“International organisations have no competence to decide on territorial issues between neighbouring countries. The Directive of the European Union independently of its content and meaning does not bind in any case Turkey. If, as stated by the Greek delegation, there are other legal bases for maritime and territorial delimitation, these have to be evaluated under their own conditions and do not need to be confirmed or invalidated by any international organisation”.

55. Another delegation, stressing the need for harmonization of data, suggested that the Parties to the Barcelona Convention could contribute data at the marine level to the Emerald network under the Bern Convention, thus creating an important synergy between the two instruments.

56. The representative of the Secretariat clarified that the national inventories of sites to be established under the relevant provisions of MAP Phase II and the SPA Protocol were independent of the Natura 2000 and Emerald site networks, even if an effort was being made to ensure, to the extent possible, compatibility and comparability with the databases established within those frameworks. The inventories were purely technical repositories of knowledge and had no legal implications whatsoever.

57. The Meeting decided that it was necessary to improve the proposed SDF in order to better adapt it to the specificities of the Mediterranean region. To that end, it was decided that National Focal Points would nominate experts who would send their comments and proposals to the RAC/SPA Secretariat via e-mail, with the aim of preparing a new draft proposal. The proposal would be submitted to the National Focal Points for MAP at their September 1999 meeting and subsequently transmitted to the October 1999 meeting of the Contracting Parties.

#### Presentation on the preliminary work with respect to the inclusion of terrestrial coastal components in the national inventories of natural sites

58. Mr Pierre Devillers, in his capacity as an expert for RAC/SPA, gave a brief presentation of the first draft classification of the habitats of the Mediterranean coastline, including a reference list of Palaearctic units. He described the background to the work undertaken and drew attention to a document, available solely for information purposes, which was an extract from the PHYSIS database. He pointed out that, in the future, work could be carried out to broaden the narrow definitions of coastal milieus contained therein.

59. The Meeting expressed interest in the work undertaken. Some delegations said that the Secretariat should not extend the scope of the inventories too much towards the terrestrial environment in order to avoid attenuating the specificity of the Barcelona system and to avoid duplication with other instruments. It was also suggested that consideration be given only to those species that go through a marine stage during their development process.

#### **6.4 – Draft Action Plan for the conservation of marine vegetation in the Mediterranean sea**

60. The representative of the Secretariat indicated that the draft Action Plan had been adopted by the last Meeting of Experts (Tunis, 9-10 April 1999) and proposed that the Chairman of the Meeting of Experts introduce it. The latter stressed that the Plan had been thoroughly discussed by the experts and that the Meeting had reached a general consensus on the plan in its entirety. He also noted that the Meeting had made sure that a terminology was adopted that was in accordance with what was used in the SPA Protocol.

61. One delegation expressed some reservations regarding point 8.3 concerning the coordination of the establishment of national networks for the monitoring of marine vegetation. Following a discussion, the Meeting agreed to keep the original text, to put the word [coordinate] between brackets, and to submit the issue to the Contracting Parties.

62. Concerning section F of the Action Plan, regarding the attribution of the title of "Action Plan Partner", the Secretariat, in answer to requests for clarification from some participants, noted that the text of the draft Action Plan stipulated that this title should be granted by the Contracting Parties and that the conditions for such attribution should be determined in coordination with the Focal Points. Several delegations stressed that this initiative could be of interest in promoting the conservation of marine vegetation.

63. Concerning the timetable annexed to the Action Plan, the representative of Greece expressed reservations regarding the deadlines it set and suggested that this annex should serve as guidelines only. He explained that this was due to the length of the coast in his country and to the human, material and financial means necessary for the implementation of the actions indicated in the timetable.

64. Several delegations stressed the importance of the timetable annexed to the Action Plan and draw attention to the fact that the deadlines it set had been adjusted and fixed by the Meeting of Experts (Tunis, 9 -10 April 1999) prior to the current Meeting, taking into account the practical possibilities for implementation.

65. The text, as approved by the Meeting, is reproduced in Annex IX to the present report.

#### **Agenda item 7 - Progress and development of RAC/SPA's activities**

66. The Director of RAC/SPA gave a brief general presentation of the implementation of RAC/SPA activities carried out since the Third Meeting of National Focal Points, as described in document UNEP(OCA)/MED WG 154/3. With respect to implementation of the Action Plans on cetaceans, the monk seal and on marine turtles, he thanked the Government of Greece for its support in organizing the meetings of experts in Arta from 27 to 31 October 1998. In connection with activities for the preparation of inventories, he thanked the Government of France for its support in organizing the expert meeting on marine habitats, held at Hyères from 18 to 20 November 1998 and the expert meeting on marine turtles, held at Tunis from 18 to 20 February 1999.

67. Training activities concerning specially protected areas and the management of species, he said, represented a strategic thrust recommended by the Contracting Parties. With regard to Coastal Area Management Programmes (CAMPs), RAC/SPA had been requested to participate in them in the sustainable management of biodiversity as an element of the integrated management of coastal areas and several CAMPs were in operation. Concerning coordination with other international organizations and conventions, he highlighted the Memorandum on Cooperation that was to be signed in the near future between RAC/SPA and the Convention on Biological Diversity. Databases and directories had become increasingly important over the past few years, he said, and RAC/SPA had upgraded and harmonized its data, which could now be accessed on its newly developed Website. In conclusion, he pointed to the many other activities that had been carried out that were listed in the report of the Secretariat.

68. Several delegations congratulated the Director and staff of the Secretariat on the high level of work, both qualitatively and quantitatively, that had been undertaken in the period since the last meeting of National Focal Points. One of them cautioned against an attempt to try to undertake too much, which could result in fragmentation of activities. Several delegations expressed thanks and appreciation for the assistance and support that they had received from RAC/SPA.

69. The delegation of Monaco, speaking on behalf of the Interim Secretariat of the ACCOBAMS Agreement, reminded Parties of the need to ratify the Agreement to ensure its rapid entry into force and thanked RAC/SPA for its activity to define, in consultation with the ACCOBAMS Interim Secretariat, practical ways by which it could discharge the duties of Subregional Coordinating Unit for the Agreement.

70. With regard to Indicators of marine and coastal biodiversity in the Mediterranean, Mr Jean-Pierre Feral, RAC/SPA consultant, gave a brief presentation of the report he had prepared on indicators of marine and coastal biodiversity, contained in document UNEP(OCA)/MED WG. 154/Inf.4. He observed that previous work on indicators of biodiversity dealt mainly with the terrestrial domain and not the marine environment. Moreover, there had been little coordination in the pursuit of such activity in the Mediterranean region. The categories of indicators in his report covered constraint or pressure; state; use and response. He concluded by stressing that the indicators were intended as a means of transmitting information to managers, and represented a synthesis rather than a scientific compilation.

71. The Meeting commended RAC/SPA and the consultant on the preparation of the document, which was considered to be a valuable initiative. The Meeting agreed to submit the study to the Contracting Parties and, to that end, to establish an *ad hoc* group of experts to examine and finalize the study. In addition, the Secretariat was requested to establish or maintain the contacts with the other international initiatives on the subject of indicators.

72. On the subject of collection of data, exchange of information and public awareness, the representative of the Secretariat, drawing attention to the information note contained in UNEP(OCA)/MED WG 154/Inf.6, explained that RAC/SPA had refined and harmonized its databases in order to make them accessible, in a balanced form, on the new Website. That Website had a threefold aim: to provide information on SPAs, on the Protocol itself and on Action Plans; to provide a forum for Focal Points to post their comments; and to make available time-sensitive information, such as details of meetings, etc. The participants in the Meeting were given a hands-on demonstration of the Website. The representative of the Secretariat pointed out that, at the current Meeting, extracts from the RAC/SPA database would be distributed to each Contracting Party for possible comment on and/or updating of the information contained therein at a future date.

**Agenda item 8 - Structure and budget of RAC/SPA for the biennium 2000-2001**

73. The Director of RAC/SPA introduced the information document on the recommendations and programme budget for RAC/SPA for 2000-2001 proposed to the MAP National Focal Points Meeting, contained in document UNEP(OCA)/MED WG 154/Inf.3. He stressed that the National Focal Points for SPAs were receiving such a document for the first time in order to make them aware of the new elements introduced into the budget format, in line with the request that the budget document be made more comprehensible. Under the four main activities (collection of data and periodic assessment of the situation ; planning and management ; public information ; and exchange of experiences) the new format identified the issues at stake, the responses received over the prior period, the gaps identified, the recommendations to the Contracting Parties and to RAC/SPA on how to overcome them, and the proposed budget.

74. In conclusion, the Director recalled that, in his opening address, the representative of the Coordinating Unit of MAP had pointed to the support MEDU had pledged to RAC/SPA for the coming biennium, in order to strengthen its capacities to undertake the tasks mandated to it.

75. In reply to questions from several delegations, the representative of the Secretariat said that, in order to have clarity and homogeneity in the document containing recommendations and the programme budget which was to be submitted to the Contracting Parties, all the recommendations of the various meetings organized by RAC/SPA were not included as an integral part of the document. In that connection, the Secretariat opted, on the one hand, to request the next meeting of the Contracting Parties to take note of those latter recommendations and to ensure their implementation and, on the other, to integrate into the document a part of the recommendations proposed for the biennium 2000-2001.

76. The representative of the Secretariat stressed that, considering the deadlines for submitting the proposed draft recommendations and proposed programme budget to the MAP Coordinating Unit, RAC/SPA had been obliged to prepare proposals prior to the convening of the current Meeting of National Focal Points for SPAs.

77. Several delegations intervened on the subject, stressing that, with regard to the priorities to be proposed to the Parties, in the future it would be desirable for RAC/SPA to coordinate with the National Focal Points for SPAs, prior to submitting them to the MAP Coordinating Unit.

**Agenda item 9 - Strategic Action Plan for the conservation of biodiversity in the Mediterranean**

78. The representative of the Secretariat recalled that the Tenth Ordinary Meeting of the Contracting Parties had adopted a Strategic Action Plan to address pollution from land-based activities (SAP-MED). As a follow-up the MAP Coordinating Unit had submitted for funding to the Global Environment Facility (GEF) a project for determination of priority actions for the further elaboration and implementation of SAP-MED. Within the project, RAC/SPA, in collaboration with the Food and Agriculture Organization of the United Nations (FAO), was tasked with the elaboration of a Strategic Action Plan (SAP) for Conservation of Biodiversity in the Mediterranean. In that context, RAC/SPA provided the Coordinating Unit with the elements to draft the relevant sections of the project document to be established with UNEP as the Implementing Agency for GEF. The project, which had already been approved, had to extend over a three-year period and was expected to start in July 1999.

**Agenda item 10 - The MEDPAN Network**

79. The representative of the Secretariat informed participants that, following a recommendation of the Tenth Ordinary Meeting of the Contracting Parties, RAC/SPA had continued contacts with the Secretariat of the MEDPAN Network, with the ultimate aim of placing the network under the aegis of MAP and entrusting RAC/SPA with the function of General Secretariat of the Network.

80. The representative of MEDPAN described the background of the Network, which had been set up in 1990 with financial support from the World Bank, within the framework of METAP. Its initial principal aims were to serve as a forum for the exchange of information and experience for the managers of Mediterranean protected areas and to develop the appropriate tools for the management of those areas. The members of the Network were directors or representatives of the administrations of Mediterranean protected areas. The Parc National de Port Cros (France) served as the Secretariat.

81. Following the conclusion of the support from the World Bank, the Network had launched a phase of revival which had led to the preparation of a draft Statute which had already been approved by the majority of the members.

82. In reply to a question from one delegation on eventual budgetary implications of the collaboration with MEDPAN, the representative of the Secretariat pointed out that this cooperation was not expected to give rise to any MAP support for budgetary expenditures. Several delegations expressed satisfaction at this cooperation which was considered to be potentially fruitful. No objections on the subject were raised by the Meeting.

**Agenda item 11 - Other matters**

83. At the suggestion of one delegation, the Meeting asked the Secretariat to provide it with the recommendations of the workshop on *Caulerpa* species, held at Heraklion (Greece) from 18-20 March 1998. English and French-language extracts from the report of the workshop containing these recommendations were distributed to all participants.

84. At the suggestion of the representative of France, the Meeting agreed to transmit the following recommendation to the Contracting Parties:

“Bearing in mind that the appearance in the Mediterranean of non-indigenous invasive species, such as *Caulerpa taxifolia* and *Caulerpa racemosa*, could be the cause of profound changes to biological diversity, the National Focal Points for SPA recommend that the Contracting Parties ensure the implementation of the recommendations of the workshop organized on the subject (Heraklion, 18-20 March 1998) and entrust RAC/SPA with the task of coordinating the collection and dissemination of information validated by each Party and the follow-up to these recommendations.”

**Agenda item 12 - Adoption of the report of the Meeting**

85. The meeting adopted its report on the basis of the draft report contained in document UNEP(OCA)/MED WG/154/CRP.1 and its addenda.

**Agenda item 13 - Closure of the Meeting**

86. After the customary exchange of courtesies, the Chairperson declared the meeting closed on Wednesday 14 April 1999 at 20.30 p.m.

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LIST OF PARTICIPANTS

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ANNEX II  
AGENDA OF THE MEETING

## AGENDA OF THE MEETING

1. Opening of the Meeting
2. Rules of Procedure
3. Election of officers
4. Adoption of the Agenda and organisation of work
5. Conservation of natural sites and species in the Mediterranean countries
6. Review of the recommendations and technical instruments elaborated within the framework of the meetings of experts and/or following recommendations of the Contracting Parties
  - 6.1 Draft revised Action Plan for the Conservation of Mediterranean Marine Turtles and priority actions for its implementation
  - 6.2 Further implementation of the Action Plan for the conservation of cetaceans and priority themes for reinforcing the implementation of the Action Plan for the management of the Mediterranean monk seal
  - 6.3 Technical instruments for the establishment of national inventories of natural sites (data form, reference classification of marine habitat types, reference lists of habitats and species )
  - 6.4 Draft Action Plan for the conservation of marine vegetation in the Mediterranean Sea
7. Progress and development of RAC/SPA's activities
  - 7.1 Implementations of the 3 Action Plans adopted within the framework of MAP
  - 7.2 Assistance to countries in the field of conservation of sites and biological diversity
  - 7.3 Indicators of marine and coastal biodiversity in the Mediterranean
  - 7.4 Collection of data, exchange of information and public awareness
  - 7.5 Strengthening of national capabilities in the field of natural sites and species conservation
  - 7.6 Coastal Area Management Programmes (CAMP)
8. Structure and budget of RAC/SPA for the biennium 2000-2001
9. Strategic Action Plan for the conservation of biodiversity in the Mediterranean
10. MEDPAN network

11. Any other matters
12. Adoption of the report of the meeting
13. Closure of the meeting

## ANNEX III

# DRAFT REVISED ACTION PLAN FOR THE CONSERVATION OF MEDITERRANEAN MARINE TURTLES

## **DRAFT REVISED ACTION PLAN FOR THE CONSERVATION OF MEDITERRANEAN MARINE TURTLES**

as elaborated by the Meeting of Experts on the implementation of the Action Plan for the conservation of Mediterranean marine turtles (Arta, 27-29 October 1998) and reviewed and approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

### **INTRODUCTION**

1. The Parties to the Barcelona Convention included among their priority targets for the period 1985-1995 the protection of Mediterranean marine turtles (Genoa Declaration, September 1985). To this purpose, they adopted in 1989 the Action Plan for the Conservation of Mediterranean Marine Turtles. In 1996, the Parties confirmed their commitment to the conservation of marine turtles by including the 5 species of marine turtle recorded for the Mediterranean in the List of Endangered and Threatened Species annexed to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Barcelona, 1995). The Protocol calls on the Parties to continue to cooperate in implementing those action plans already adopted.
2. There is evidence of important negative impact on the populations of Mediterranean marine turtles by human activities. The most serious threats to the turtles are :
  - deterioration of the critical habitats for the life cycle of marine turtles, such as nesting, feeding and wintering areas, and migration routes;
  - incidental or intentional capture in fisheries;
  - pollution.

These threats have to be taken into account in any plan for the conservation of marine turtles and appropriate protection measures proposed.
3. Many important aspects of the status, biology and behaviour of marine turtles remain too poorly known to plan a complete management strategy for the conservation of these species in the Mediterranean. Nevertheless, the information which has become available since the adoption of the Action Plan allows a revision of some of its provisions. This Plan will be readjusted if necessary, as further information becomes available.
4. Information from various sources is taken into account in this Action Plan. Coordinated programmes for scientific research (population dynamics, tagging, biology, physiology, etc.), public awareness campaigns, proposals for the management of nesting beaches, etc. can ensure the survival and help the reconstitution of populations of marine turtles.
5. An effective and durable protection of the Mediterranean marine turtles implies management of the Mediterranean as a whole, and should take advantage of the action of all the concerned actors, notably NGOs, and be carried out in cooperation with existing programmes and plans, in particular:
  - at the international level : the Mediterranean Action Plan (MAP); Fisheries Management Plans (FAO/GFCM); Global Strategy for the Conservation of Marine Turtles (IUCN/SSC); International Commission for the Conservation of Atlantic Tunas (ICCAT); International Commission for the Scientific Exploration of the Mediterranean Sea (ICSEM);
  - at the national level : the plans established by the various countries.
6. This Action Plan for the Conservation of Mediterranean Marine Turtles outlines objectives, priorities, and implementation measures in different fields and their coordination. The different components of the Action Plan are mutually reinforcing and must be taken together to have the best chance of success.

## OBJECTIVES

7. The objectives of this Action Plan are :
- a. Protection, conservation and, where possible, enhancing of the populations of marine turtles in the Mediterranean. Special priority should be accorded to Chelonia mydas, wherever appropriate.
  - b. Appropriate protection, conservation and management of the marine turtle habitats including nesting, feeding, and wintering areas and migration routes.
  - c. Improvement of the scientific knowledge by research and monitoring.

## PRIORITIES

8. The following general priorities are recommended :
- protection and management of known nesting, feeding (benthic and pelagic) and wintering areas and migration routes;
  - restoration of degraded nesting beaches;
  - banning of exploitation and minimization of incidental catches;
  - identification of feeding and wintering areas and migration routes;
  - investigation of new nesting areas;
  - more knowledge on the biology of the species, in particular aspects related to its life cycle.
9. The following priority actions are specified :
- a. For the protection and management of the species and their habitats :
    - development and implementation of legislation;
    - protection and management of nesting areas;
    - management of feeding and wintering areas;
    - minimization of the impact of fisheries on marine turtles.
  - b. For research and monitoring :  
Knowledge needs to be improved concerning the following priority topics:
    - identification of marine turtle critical habitats;
    - assessment of fisheries' interaction;
    - population structure and dynamics;
    - development of nesting beach management techniques;
    - recording of dead, sick and injured sea turtles through stranding networks.
  - c. For public awareness, information and education :  
The general public and local stakeholders have to be addressed and, in particular, depending on specific conditions - target groups such as:
    - the local population and visitors to nesting areas;
    - fishermen and other stakeholders;
    - tourists and tourism-related organizations;
    - schoolchildren and teachers;
    - decision makers at local and regional levels.
  - d. For coordination:  
it is necessary to promote and enhance cooperation and coordination between the Contracting Parties , as well as the organisations and experts in the region.

In order to satisfy the set of priorities, emphasis should *inter alia* be given to :

- information media and, in particular, electronic media; for this purpose, the appropriate networks are to be used, wherever possible;
- production of Mediterranean information material, notably publications and audio-

- visual material ;
- national information campaigns.

## **IMPLEMENTATION MEASURES**

10. An adequate implementation of the measures recommended in this action plan will only be possible in the presence of appropriate support by the Parties and competent international organizations, particularly as regards the provision of adequate financial support, through national and regional financing programmes and through support for applications to donors for relevant projects.

### **A. PROTECTION AND MANAGEMENT**

With regard to management, the following measures are recommended :

#### **A.1 Legislation**

11. The Contracting Parties that have not yet extended legal protection to marine turtles should do so as soon as possible, especially having regard to the relevant international conventions.
12. Each Contracting Party should be encouraged to develop and implement the necessary legislation for the establishment, protection, conservation and management of protected areas for marine turtles.

#### **A.2 Protection and Management of Critical Habitats**

13. Integrated management plans should be drafted for terrestrial and marine areas which encompass marine turtle critical habitats.
13. Measures and regulations aimed at protecting critical habitats, on land and at sea, should be developed and implemented. In the case of nesting beaches, such measures should be in relation to public access, use of vehicles, use of artificial lights, noise, nautical activities, minimization of predation and inundation, etc.
15. Information campaigns directed at local authorities, residents, teachers, visitors, fishermen, and other stakeholders, are urgently needed in order to enlist their participation in the efforts for the conservation of marine turtles.

#### **A.3 Reducing Mortality at Sea and Eliminating Local Consumption and Use**

16. A reduction of accidental catch and mortality can be achieved by:
  - applying appropriate fishing regulations concerning depth, season, gear, etc. especially in areas with a high concentration of turtles;
  - the modification of fishing gear and methods. For instance, the use of Turtle Excluder Device (TED) and modified longlines could be tried and, as appropriate, introduced in fishing practices;
  - regulating speedboats at areas frequented by turtles;
  - education/training of fishermen to correctly haul, handle, release and record incidentally caught turtles.



17. Consumption, exploitation and deliberate killing of marine turtles should be eliminated by:
- designing and enforcing appropriate legislation;
  - carrying out campaigns among fishermen in order to urge them to release marine turtles caught incidentally and to participate in the information networks on turtles (report sightings of turtles, of tags, participation in tagging programmes, etc.);
  - carrying out campaigns for fishermen and local populations to facilitate the implementation of legislation to ban the consumption and trade/use of all products derived from marine turtles as well as to reduce mutilations and killings because of ignorance and/or prejudice.
18. Establishment of first-aid and rescue centres for the rehabilitation of sick and injured (accidentally or intentionally) marine turtles.

#### A.4 Establishment of a Mediterranean Network of Marine and Coastal Protected Areas for Marine Turtles

19. All the Contracting Parties that have critical habitats for marine turtles should make immediate efforts for the adequate protection, conservation and management of the areas encompassing those habitats.
20. An inventory of marine turtle critical habitats, including migrations routes, in the Mediterranean should be prepared urgently, and should be regularly reviewed in the light of increased knowledge.
21. A network of marine and coastal protected areas throughout the Mediterranean should be created covering known areas for reproduction, feeding, migration and wintering of marine turtles.

#### A.5 Information, Education and Training

22. A public-awareness programme, including special documentary information material, should be developed for fishermen, local populations, tourists and tourism-related organizations to help reduce the mortality rates of marine turtles, to induce respect for nesting, feeding and wintering areas, and to promote the reporting of any useful information concerning sea turtles.
23. A widespread campaign for the protection of Mediterranean marine turtles should be carried out in order to sensitize the public and encourage it to support conservation measures.
24. Training programmes should be elaborated for the exchange of expertise among the Contracting Parties, and particularly for those Parties that have no experts with specialized knowledge of marine turtles, or for managers of specially protected areas, including critical habitats for turtles.

### **B. SCIENTIFIC RESEARCH AND MONITORING**

#### B.1 Scientific Research

25. The development of research and exchange of information should cover all the priority fields for the conservation of marine turtle population by using various methods such as surveys, tagging, data logging, satellite telemetry, Geographic Information Systems (GIS), genetics, on-board observers, and modelling.
26. For some Contracting Parties there is little or no information on critical habitats and size of breeding populations of marine turtles. These Parties should be encouraged and assisted to undertake such research programmes.

#### B.2 Monitoring

27. All Contracting Parties should encourage monitoring programmes aimed at gathering information on population status and trends. For this purpose, important areas should be selected, included in the Mediterranean network, and a standardized methodology should be followed in order to allow

statistical comparisons to be made.

### **C. COORDINATION STRUCTURE**

28. It is necessary to develop cooperation among the Contracting Parties for the implementation of the Action Plan and to improve the coordination of activities within the region. It is considered that the Mediterranean Action Plan/Regional Activity Centre for Specially Protected Areas is the most appropriate existing mechanism for this coordination, in cooperation with other bodies concerned.
29. The major function of the coordinating mechanism with regard to marine turtles would be to :
  - collect and evaluate the data at Mediterranean level;
  - prepare inventories of existing and potential networks of protected areas for marine turtles;
  - contribute to the creation of a Mediterranean network of protected areas for marine turtles;
  - prepare a timetable of activities and financing proposals for the Contracting Parties meetings;
  - contribute to the dissemination and exchange of information;
  - assist and/or organize expert meetings on specific topics regarding marine turtles, as well as training courses.
30. Complementary work carried out by other international bodies aiming at the same objectives should be encouraged, promoting coordination and preventing possible overlapping.
31. The status of Mediterranean marine turtles and the content of this Action Plan for marine turtles should be reviewed whenever necessary.

## APPENDIX I

### PROPOSED PRIORITY ACTIONS FOR THE IMPLEMENTATION OF THE ACTION PLAN FOR THE CONSERVATION OF MEDITERRANEAN MARINE TURTLES

as elaborated by the Meeting of Experts on the implementation of the Action Plan for the conservation of Mediterranean marine turtles (Arta, 27-29 October 1998) and reviewed and approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

### RECOMMENDED ACTIONS AT THE REGIONAL AND SUBREGIONAL LEVELS

#### A. PROTECTION AND MANAGEMENT

##### A.1 Legislation

- *Elaborate guidelines to design legislation and regulations relative to the conservation and management of marine turtle populations and their habitats, taking into account the need to enforce existing international legislation*

##### A.2 Protection and Management of Critical Habitats

No action recommended at the regional and subregional levels at this point

##### A.3 Reducing Mortality at Sea and Eliminating Local Consumption and Use

- *Establish guidelines to improve the involvement of marine turtle rescue centres as an additional tool to reduce mortality. Establish a network of centres that comply with such guidelines.*

##### A.4 Establishment of a Mediterranean Network of Marine and Coastal Protected Areas for Marine Turtles

- *Prepare an inventory of nesting areas, of those areas known for mating, feeding and wintering, and of migration routes all around the Mediterranean, which should subsequently be regularly updated. Compile and synthesize information on these areas in an Atlas.*
- *Establish a network of managed and monitored nesting sites, with the aim of facilitating the exchange of information and experience.*

##### A.5 Information, Education and Training

- *Prepare training and information/awareness modules and tools addressed to fishermen, aimed at reducing the mortality of marine turtles incidentally caught in fishing gear.*
- *Support the continuation of training courses for Mediterranean scientists and SPA*

*managers in marine turtle conservation techniques.*

## **B. SCIENTIFIC RESEARCH AND MONITORING**

### **B.1 Scientific Research**

- *Encourage the elaboration and execution of cooperative research projects of regional importance aimed at  
    assessing the interaction between turtles and fisheries;  
    identifying marine turtle critical habitats, including migration routes.*
- *Promote the development of management techniques for nesting beaches.*
- *Encourage standardization of methodologies to estimate demographic parameters for population dynamics analysis, such as population modelling.*

### **B.2 Monitoring**

- *Encourage:  
    long-term beach monitoring programmes;  
    saturation tagging and genetic analysis, to be used where appropriate;  
    cooperation among beach monitoring programmes in order to have compatibility in data collection and analysis, and thus detect population trends and their response to management policies.*

## **C. COORDINATION**

- *Convene the first Mediterranean Conference on marine turtles.*
- *Open a dialogue through national focal points for SPA with fishing administrations and stakeholders in the marine environment, to discuss fishing techniques and their impact and the possibilities of improving such techniques.*
- *Create:  
    a Mediterranean newsletter on marine turtles that could be eventually developed and incorporated in a specific Web site with the help of national experts.  
    a Mediterranean newsgroup.*
- *Establish a directory of sea turtle specialists working in the Mediterranean.*

## **RECOMMENDED ACTIONS AT THE NATIONAL LEVEL**

Acknowledging the progress achieved over the past years and the proliferation of projects,

activities and actions in many countries it is considered a priority action to continue and enhance ongoing projects and activities related to marine turtle conservation, research and monitoring.

The following recommendations apply to all, or most countries :

- *Develop education and training programmes for fishermen on techniques for correctly hauling, handling, releasing and recording incidentally caught turtles, with possible support from and cooperation with GFCM and ICCAT. Involvement of existing rescue centres and aquariums should be sought.*
- *Develop systematic public awareness projects, structured in such a way that the objectives and target groups are clearly defined. Some of the main target groups involve local residents and tourists at nesting sites, local and national authorities, schoolchildren, fishermen, yachtsmen and other sea users. The establishment of such programmes could be triggered and assisted by appropriate regional initiatives.*

Specific additional proposals for individual countries follow.

### **Albania**

- *Grant full legal protection to marine turtles.*
- *Undertake a prospection campaign to assess the occurrence of marine turtle nesting on Albanian coasts.*

### **Algeria**

- [- *Speed up procedures for the enacting of legal texts granting protection to marine turtles.*]
- [- *Establish a monitoring programme on by-catches of marine turtles by Algerian fisheries.*]

### **Bosnia and Herzegovina**

No additional actions recommended.

### **Croatia**

- *Develop research and monitoring on Caretta caretta in Croatian waters, focused on the following main topics:*

*overwintering and feeding areas and ecology;  
migration patterns, population structure and dynamics ;  
interaction with fisheries.*

- *Undertake a prospection campaign to assess the occurrence of marine turtle nesting on Mljet island sandy beaches.*
- *Strengthen the legal protection for the sandy habitats of Sapunara and Blace Bays by moving them from the present "protected landscape" category to the "protected botanical and zoological reserve" category.*
- *Establish bottom trawling restrictions in northern Croatian waters throughout the winter in areas where the sea is less than 50 m deep.*
- *Establish a network of rescue centres along the Croatian coasts.*

## **Cyprus**

- *Ensure the long-term conservation of nesting beaches by including their adequate protection and management in all coastal management plans, notably in relation to tourist development, and by including the most important nesting beaches in a long-term monitoring and protection plan.*
- *Finalize the Conservation Management Plan for the Akamas peninsula, based on the METAP study, and implement it.*
- *Pursue the project on the hatching and rearing of juvenile stages (head-starting) of green turtles, and assess its results in terms of its impact on the wild population.*

## **Egypt**

- *Reduce substantially, and finally eliminate, intentional mortality by:  
enforcing existing legislation protecting marine turtles and promulgating new protection texts where necessary;  
establishing well-targeted environmental education and public awareness programmes for key Mediterranean coastal communities where sea turtle consumption still takes place.*
- *enforce regulations for the reduction of by-catch and fishery- related mortality caused by bottom trawl and by small coastal fisheries.*
- *Identify and implement adequate protection and management measures for the most important nesting beaches along the Mediterranean coast.*

## **France**

- *Set up a programme to estimate incidental capture by the various fisheries within the framework of a specific sampling plan.*
- *Develop the network of observers along the Mediterranean coast of France.*
- *Determine the origin of turtles caught in French waters.*

## **Greece**

- *See to continue monitoring the nesting population and take effective management measures at all major nesting areas.*
- *Finalize the process of setting up the Zakynthos National Marine Park and its managing body, and further strengthen the appropriate conservation and management of the site .*
- *Grant adequate protection and management to, and where appropriate restore, other important nesting areas, in particular: the Bay of Kyparissia, Rethymno, Lakonikos Bay, the Bay of Chania, Bay of Messara.*
- *Assess sea turtle mortality caused by fisheries' interactions and powered pleasure boats, and elaborate relevant conservation measures.*
- *Develop a nation-wide stranding network and improve existing facilities for rehabilitation of injured and sick turtles.*
- *Initiate research programmes aimed at:  
    *identifying feeding and/or wintering areas along Greek coasts, and  
    assessing discreteness of nesting populations (through genetic studies).**

## **Israel**

- *Ensure long-term protection of major and potential nesting beaches.*
- *Promote the process of legal declaration of protected marine and coastal areas.*
- *Eliminate both destructive human activities on nesting beaches and the disorientation of hatchlings caused by artificial light.*

## **Italy**

- *Assess the impact of Italian fisheries on marine turtle populations, particularly in the Ionian Sea and the Sicily Channel.*

- *Envisage management and protection measures in the most sensitive areas.*
- *Ensure the protection of the few remaining nesting beaches, having them integrated in any possible development plan, and provide a commitment to long-term monitoring.*
- *Anticipate monitoring of other potential nesting sites.*
- *Pursue or support research to identify feeding and wintering areas and migration routes.*
- *Continue to develop the network of observers along the Italian coast.*

### **Lebanon**

- *Enact legislation banning the consumption and sale of products derived from sea turtles.*
- *Undertake a survey aimed at assessing sea turtle nesting and potential nesting sites, feeding and wintering areas on the coast of Lebanon.*
- *Establish a programme for the long-term monitoring of sea turtle nesting in the Palm Island reserve.*
- *Prepare a National Action Plan for the conservation of marine turtles in Lebanon.*

### **Libya**

- *Further study the dimension of the nesting populations and nesting distribution along the coasts.*
- *Identify the most valuable nesting beaches, grant them adequate long-term protection and management and include them in a long-term monitoring programme. The following beaches are already identified as deserving special attention: Eastern beach of Ain-Algazala, Aboulfraes, Kouf National Park, Al-Ghbeba.*
- *Assess the impact of coastal fisheries on marine turtles.*

### **Malta**

- *Assess the impact of fisheries' by-catches.*

### **Monaco**

- *Activate the procedure of legal protection for marine turtles.*



## **Morocco**

- *Activate the procedure of legal protection for marine turtles.*
- *Strengthen the monitoring programme on by-catches of marine turtles by Moroccan fisheries.*

## **Slovenia**

No additional action recommended.

## **Spain**

- *Ensure periodical assessment of the fisheries' impact in the Balearic G.F.C.M. area (Spanish Mediterranean Area).*
- *Develop research programmes aimed at identifying marine turtle migratory patterns in the Gibraltar Strait region; evaluating the percentage of turtles of Atlantic and/or Mediterranean origin in the Alboran Sea and connected waters.*
- *Establish a network of stranding observers and rescue centres along the Mediterranean coasts of Spain, with a view to harmonizing rescue methodologies and establishing a common database on stranded and rescued turtles in the Mediterranean.*

## **Syria**

- [- *Undertake a survey aimed at assessing sea turtle nesting on the coast of Syria.*]

## **Tunisia**

- *Elaborate specific legislation for marine turtles.*
- *Develop research and monitoring programmes aimed at: assessing by-catches and related mortality, particularly in the Gulf of Gabes; assessing the value of the Gulf of Gabes as a feeding/overwintering area; identifying possible nesting sites as yet unknown.*

- *Grant the nesting sites on the Kuriat islands adequate protection and management, and continue the scientific monitoring programme there on a long term basis.*
- *Establish a marine turtle biology centre in Tunisia.*

## **Turkey**

- *Ensure that an Environmental Impact Assessment (EIA) is made an integral part of the tourist and development projects connected with the important marine turtle nesting beaches.*
- *Ensure the most important nesting beaches adequate legal protected status. Monitor the enforcement of the relevant regulations at the protected sites. Special priority should be given to the nesting sites of Chelonia mydas.*
- *Regulate activities related to tourist use that affects the important nesting beaches' value as nesting grounds, in particular: the use of speed boats and jet-skis; night visiting of beaches; lighting of beaches; riding and driving on beaches.*
- *Take all appropriate measures to prevent illegal sand extraction from the important nesting beaches.*
  
- *Create and enforce specific regulations for the reduction of by-catch and fishery-related mortality in bottom trawl and small coastal fisheries in the benthic feeding grounds of the Bay of Iskenderun.*
- *Reduce nest predation by applying appropriate techniques. In particular, the use of cages is recommended.*
- *Establish public awareness campaigns targeted at decision-makers.*

## ANNEX IV

### RECOMMENDATIONS

ON TOPICS TO BE ADDRESSED AS A MATTER OF  
PRIORITY IN THE FURTHER IMPLEMENTATION OF  
THE ACTION PLAN FOR THE MANAGEMENT OF  
THE MEDITERRANEAN MONK SEAL

**Recommendations**  
**on topics to be addressed as a matter of priority in the further implementation**  
**of the Action Plan for the Management of the Mediterranean Monk Seal**

as elaborated by the Meeting of Experts on the implementation of the Action Plans for marine mammals (monk seal and cetaceans) adopted within MAP, (Arta, Greece, 29-31 October 1998) and reviewed and approved by the Fourth Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

Items 7, 8, 9, 11 and 12: Reduction in adult mortality

An integrated approach combining awareness campaigns for fishermen and enforcement of appropriate legislation and regulations, on the model of what has been done in the National Marine Park of Alonissos-Northern Sporades (Greece) should be applied in areas where monk seals interact negatively with fishing activity.

The economic impact of seal damage to coastal fisheries and fish farms, and the ways to prevent or mitigate such impact, should be assessed.

Item 10: Development of systems to avoid entanglement in nets

Pilot research studies to assess the effectiveness and consequences of systems to avoid entanglement of seals in nets which are to be carried out in appropriate locations and/or seasons are considered useful.

Items 13-16: Establishment of a network of marine reserves

Already identified sites important for the conservation of the species should be urgently protected and appropriately managed.

Protected sites should be extended to include all valuable habitats for monk seals, aiming at the creation of a network of protected areas.

Items: 17-19: Monitoring, collection of data and exchange of information

E-mail regional networks should be established to facilitate ready exchange of information. RAC/SPA should encourage further contacts between conservation projects for monk seals.

Whenever appropriate, the range of seal movements should be studied as a matter of priority, using suitable techniques (e.g. telemetry). Relevant protocols should be elaborated according to the available experience.

RAC/SPA is invited to hold workshops and to promote expertise to synthesize available information on the biology, ecology and behaviour of Mediterranean monk seals that is critical for conservation. The output of these workshops should be published and be made the subject of a symposium.

Item 20: Rehabilitation of seals

A workshop to develop agreed technical measures for the rehabilitation of Mediterranean monk seals should be urgently undertaken and appropriate guidelines put in place.

Items 21-22: Other conservation measures

An Emergency Plan should be developed to coordinate all action if a mass mortality or other emergency event occurs. This emergency plan, which applies to the distribution area of the species, should, *inter alia*, include an exchange of information between countries and the secretariat, as well as the concerned international organization.

Items 23-26: Information programmes

Awareness programmes for the public should be developed and should be carefully designed in order to avoid dissemination of information that might adversely affect the conservation of the monk seals (e.g. the location of seal caves).

Special attention should be paid to increasing awareness of decision makers.

Item 27: Training programmes

Emphasis should be placed on the organization of training courses, specific workshops and training grants to address practical aspects which are relevant to the research, conservation and management of monk seals.

## ANNEX V

### RECOMMENDATIONS

FOR FURTHER IMPLEMENTATION OF THE ACTION PLAN  
FOR THE CONSERVATION OF CETACEANS IN THE  
MEDITERRANEAN SEA

**RECOMMENDATIONS  
FOR FURTHER IMPLEMENTATION OF THE ACTION PLAN FOR THE  
CONSERVATION OF CETACEANS IN THE MEDITERRANEAN SEA**

as elaborated by the Meeting of Experts on the implementation of the action plan for the conservation of marine mammals (monk seal and cetaceans) adopted within MAP (Arta, 27-29 October 1998) and reviewed and approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

1. To elaborate guidelines for improving national legislation and where necessary, making them conform to the provisions of the relevant international Agreements in the field of cetacean conservation.
2. To invite the Contracting Parties to the Barcelona Convention to ratify, if they have not done so, the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean and the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area.
3. Noting that the government of France, Italy and Monaco have relaunched the procedure for signing an agreement for the purpose of establishing a sanctuary in the Sardinia-Corsica-Liguria-Provence Basin, the Meeting recommends that the Contracting Parties undertake all necessary action to support the conclusion of the said international agreement as soon as possible.
4. The experts recommend that countries and organizations take into account and develop the work related to the effects of chemical pollution on health and reproductive cycles of marine mammals and of the species on which they feed.
5. To define and implement co-ordinated survey programmes aiming at identifying the status and distribution of cetaceans in the Mediterranean. This work should include organization of a workshop on the most appropriate methodologies to be applied in the common interest, taking into account the need for information about the eastern and southern part of the basin.
6. To promote the establishment of national plans and networks for the study of cetacean strandings, using standardized methods for the collection of data. It is necessary to collect data validated by the Parties on cetacean strandings in the Mediterranean in a common file including basic data on the reported strandings. The keeping of this common file shall be entrusted to a body belonging to one of Mediterranean intergovernmental organizations. The file must be continuously updated.
7. Co-ordination at the Mediterranean level in the field of study of cetacean strandings should be established on the basis of existing national networks and, where they are absent, on the institutions and researchers carrying out monitoring of cetacean strandings. Bilateral Cooperation should be encouraged in order to facilitate the exchange of experience between countries having experience in the study of cetacean strandings and those countries willing to develop this activity.
8. To entrust the Secretariat with the elaboration of a feasibility study (including a financial evaluation) on a Mediterranean network for the study of cetacean strandings. This feasibility study will be submitted to the Contracting Parties to the Barcelona Convention.
9. To organize a Mediterranean workshop on methods and techniques related to the monitoring and study of cetacean strandings.
10. Interactions between fisheries and cetaceans should be investigated by designing and implementing appropriate research and awareness initiatives. The experts invite the countries, not members of the European Union, to consider the banning of driftnet use.
11. To elaborate a code of conduct for whale-watching in the Mediterranean, to be included in the conditions to be respected by every boat that practises whale-watching for either commercial or non-commercial ends;

and to investigate the possibilities of the integration of the code of conduct in the national legislation.

12. The use of powerful noise sources such as low-frequency active sonar should be avoided in those areas known to be highly frequented by cetaceans.
1. Elaborate a Directory of organizations (NGOs, laboratories, etc.) active in the field of study and conservation of cetaceans in the Mediterranean.
2. To develop, in co-ordination with the relevant intergovernmental organizations and interested NGOs, informative and educational tools on Mediterranean cetaceans, to be used in all the Mediterranean countries to support awareness and public participation.



## ANNEX VI

### DRAFT REFERENCE CLASSIFICATION OF MARINE HABITAT TYPES FOR THE MEDITERRANEAN REGION

## **DRAFT REFERENCE CLASSIFICATION OF MARINE HABITAT TYPES FOR THE MEDITERRANEAN REGION**

as elaborated by the Meeting of Experts on marine habitat types in the Mediterranean region (Hyères, 18-20 November 1999) and reviewed and approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

### **1. INTRODUCTION**

The present classification of the various marine habitats types for the Mediterranean region is being established within the framework of the Mediterranean Action Plan of UNEP, with the primary aim of serving as a common reference for the establishment of national inventories of marine and coastal natural sites of conservation interest, to be compiled pursuant to the Mediterranean Action Plan - Phase II and art. 15 of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean.

The specificity of the Mediterranean Sea, its high level of diversity, and the density of the knowledge already acquired call for harmonisation and for a specific study to be carried out. The types of habitats taken into account constitute most often the general case, whereas the local specificities are dealt with within the framework of national studies.

Numerous initiatives, meetings, and reports enabled hierarchical lists of European marine habitats to be established. The main purpose of these initiatives (CORINE<sup>1</sup>-biotopes, EEC Habitat Directive 92/43 - Annex 1, Palaeartic Classification, EUNIS<sup>2</sup> habitat classification) was to establish valid lists of all the habitats in Europe.

As early as 1988, France published a zoning scheme covering the whole of the land and part of the coastal areas as Natural Zones of Fauna, Flora and Ecological Interest (ZNIEFF<sup>3</sup>). The classification of the biocenoses established by Peres and Picard (1964) was used for determining the sea-ZNIEFF (Anonymous, 1988) and was taken into account not only for the French coasts but also for the whole of the Mediterranean basin. For the Provence-Alpes-Cote d'Azur Region 107 Sea-ZNIEFF have been created, the main objective of which was to present a synthesis of the scientific data available on this environment to optimise its management.

The inventory of the ZNIEFFs concerns knowledge and is considered as a scientific instrument and not as a legal tool although it is used as a protection and management administrative decision making support tool.

The inventory of the ZNIEFFs is of primary importance for the French state as a basis for international programmes and obligations (inventory of Important Bird Areas, Special Protection Areas in keeping with the EEC "Bird" Directive, inventory as a prerequisite for the designation of Special Conservation Areas in keeping with the EEC "Habitats, Fauna, Flora" Directive, Alpine Convention, Statistics for the

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<sup>1</sup> CORINE: Coordination of Information on the Environment

<sup>2</sup> EUNIS: European Nature Information System of the European Environment Agency, managed by its Topic Centre on Nature Conservation in Paris

<sup>3</sup> ZNIEFF: Zones Naturelles d'Intérêt Ecologique, Faunistique et Floristique: Inventory of natural sites in France

European Environment Agency, etc.).

As early as 1991, when the inventory of ZNIEFFs was widely used, a reflection process took place that involved the real estate developers, the users and the scientists in order to:

- learn from the utilisation of the existing inventory,
- improve the legibility of the forms established,
- include new data,
- harmonise and standardise information at national level and with foreign partners.

In 1993, a first list of Parameters and Biocenoses of the metropolitan French coasts (Dauvin *et al.*, 1993) was established by a working group composed of French Mediterranean and Atlantic experts on the benthos.

In 1994, a second updated and completed edition (Dauvin *et al.*, 1994) provided a detailed typology based on the CORINE-biotopes list for the metropolitan French coast.

At the European level, the document 'CORINE biotopes manual' (1988) updated in 1989 and edited in 1991 (Anonymous, 1991) and which is a reference for the EEC Directive 92/43 EEC proved to be of difficult use for maritime purpose and more so in the Mediterranean zone. Not only was it too schematic but it also contained several errors and some misleading information.

For the north-east part of the Atlantic coast, Connor *et al.* (1995), taking as a model the typology of the ZNIEFFs and after several meetings of European experts, could establish a classification of the benthic marine biotopes of the United Kingdom and of the Republic of Ireland. This activity was carried out within the BIOMAR programme.

The classification of Palaeartic habitats (Devilliers and Devilliers-Terschuren, 1996) is a development and a geographical extension of the CORINE biotopes which does not provide significantly more information for the Mediterranean Sea.

For the Mediterranean Sea several more or less complete documents suited to the problem can be used for the demarcation of zones of heritage or ecological interest, zones that require a certain level of protection or for which sensible management is sought:

- the definition of benthic biocenoses resulting from the works in the line of Peres and Picard (1964) and for which there are only few syntheses available (Gamulin Brida, 1967; Augier, 1982; Peres, 1982; Ros *et al.*, 1985; Bellan-Santini *et al.*, 1994);
- the CORINE biotopes classification which is too succinct;
- the classifications of Palaeartic and BIOMAR habitats, unsuitable for the Mediterranean Sea;
- the list of marine biocenoses for the French metropolitan coasts (Dauvin *et al.* 1994) which has been validated for France but which must be completed and reviewed for the Mediterranean Sea; this work is in progress within the framework of the French programme for the revision of ZNIEFFs started in 1995.

The list of marine biocenoses of the French metropolitan coasts (Dauvin *et al.*, 1994) is the result of a compilation made by scientists who worked on benthic populations (communities or biocenoses; habitats as defined by the EEC Directive) in the Mediterranean Sea and on the Atlantic and Channel coasts, followed by a common reflection of these scientists.

Biocenoses have been classified as a function of the zonation and granulometric nature of the sediment.

Priority environments are those that contribute to the identification of the zone either for their own value or for that of the species that dwell in them leaving aside any consideration about the surface. Most assemblages of plants and animals (biocenoses, facies) are fairly easy to identify but the sole mention of the biocenosis can justify the creation of a ZNIEFF in as much as it is sufficiently determinant and most of all accompanied with a list of significant priority species.

This document which concerns the Mediterranean Sea only is based on the document written by Dauvin *et al.* (1994), but since the homogeneity with the Atlantic coasts is no longer necessary it has been completely revised and adapted to the specificities of the Mediterranean zone for the French coastlines (ZNIEFFs re-actualisation programme), and then extended to the whole of the Mediterranean Sea to meet the needs of RAC/SPA. This document has been revised and amended with the assistance of the "biotopi marini" group of the "Ministero dell Ambiente" (Italy).

The typology proposed for the Mediterranean Sea, elaborated from the CORINE biotopes nomenclature, is hierarchical, phytosociological and uses the following as bases of references:

- the zonation as defined by Peres and Picard in 1964 (Appendix I),
- the granulometric nature of the sea beds classified as per the model adopted by Dauvin *et al.* 1994 (Appendix II).

The levels of the facies and sub-facies are mainly limited to those most widely distributed since their number increases as a function of the number of works on benthic communities and they most often constitute a strictly local datum. The facies mentioned have indicative value only. Environments affected by human activity (polluted environments and harbours) are not considered in the text.

The terms used in this report may have appeared with rather different meanings in referenced documents. A lexicon (Appendix III) gives the meaning adopted herein.

## 2. TYPOLOGY: LIST OF MEDITERRANEAN BENTHIC MARINE BIOCENOSES

### I. SUPRALITTORAL

#### I. 1. MUDS

I. 1. 1. Biocenosis of beaches with slowly-drying wracks under glassworts

#### I. 2. SANDS

I. 2. 1 Biocenosis of supralittoral sands

I. 2. 1. 1. Facies of sands without vegetation, with scattered debris

I. 2. 1. 2. Facies of depressions with residual humidity

I. 2. 1. 3. Facies of quickly-drying wracks

I. 2. 1. 4. Facies of tree trunks which have been washed ashore

I. 2. 1. 5. Facies of phanerogams which have been washed ashore (upper part)

#### I. 3. STONES AND PEBBLES

I. 3. 1. Biocenosis of slowly drying wracks

#### I. 4. HARD BEDS AND ROCKS

I. 4. 1. Biocenosis of supralittoral rock

I. 4. 1. 1. Association with *Entophysalis deusta* and *Verrucaria amphibia*

I. 4. 1. 2. Pools with variable salinity (mediolittoral enclave)

### II. MEDIOLITTORAL

#### 1- II. 1. MUDS, SANDY MUDS AND SANDS

II. 1. 1. Biocenosis of muddy sands and muds

II. 1. 1. 1. Association with halophytes

II. 1. 1. 2. Facies of saltworks

## II. 2. SANDS

### II. 2. 1. Biocenosis of mediolittoral sands

II. 2. 1. 1. Facies with *Ophelia bicornis*

## II. 3. STONES AND PEBBLES

### II. 3. 1. Biocenosis of mediolittoral coarse detritic bottoms

II. 3. 1. 1. Facies of banks of dead leaves of *Posidonia oceanica* and other phanerogams

## II. 4. HARD BEDS AND ROCKS

### II. 4. 1. Biocenosis of the upper mediolittoral rock

II. 4. 1. 1. Association with *Bangia atropurpurea*

II. 4. 1. 2. Association with *Porphyra leucosticta*

II. 4. 1. 3. Association with *Nemalion helminthoides* and *Rissoella verruculosa*

II. 4. 1. 4. Association with *Lithophyllum papillosum* and *Polysiphonia* spp.

### II. 4. 2. Biocenosis of the lower mediolittoral rock

II. 4. 2. 1. Association with *Lithophyllum lichenoides* (= entablature with *L. tortuosum*)

II. 4. 2. 2. Association with *Lithophyllum byssoides*

II. 4. 2. 3. Association with *Tenarea undulosa*

II. 4. 2. 4. Association with *Ceramium ciliatum* and *Corallina elongata*

II. 4. 2. 5. Facies with *Pollicipes cornucopiae*

II. 4. 2. 6. Association with *Enteromorpha compressa*

II. 4. 2. 7. Association with *Fucus virsoides*

II. 4. 2. 8. *Neogoniolithon brassica-florida* concretion

II. 4. 2. 9. Association with *Gelidium* spp.

II. 4.2.10. Pools and lagoons sometimes associated with vermetids (infralittoral enclave)

### II. 4. 3. Mediolittoral caves

II. 4. 3. 1. Association with *Phymatolithon lenormandii* and *Hildenbrandia rubra*

### III. INFRALITTORAL

#### III. 1. SANDY MUDS, SANDS, GRAVELS AND ROCKS IN EURYHALINE AND EURYTHERMAL ENVIRONMENT

##### III. 1. 1. Euryhaline and eurythermal biocenosis

III. 1. 1. 1. Association with *Ruppia cirrhosa* and/or *Ruppia maritima*

III. 1. 1. 2. Facies with *Ficopomatus enigmaticus*

III. 1. 1. 3. Association with *Potamogeton pectinatus*

III. 1. 1. 4. Association with *Zostera noltii* in euryhaline and eurythermal environment

III. 1. 1. 5. Association with *Zostera marina* in euryhaline and eurythermal environment

III. 1. 1. 6. Association with *Gracilaria* spp.

III. 1. 1. 7. Association with *Chaetomorpha linum* and *Valonia aegagropila*

III. 1. 1. 8. Association with *Halopithys incurva*

III. 1. 1. 9. Association with *Ulva laetevirens* and *Enteromorpha linza*

III. 1. 1. 10. Association with *Cystoseira barbata*

III. 1. 1. 11. Association with *Lamprothamnium papulosum*

III. 1. 1. 12. Association with *Cladophora echinus* and *Rytiphloea tinctoria*

#### III. 2. FINE SANDS WITH MORE OR LESS MUD

##### III. 2. 1. Biocenosis of fine sands in very shallow waters

III. 2. 1. 1. Facies with *Lentidium mediterraneum*

##### III. 2. 2. Biocenosis of well sorted fine sands

III. 2. 2. 1. Association with *Cymodocea nodosa* on well sorted fine sands

III. 2. 2. 2. Association with *Halophila stipulacea*

##### III. 2. 3. Biocenosis of superficial muddy sands in sheltered waters

III. 2. 3. 1. Facies with *Callianassa tyrrhena* and *Kellia corbuloides*

III. 2. 3. 2. Facies with fresh water resurgences with *Cerastoderma glaucum* and *Cyathura carinata*

III. 2. 3. 3. Facies with *Loripes lacteus*, *Tapes* spp.

III. 2. 3. 4. Association with *Cymodocea nodosa* on superficial muddy sands in sheltered waters

III. 2. 3. 5. Association with *Zostera noltii* on superficial muddy sands in sheltered waters

III. 2. 3. 6. Association with *Caulerpa prolifera* on superficial muddy sands in sheltered waters

III. 2. 3. 7. Facies of hydrothermal oozes with *Cyclope neritea* and nematodes

### III. 3. COARSE SANDS WITH MORE OR LESS MUD

#### III. 3. 1. Biocenosis of coarse sands and fine gravels mixed by the waves

III. 3. 1. 1. Association with rhodolithes

#### III. 3. 2. Biocenosis of coarse sands and fine gravels under the influence of bottom currents (also found in the Circalittoral)

III. 3. 2. 1. Maërl facies (= Association with *Lithothamnion corallioides* and *Phymatolithon calcareum*) (can also be found as facies of the biocenosis of coastal detritic).

III. 3. 2. 2. Association with rhodolithes

### III. 4. STONES AND PEBBLES

#### III. 4. 1. Biocenosis of infralittoral pebbles

III. 4. 1. 1. Facies with *Gouania wildenowi*

### III. 5. POSIDONIA OCEANICA MEADOWS

#### III. 5. 1. Posidonia oceanica meadows (= Association with *Posidonia oceanica*)

III. 5. 1. 1. Ecomorphosis of striped meadows

III. 5. 1. 2. Ecomorphosis of "barrier-reef" meadows

III. 5. 1. 3. Facies of dead "mattes" of *Posidonia oceanica* without much epiflora

III. 5. 1. 4. Association with *Caulerpa prolifera*



### III. 6. HARD BEDS AND ROCKS

#### III. 6. 1. Biocenosis of infralittoral algae<sup>4</sup>:

- III. 6. 1. 1. Overgrazed facies with encrusting algae and sea urchins
- III. 6. 1. 2. Association with *Cystoseira amentacea* ( var. *amentacea*, var. *stricta*, var. *spicata*)
- III. 6. 1. 3. Facies with Vermetids
- III. 6. 1. 4. Facies with *Mytilus galloprovincialis*
- III. 6. 1. 5. Association with *Corallina elongata* and *Herposiphonia secunda*
- III. 6. 1. 6. Association with *Corallina officinalis*
- III. 6. 1. 7. Association with *Codium vermilara* and *Rhodymenia ardissoni*
- III. 6. 1. 8. Association with *Dasycladus vermicularis*
- III. 6. 1. 9. Association with *Alsidium helminthochorton*
- III. 6. 1. 10. Association with *Cystoseira tamariscifolia* and *Saccorhiza polyschides*
- III. 6. 1. 11. Association with *Gelidium spinosum* v. *hystrix*
- III. 6. 1. 12. Association with *Lobophora variegata*
- III. 6. 1. 13. Association with *Ceramium rubrum*
- III. 6. 1. 14. Facies with *Cladocora caespitosa*
- III. 6. 1. 15. Association with *Cystoseira brachycarpa*
- III. 6. 1. 16. Association with *Cystoseira crinita*
- III. 6. 1. 17. Association with *Cystoseira crinitophylla*
- III. 6. 1. 18. Association with *Cystoseira sauvageauana*
- III. 6. 1. 19. Association with *Cystoseira spinosa*
- III. 6. 1. 20. Association with *Sargassum vulgare*
- III. 6. 1. 21. Association with *Dictyopteris polypodioides*
- III. 6. 1. 22. Association with *Calpomenia sinuosa*
- III. 6. 1. 23. Association with *Stypocaulon scoparium* (= *Halopteris scoparia*)
- III. 6. 1. 24. Association with *Trichosolen myura* and *Liagora farinosa*
- III. 6. 1. 25. Association with *Cystoseira compressa*

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<sup>4</sup> the facies and associations of the biocenosis of infralittoral algae are presented in accordance with the two dominant factors affecting this biocenosis, namely hydrodynamics and light, in descending order.

- III. 6. 1. 26. Association with *Pterocliadiella capillacea* and *Ulva laetevirens*
- III. 6. 1. 27. Facies with large Hydrozoa
- III. 6. 1. 28. Association with *Pterothamnion crispum* and *Compsothamnion thuyoides*
- III. 6. 1. 29. Association with *Schottera nicaeensis*
- III. 6. 1. 30. Association with *Rhodymenia ardissoni* and *Rhodophyllis divaricata*
- III. 6. 1. 31. Facies with *Astroides calycularis*
- III. 6. 1. 32. Association with *Flabellia petiolata* and *Peyssonnelia squamaria*
- III. 6. 1. 33. Association with *Halymenia floresia* and *Halarachnion ligulatum*
- III. 6. 1. 34. Association with *Peyssonnelia rubra* and *Peyssonnelia* spp.
- III. 6. 1. 35. Facies and Associations of Coralligenous biocenosis (in enclave)
- II. 6. 1. 36. Facies with *Chondrilla nucula*
- III. 6. 1. 37. Facies with *Microcosmus exasperatus*

#### IV. CIRCALITTORAL

##### IV. 1. MUDS

###### IV. 1. 1. Biocenosis of coastal terrigenous muds

- IV. 1. 1. 1. Facies of soft muds with *Turritella tricarinata communis*
- IV. 1. 1. 2. Facies of sticky muds with *Virgularia mirabilis* and *Pennatula phosphorea*
- IV. 1. 1. 3. Facies of sticky muds with *Alcyonium palmatum* and *Stichopus regalis*

##### IV. 2. SANDS

###### IV. 2. 1. Biocenosis of the muddy detritic bottom

- IV. 2. 1. 1. Facies with *Ophiothrix quinquemaculata*

IV. 2. 2. Biocenosis of the coastal detritic bottom

- IV. 2. 2. 1. Association with rhodolithes
- IV. 2. 2. 2. Maërl Facies (*Lithothamnion corallioides* and *Phymatholithon calcareum*)
- IV. 2. 2. 3. Association with *Peyssonnelia rosa-marina*
- IV. 2. 2. 4. Association with *Arthrocladia villosa*
- IV. 2. 2. 5. Association with *Osmundaria volubilis*
- IV. 2. 2. 6. Association with *Kallymenia patens*
- IV. 2. 2. 7. Association with *Laminaria rodriguezii* on detritic
- IV. 2. 2. 8. Facies with *Ophiura texturata*
- IV. 2. 2. 9. Facies with Synascidies
- V. 2. 2. 10. Facies with large Bryozoa

IV. 2. 3. Biocenosis of shelf-edge detritic bottom

- IV. 2. 3. 1. Facies with *Neolampas rostellata*
- IV. 2. 3. 2. Facies with *Leptometra phalangium*

IV. 2. 4. Biocenosis of coarse sands and fine gravels under the influence of bottom currents (biocenosis found in areas under specific hydrodynamic conditions - straits-; also found in the Infralittoral)

IV. 3. HARD BEDS AND ROCKS

IV. 3. 1. Coralligenous biocenosis

- IV. 3. 1. 1. Association with *Cystoseira zosteroides*
- IV. 3. 1. 2. Association with *Cystoseira usneoides*
- IV. 3. 1. 3. Association with *Cystoseira dubia*
- IV. 3. 1. 4. Association with *Cystoseira corniculata*
- IV. 3. 1. 5. Association with *Sargassum* spp. (indigenous)
- IV. 3. 1. 6. Association with *Mesophyllum lichenoides*
- IV. 3. 1. 7. Association with *Lithophyllum frondosum* and *Halimeda tuna*
- IV. 3. 1. 8. Association with *Laminaria ochroleuca*
- IV. 3. 1. 9. Association with *Rodriguezella strafforelli*
- IV. 3. 1. 10. Facies with *Eunicella cavolinii*
- IV. 3. 1. 11. Facies with *Eunicella singularis*
- IV. 3. 1. 12. Facies with *Lophogorgia sarmentosa*
- IV. 3. 1. 13. Facies with *Paramuricea clavata*

IV. 3. 1. 14. Facies with *Parazoanthus axinellae*

IV. 3. 1. 15. Coralligenous platforms

IV.3. 2. Semi-dark caves (also in enclave in upper stages)

IV. 3. 2. 1. Facies with *Parazoanthus axinellae*

IV. 3. 2. 2. Facies with *Corallium rubrum*

IV. 3. 2. 3. Facies with *Leptopsammia pruvoti*

IV. 3. 3. Biocenosis of shelf-edge rock

## V. BATHYAL

### V. 1. MUDS

V. 1. 1. Biocenosis of bathyal muds

V. 1. 1. 1. Facies of sandy muds with *Thenaea muricata*

V. 1. 1. 2. Facies of fluid muds with *Brissopsis lyrifera*

V. 1. 1. 3. Facies of soft muds with *Funiculina quadrangularis* and *Apporhais seressianus*

V. 1. 1. 4. Facies of compact muds with *Isidella elongata*

V. 1. 1. 5. Facies with *Pheronema grayi*

### V. 2. SANDS

V. 2. 1. Biocenosis of bathyal detritic sands with *Grypheus vitreus*

### V. 3. HARD BEDS AND ROCKS

V. 3. 1. Biocenosis of deep sea corals

V. 3. 2. Caves and ducts in total darkness (in enclave in the upper stages)

## VI. ABYSSAL

### VI. 1. MUDS

VI. 1. 1. Biocenosis of abyssal muds

## **RECENT CASES OF HABITATS AFFECTED BY INTRODUCED AND/OR INVASIVE SPECIES**

Two majors cases have been observed :

1. The species constitutes an individualized facies or association (eg. *Sargassum mutans*, *Brachydontes pharaonis*, *Styopodium shimperi*,...)
2. The species affects several habitats, possibly on several stages (eg. *Caulerpa taxifolia*, *Caulerpa racemosa*,...)

## APPENDIX I

### ZONATION OF BIOCENOSES IN THE MEDITERRANEAN REGION

(Bellan-Santini *et al.* 1994)

Two main systems can be distinguished as a function of the vertical light gradient:

- the phytal system which is the habitat of all types of flora;
- the aphyital system which is not the habitat of autotrophic flora except for certain algae in conditions still unclear.

Each of the two main systems comprises subdivisions or stages.

The phytal system comprises:

- the Supralittoral stage where organisms that require a high level of humidifying but that are never immersed are present. The upper limit corresponds to the zone splashed by the waves (including the spray of the waves);
- the Mediolittoral stage which corresponds to the zone affected by waves, submitted to sea level variations caused by the wind, atmospheric pressure and tides;
- the Infralittoral stage which is the immersed zone compatible with the life of the marine phanerogams and photophilous algae;
- the Circalittoral stage which stretches up to the survival boundary of autotrophic pluricellular algae (general case).

The aphyital system comprises:

- the Bathyal stage which stretches up to the boundary of the continental slope;
- the Abyssal stage, the presence of which is acknowledged in the Mediterranean sea (Pérès, 1984; Bellan-Santini, 1985; Laubier & Emig, 1993) and which corresponds to the plain that would start at about 2,000 m. A faunistic renewal is noticed there, the reasons of which are still unclear, and a high endemism rate.

The boundary between the last two stages is still insufficiently defined in the Mediterranean sea.

## APPENDIX II

### TYPES OF SEDIMENTS SELECTED

(Dauvin *et al.*, 1993, modified)

- Mud: more than 75% of fine particles < 63µm
- Sandy mud: 25 to 75% fine particles < 63µm
- Fine sand with more or less mud: 5 to 25% of fine particles < 63µm
- Fine sand: less than 5% of fine particles, fraction larger than 2 mm < 15%, median smaller than 250µm
- Dune medium sand: about 0% of fine particles, fraction larger than 2 mm < 15%, median between 315 and 800 µm
- Heterogeneous muddy sand: fine particles between 10 and 30%, sand, coarse sand and gravel between 50 and 80%
- Coarse sand: less than 5% of fine particles, more than 50% of sand + fine particles, median smaller than 2 mm
- Muddy heterogeneous sediment: more than 5% of fine, median larger than 500 µm, high percentage of pebbles or shells
- Gravel: less than 5% of fine particles, less than 50% of pebbles + shells, median larger than 2 mm
- Small stones: less than 5% of fine particles, more than 50% of pebbles + shells.

Granulometry (as per Larssonneur, 1977, modified)

- . Rock chaos;
  - . Blocks: larger than 10 cm;
  - . Pebbles and shells: elements larger than 2 cm ;
  - . Coarse gravel: elements between 1 and 2 cm ;
  - . Medium gravel: elements between 5 and 10 mm ;
  - . Small gravel and particles: elements between 2 and 5 mm ;
  - . Coarse sand: elements between 1 and 2 mm ;
  - . Medium sand: elements between 0.5 and 1 mm ;
  - . Fine sand: elements between 0.2 and 0.5 mm ;
  - . Finer sand: elements between 0.1 and 0.2 mm ;
  - . Finest sand: elements between 0.063 and 0.1 mm ;
  - . Fine particles: mud + clay: fraction smaller than 0.063 mm.
- 
- . well sorted sediment ;
  - . poorly sorted sediment, heterogeneous.

## APPENDIX III

### LEXICON

- Association :** permanent aspect of a biocenosis with a vegetal physiognomic dominance where the species are linked by an ecological compatibility and a chorological affinity.
- Biocenosis :** grouping of living organisms, linked by relationships of interdependence within a biotope with relatively homogenous major characteristics; each biocenosis comprises mainly the phytocenosis, which includes flora, and the zoocenosis, which includes fauna. The notions of community or association in the phytosociological sense of the word are very close to the notion of biocenosis although they cannot exactly replace it.
- Biotope :** geographical area with variable surface or volume submitted to ecological conditions where the dominant elements are homogenous.
- Characteristics :** a species is considered as characteristic when it is exclusive or preferential for the biotope considered, whether it is represented widely or not, sporadic or not.
- Community :** grouping of living organisms linked by interdependence relationships within a biotope, typically characterized with respect to one or several dominant species.
- Ecomorphosis :** a particular morphology linked to local ecological conditions.
- Enclave :** local existence for microclimatic reasons of a habitat within a surface normally occupied by another habitat or another stage.
- Euryhaline :** which exhibits a large range of variation of the salinity.
- Facies :** aspect exhibited by a biocenosis when the local predominance of certain factors causes the prevalence of either one or a very small number of species, essentially animal ones.



**Habitat :** area distinguished by geographic, abiotic and biotic features (definition of EEC Directive 92/43). the definition of the habitat can be compared herein to that of a biocenosis, facies and association.

**Introduced species :** species whose remote (not marginal) extension of the range is linked, directly or indirectly, to human activity. Within its new area, populations of individuals are born *in situ*, without human assistance (it is naturalized).

**Invasive species :** is an introduced species which has become a key species, or which has a significant impact on key species, functional groups or landscape, and/or a species which has a negative economic impact.

**Stage :** vertical space of the marine benthic domain where the ecological conditions, as a function of its situation with respect to the sea level, are notably constant or fluctuate regularly between the two critical levels which indicate the boundaries of the stage.

## ANNEX VII

# DRAFT REFERENCE LIST OF HABITATS FOR THE SELECTION OF SITES TO BE INCLUDED IN THE NATIONAL INVENTORIES OF NATURAL SITES OF CONSERVATION INTEREST

**DRAFT REFERENCE LIST OF HABITAT TYPES FOR THE SELECTION OF SITES  
TO BE INCLUDED IN THE NATIONAL INVENTORIES OF NATURAL SITES OF  
CONSERVATION INTEREST**

as approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

**SECTION I - MARINE HABITAT TYPES<sup>1</sup>**

**I. SUPRALITTORAL**

**I. 2. SANDS**

**I. 2. 1 Biocenosis of supralittoral sands**

\* I. 2. 1. 5. Facies of phanerogams which have been washed ashore (upper part)

**II. MEDIOLITTORAL**

**II. 1. MUDS, SANDY MUDS AND SANDS**

**II. 1. 1. Biocenosis of muddy sands and muds**

\* II. 1. 1. 1. Association with halophytes

\* II. 1. 1. 2. Facies of saltworks

**II. 3. STONES AND PEBBLES**

**II. 3. 1. Biocenosis of mediolittoral coarse detritic bottoms**

\* II. 3. 1. 1. Facies of banks of dead leaves of *P. oceanica* and other phanerogams

**II. 4. HARD BEDS AND ROCKS**

**II. 4. 1. Biocenosis of the upper mediolittoral rock**

\* II. 4. 1. 3. Association with *Nemalion helminthoides* and *Rissoella verruculosa*

\* II. 4. 1. 4. Association with *Lithophyllum papillosum* and *Polysiphonia* spp.

<sup>1</sup> The present list is based on the Classification of Benthic Marine Habitat Types for the Mediterranean Region, as it has been elaborated by the Meeting of Experts on Marine Habitat Types in the Mediterranean Region (Hyères, France, 18-20 November 1998) and subsequently reviewed by the Fourth Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999). The selection of habitat types to be included in the list was made by the latter meeting on the basis of an evaluation of the conservation interest of each habitat type identified in the classification, which had been undertaken by the Meeting of Experts in Hyères according to an agreed set of criteria. The revised classification can be found in the report of the meeting of the National Focal Points, edited by RAC/SPA under the code UNEP(OCA)/MED WG.154/7, while the criteria and the full results of the evaluation exercise can be found in the report of the meeting in Hyères, edited by RAC/SPA under the code UNEP(OCA)/MED WG.149/5/Rev.1.

With a view to helping the reader in identifying the habitat units, for each selected habitat type also the higher hierarchical levels of the classification are indicated on the list. However, in order to try to avoid confusion between selected and non-selected units, the selected ones are indicated by an asterisk (\*) on the left of the page, and are put on a grey background.

#### II. 4. 2. Biocenosis of the lower mediolittoral rock

- \* II. 4. 2. 1. Association with *Lithophyllum lichenoides* (= entablature with *L. tortuosum*)
- \* II. 4. 2. 5. Facies with *Pollicipes cornucopiae*
- \* II. 4. 2. 7. Association with *Fucus virsoides*
- \* II. 4. 2. 8. *Neogoniolithon brassica-florida* concretion
- \* II. 4.2.10. Pools and lagoons sometimes associated with vermetids (infralittoral enclave)
- \* II. 4. 3. Mediolittoral caves
- \* II. 4. 3. 1. Association with *Phymatolithon lenormandii* and *Hildenbrandia rubra*

### III. INFRALITTORAL

#### III.1 SANDY MUDS, SANDS, GRAVELS AND ROCKS IN EURYHALINE AND EURYTHERMAL ENVIRONMENT

##### III. 1. 1. Euryhaline and eurythermal biocenosis

- \* III. 1. 1. 1. Association with *Ruppia cirrhosa* and/or *Ruppia maritima*
- \* III. 1. 1. 3. Association with *Potamogeton pectinatus*
- \* III. 1. 1. 4. Association with *Zostera noltii* in euryhaline and eurythermal environment
- \* III. 1. 1. 5. Association with *Zostera marina* in euryhaline and eurythermal environment
- \* III. 1. 1. 8. Association with *Halopithys incurva*

#### III. 2. FINE SANDS WITH MORE OR LESS MUD

##### III. 2. 2. Biocenosis of well sorted fine sands

- \* III. 2. 2. 2. Association with *Halophila stipulacea*
- III. 2. 3. Biocenosis of superficial muddy sands in sheltered waters
- \* III. 2. 3. 3. Facies with *Loripes lacteus*, *Tapes* spp.
- \* III. 2. 3. 5. Association with *Zostera noltii* on superficial muddy sands in sheltered waters
- \* III. 2. 3. 7. Facies of hydrothermal oozes with *Cyclope neritea* and nematodes

#### III. 3. COARSE SANDS WITH MORE OR LESS MUD

##### III. 3. 1. Biocenosis of coarse sands and fine gravels mixed by the waves

- \* III. 3. 1. 1. Association with rhodolithes

III. 3. 2. Biocenosis of coarse sands and fine gravels under the influence of bottom currents (also found in the Circalittoral)

- \* III. 3. 2. 1. Maërl facies (= Association with *Lithothamnion corallioides* and *Phymatolithon calcareum*) (can also be found as facies of the biocenosis of coastal detritic).
- \* III. 3. 2. 2. Association with rhodolithes

III. 5. POSIDONIA OCEANICA MEADOWS

- \* III. 5. 1. Posidonia oceanica meadows (= Association with *Posidonia oceanica*)
- \* III. 5. 1. 1. Ecomorphosis of striped meadows
- \* III. 5. 1. 2. Ecomorphosis of “barrier-reef” meadows

III. 6. HARD BEDS AND ROCKS

III. 6. 1. Biocenosis of infralittoral algae

- \* III. 6. 1. 2. Association with *Cystoseira amentacea* ( var. *amentacea*, var. *stricta*, var. *spicata*)
- \* III. 6. 1. 3. Facies with Vermetids
- \* III. 6. 1. 10. Association with *Cystoseira tamariscifolia* and *Saccorhiza polyschides*
- \* III. 6. 1. 14. Facies with *Cladocora caespitosa*
- \* III. 6. 1. 15. Association with *Cystoseira brachycarpa*
- \* III. 6. 1. 16. Association with *Cystoseira crinita*
- \* III. 6. 1. 17. Association with *Cystoseira crinitophylla*
- \* III. 6. 1. 18. Association with *Cystoseira sauvageauana*
- \* III. 6. 1. 19. Association with *Cystoseira spinosa*
- \* III. 6. 1. 20. Association with *Sargassum vulgare*
- \* III. 6. 1. 25. Association with *Cystoseira compressa*
- \* III. 6. 1. 35. Facies and Associations of Coralligenous biocenosis (in enclave)

IV. CIRCALITTORAL

IV. 2. SANDS

IV. 2. 2. Biocenosis of the coastal detritic bottom

- \* IV. 2. 2. 7. Association with *Laminaria rodriguezii* on detritic
- \* IV. 2. 2. 10. Facies with large Bryozoa

### IV. 3. HARD BEDS AND ROCKS

- \* IV. 3. 1. Coralligenous biocenosis
  - \* IV. 3. 1. 1. Association with *Cystoseira zosteroides*
  - \* IV. 3. 1. 2. Association with *Cystoseira usneoides*
  - \* IV. 3. 1. 3. Association with *Cystoseira dubia*
  - \* IV. 3. 1. 4. Association with *Cystoseira corniculata*
  - \* IV. 3. 1. 5. Association with *Sargassum* spp. (indigenous)
  - \* IV. 3. 1. 8. Association with *Laminaria ochroleuca*
  - \* IV. 3. 1. 9. Association with *Rodriguezella strafforelli*
  - \* IV. 3. 1. 10. Facies with *Eunicella cavolinii*
  - \* IV. 3. 1. 11. Facies with *Eunicella singularis*
  - \* IV. 3. 1. 12. Facies with *Lophogorgia sarmentosa*
  - \* IV. 3. 1. 13. Facies with *Paramuricea clavata*
  - \* IV. 3. 1. 15. Coralligenous platforms
- 
- \* IV.3. 2. Semi-dark caves (also in enclave in upper stages)
  - \* IV. 3. 2. 2. Facies with *Corallium rubrum*

### V. BATHYAL

#### V. 1. MUDS

##### V. 1. 1. Biocenosis of bathyal muds

- \* V. 1. 1. 3. Facies of soft muds with *Funiculina quadrangularis* and *Apporhais seressianus*
- \* V. 1. 1. 4. Facies of compact muds with *Isidella elongata*

#### V. 3. HARD BEDS AND ROCKS

- \* V. 3. 1. Biocenosis of deep sea corals
- \* V. 3. 2. Caves and ducts in total darkness (in eclave in the upper stages)

## ANNEX VIII

### DRAFT REFERENCE LIST OF SPECIES FOR THE SELECTION OF SITES TO BE INCLUDED IN THE NATIONAL INVENTORIES OF NATURAL SITES OF CONSERVATION INTEREST

**DRAFT REFERENCE LIST OF SPECIES FOR THE SELECTION OF SITES TO BE INCLUDED IN THE NATIONAL INVENTORIES OF NATURAL SITES OF CONSERVATION INTEREST\***

as approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

<u>Species name</u>	<u>Annex II</u>	<u>Annex III</u>
<b>Magnoliophyta</b>		
<i>Posidonia oceanica</i>	Y	
<i>Zostera marina</i>	Y	
<i>Zostera noltii</i>	Y	
<b>Chlorophyta</b>		
<i>Caulerpa ollivieri</i>	Y	
<b>Phaeophyta</b>		
<i>Cystoseira amentacea</i> (including var. <i>stricta</i> and var. <i>spicata</i> )	Y	
<i>Cystoseira mediterranea</i>	Y	
<i>Cystoseira sedoides</i>	Y	
<i>Cystoseira spinosa</i> (including <i>C. adriatica</i> )	Y	
<i>Cystoseira zosteroides</i>	Y	
<i>Laminaria rodriguezii</i>	Y	
<b>Rhodophyta</b>		
<i>Goniolithon byssoides</i>	Y	
<i>Lithophyllum lichenoides</i>	Y	
<i>Ptilophora mediterranea</i>	Y	
<i>Schimmelmannia schousboei</i>	Y	
<b>Porifera</b>		
<i>Asbestopluma hypogea</i>	Y	
<i>Aplysina sp. plur.</i>	Y	
<i>Axinella cannabina</i>	Y	
<i>Axinella polypoides</i>	Y	
<i>Geodia cydonium</i>	Y	
<i>Hippospongia communis</i>		Y
<i>Ircinia foetida</i>	Y	
<i>Ircinia pipetta</i>	Y	
<i>Petrobiona massiliana</i>	Y	
<i>Spongia agaricina</i>		Y
<i>Spongia officinalis</i>		Y
<i>Spongia zimocca</i>		Y
<i>Tethya sp. plur.</i>	Y	

<u>Species name</u>	<u>Annex II</u>	<u>Annex III</u>
<b>Cnidaria</b>		
<i>Antipathes sp. plur.</i>		Y
<i>Astroides calycularis</i>	Y	

\* Following its adoption by the Meeting of the Contracting Parties, the present reference list will be annexed to the criteria for the establishment of national inventories of natural sites of conservation interest. The list may be amended by any further meeting of the Contracting Parties



<i>Corallium rubrum</i>		Y
<i>Errina aspera</i>	Y	
<i>Gerardia savaglia</i>	Y	

**Echinodermata**

<i>Asterina pancerii</i>	Y	
<i>Centrostephanus longispinus</i>	Y	
<i>Ophiodiaster ophidianus</i>	Y	
<i>Paracentrotus lividus</i>		Y

**Bryozoa**

<i>Hornera lichenoides</i>	Y	
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**Mollusca**

<i>Ranella olearia</i> (= <i>Argobuccinum olearium</i> = <i>A. giganteum</i> )	Y	
<i>Charonia lampas</i> (= <i>Ch. rubicunda</i> = <i>Ch. nodifera</i> )	Y	
<i>Charonia tritonis</i> (= <i>Ch. seguenziae</i> )	Y	
<i>Dendropoma petraeum</i>	Y	
<i>Erosaria spurca</i>	Y	
<i>Gibbula nivosa</i>	Y	
<i>Lithophaga lithophaga</i>	Y	
<i>Luria lurida</i> (= <i>Cypraea lurida</i> )	Y	
<i>Mitra zonata</i>	Y	
<i>Patella ferruginea</i>	Y	
<i>Patella nigra</i>	Y	
<i>Pholas dactylus</i>	Y	
<i>Pinna nobilis</i>	Y	
<i>Pinna rudis</i> (= <i>P. pernula</i> )	Y	
<i>Schilderia achatidea</i>	Y	
<i>Tonna galea</i>	Y	
<i>Zonaria pyrum</i>	Y	

**Crustacea**

<i>Homarus gammarus</i>		Y
<i>Maja squinado</i>		Y
<i>Ocypode cursor</i>	Y	
<i>Pachylasma giganteum</i>	Y	
<i>Palinurus elephas</i>		Y
<i>Scyllarides latus</i>		Y
<i>Scyllarus pigmaeus</i>		Y
<i>Scyllarus arctus</i>		Y

**Species name****Annex II****Annex III****Pisces**

<i>Acipenser naccarii</i>	Y	
<i>Acipenser sturio</i>	Y	
<i>Alosa alosa</i>		Y
<i>Alosa fallax</i>		Y
<i>Anguilla anguilla</i>		Y
<i>Aphanius fasciatus</i>	Y	
<i>Aphanius iberus</i>	Y	
<i>Cetorhinus maximus</i>	Y	
<i>Carcharodon carcharias</i>	Y	
<i>Epinephelus marginatus</i>		Y
<i>Hippocampus ramulosus</i>	Y	

<i>Hippocampus hippocampus</i>	Y	
<i>Huso huso</i>	Y	
<i>Isurus oxyrinchus</i>		Y
<i>Lamna nasus</i>		Y
<i>Lampetra fluviatilis</i>		Y
<i>Lethenteron zanandreaei</i>	Y	
<i>Mobula mobular</i>	Y	
<i>Petromyzon marinus</i>		Y
<i>Pomatoschistus canestrinii</i>	Y	
<i>Pomatoschistus tortonesei</i>	Y	
<i>Prionace glauca</i>		Y
<i>Raja alba</i>		Y
<i>Sciaena umbra</i>		Y
<i>Squatina squatina</i>		Y
<i>Thunnus thynnus</i>		Y
<i>Umbrina cirrosa</i>		Y
<i>Valencia hispanica</i>	Y	
<i>Valencia letourneuxi</i>	Y	
<i>Xiphias gladius</i>		Y

**Reptiles**

<i>Caretta caretta</i>	Y
<i>Chelonia mydas</i>	Y
<i>Dermodochelys coriacea</i>	Y
<i>Eretmodochelys imbricata</i>	Y
<i>Lepidochelys kempii</i>	Y
<i>Trionyx triunguis</i>	Y

**Species name**

**Annex II**

**Annex III**

**Aves**

<i>Pandion haliaetus</i>	Y
<i>Calonectris diomedea</i>	Y
<i>Falco eleonora</i>	Y
<i>Hydrobates pelagicus</i>	Y
<i>Larus audouinii</i>	Y
<i>Numenius tenuirostris</i>	Y
<i>Phalacrocorax aristotelis</i>	Y
<i>Phalacrocorax pygmeus</i>	Y
<i>Pelecanus onocrotalus</i>	Y
<i>Pelecanus crispus</i>	Y
<i>Phoenicopterus ruber</i>	Y
<i>Puffinus yelkouan</i>	Y
<i>Sterna albifrons</i>	Y
<i>Sterna bengalensis</i>	Y
<i>Sterna sandvicensis</i>	Y

**Mammalia**

<i>Balaenoptera acutorostrata</i>	Y
<i>Balaenoptera borealis</i>	Y
<i>Balaenoptera physalus</i>	Y
<i>Delphinus delphis</i>	Y
<i>Eubalaena glacialis</i>	Y
<i>Globicephala melas</i>	Y

<i>Grampus griseus</i>	Y
<i>Kogia simus</i>	Y
<i>Megaptera novaeangliae</i>	Y
<i>Mesoplodon densirostris</i>	Y
<i>Monachus monachus</i>	Y
<i>Orcinus orca</i>	Y
<i>Phocoena phocoena</i>	Y
<i>Physeter macrocephalus</i>	Y
<i>Pseudorca crassidens</i>	Y
<i>Stenella coeruleoalba</i>	Y
<i>Steno bredanensis</i>	Y
<i>Tursiops truncatus</i>	Y
<i>Ziphius cavirostris</i>	Y

## ANNEX IX

### DRAFT ACTION PLAN FOR THE CONSERVATION OF MARINE VEGETATION IN THE MEDITERRANEAN SEA

## **DRAFT ACTION PLAN FOR THE CONSERVATION OF MARINE VEGETATION IN THE MEDITERRANEAN SEA**

as elaborated by the Meeting of Experts for the elaboration of the Action Plan for the conservation of marine vegetation in the Mediterranean sea (Tunis, 9-10 April 1999) and reviewed and approved by the 4<sup>th</sup> Meeting of National Focal Points for SPA (Tunis, 12-14 April 1999)

### **INTRODUCTION**

- 1.** The Contracting Parties to the Barcelona Convention, within the framework of the Mediterranean Action Plan, give priority to the conservation of the marine environment and to the components of its biological diversity. This was confirmed by the adoption of the new 1995 Barcelona Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA Protocol) and of its annexes, among them a list of endangered or threatened species.
- 2.** Elaborating and implementing action plans to conserve one species or group of species is an effective way of guiding, coordinating and strengthening the efforts the Mediterranean countries are making to safeguard the natural heritage of the region.
- 3.** The Mediterranean possesses over one thousand macroscopic marine vegetation species, with a high percentage of rare and/or endemic species. The role of these species in maintaining the balance of marine ecosystems is primordial. The direct and indirect consequences of their decline are many, at the ecological and even the economic level (primary production, spawning grounds, nurseries, stability of coasts...).
- 4.** Although available knowledge on marine vegetation species in the Mediterranean is at present insufficient, and often fragmentary, it is obvious that these species are under increasing pressure, often anthropogenic in origin, in the Mediterranean, which engenders a degradation and decline of these species, observed in many Mediterranean regions.
- 5.** The degradation observed and the evident decline of marine vegetation have reached such levels that it would be serious to postpone any longer taking measures on the scale of all the Mediterranean countries. Information available today allows the drafting of an Action Plan for the Conservation of Marine vegetation in the Mediterranean Sea. The Action Plan will be adapted, where necessary, as further data become available.

6. The threats hanging over the marine plants in the Mediterranean are numerous and vary according to the affected species, and from one region to the next. Most of these threats are of anthropogenic origin. The main known threats are :

- Infrastructure development on the littoral
- pollution
- turbidity
- anchorage
- bottom trawling
- uncontrolled development of aquaculture
- use of explosives
- laying of sea cables
- recovery
- modification of sedimentary flow
- Accumulation of sedimentation originating from watersheds
- sand extracting from the sea bed and enlargement of beaches
- competition with non-indigenous species
- trampling

Other threats are foreseeable, such as the exploitation of certain marine vegetation species for industrial purposes.

## A. OBJECTIVES

7. The main objectives aimed at by the present Action Plan are :

- 7.1. Ensuring the conservation of macroscopic marine vegetation species and vegetal assemblages in the Mediterranean by implementing management and legal protection measures. These measures should also permit improved knowledge of these species;
- 7.2. Avoiding loss and degradation of the seagrass meadows, and of other vegetal assemblages of importance for the marine environment, as marine habitats that are essential to the survival of many Mediterranean species, and keeping them in favourable conservation status;
- 7.3. Ensuring the conservation of marine vegetal assemblages that could be considered natural monuments, such as barrier reefs of *Posidonia* and organogenic surface formations, terraces (platforms with vermitids covered by soft algae) and certain *Cystoseira* belts.

## B. PRIORITIES

8. In implementing the Action Plan, priority will be accorded to :

- 8.1. At species level: the present Action Plan's provisions are to be implemented for all the macrophyta species inhabiting the Mediterranean. Particular attention must be paid, however, to the species appearing in Annex 2 to the SPA Protocol. These species are :

Magnoliophyta: *Posidonia oceanica*, *Zostera marina*, *Zostera noltii*.

Chlorophyta: *Caulerpa ollivieri*.

Phaeophyta: *Cystoseira amentacea*, *Cystoseira mediterranea*, *Cystoseira sedoides*, *Cystoseira spinosa*, *Cystoseira zosteroides*, *Laminaria rodriguezii*.

Rhodophyta: *Goniolithon byssoides*, *Lithophyllum lichenoides*, *Ptilophora mediterranea*, *Schimmelmannia schousboei*.

Priority should also be given to other species of importance to the natural heritage of the Mediterranean, to be designated at a future time.

Given the particular importance of *Posidonia* meadows and other vegetal assemblages of importance for the marine environment in the Mediterranean, their conservation is to be considered one of the main priorities of the present Action Plan.

#### **8.2. At national level:**

- inventory of species, determination and mapping of their distribution
- identification of threats
- establishment of protected areas
- detailed mapping of seagrass meadows
- protection of seagrass meadows and of other vegetal assemblages of importance for the marine environment
- reinforced protection of the *Posidonia* barrier reefs and organogenic surface formations and certain *Cystoseira* belts
- elaboration and implementation of appropriate legislation
- establishment of marine vegetation monitoring networks
- controlling the impact made by watershed infrastructures on the marine environment

#### **8.3. At regional level:**

- strengthening cooperation and exchange of experience
- make sure information is well circulated, particularly in the case where transboundary phenomena appear (pollution, invasion by non-indigenous species, etc.)
- promote [and coordinate] the setting up of national marine vegetation monitoring networks
- promote the creation of protected areas to protect *Posidonia* meadows and other vegetal assemblages of importance for the marine environment

## **C. ACTION REQUIRED TO ATTAIN THE OBJECTIVES OF THE ACTION PLAN**

### **C.1 Legislation**

9. The species and vegetal assemblages of importance for the marine environment should be granted legal protection. In particular, the vegetal species enumerated in annex 2 to the SPA Protocol should be accorded legal protection in the countries where they exist in order to control and, if necessary, prohibit any type of destruction or disturbance, including the taking, harvesting, cutting, uprooting, possessing, trading in, transporting and exhibiting for commercial purposes, of these species. It is also important to provide for penal sanctions for damage caused to seagrass meadows and other vegetal assemblages of importance for the marine environment. It is necessary to harmonize the Mediterranean legislation and to elaborate guidelines to assist countries in their efforts in this field.
10. The Contracting Parties which have not yet promulgated legislation for the protection of seagrass meadows and other vegetal assemblages of importance for the marine environment should do so as soon as possible.
11. The regulation relating to impact studies will have to be strengthened to make obligatory the assessment of impact on seagrass meadows of all human activity to be introduced in areas possessing seagrass meadows. The regulation will have to pay special attention to the impact on seagrass meadows and other vegetal assemblages of importance for the marine environment in the case of harbour facilities (including marinas), laying down pipes for sewage discharging at sea, dredging work or deposits of material from dredging and aquaculture projects. Guidelines for the assessment of environmental impact on seagrass meadows will have to be elaborated by RAC/SPA in collaboration with Mediterranean experts and concerned organizations.

### **C.2 Creating marine protected areas for the protection of seagrass meadows and other vegetal assemblages of importance for the marine environment**

12. It is necessary to establish marine protected areas to protect the most representative seagrass meadows and other vegetal assemblages of importance for the marine environment by applying the protection and management measures recommended by articles 6 and 7 of the SPA Protocol.
13. The marine vegetal assemblages that could be considered natural monuments, such as barrier reefs of *Posidonia*, organogenic surface formations, terraces (platforms with vermitids covered by soft algae) and certain *Cystoseira* belts, will have to be identified as soon as possible and covered by a network of protected areas.



14. Those Mediterranean marine protected areas which contain seagrass meadows, *Posidonia* barrier reefs, organogenic surface formations, terraces (platforms with vermitids covered by soft algae) and certain *Cystoseira* belts or other marine vegetal assemblages and for which management and monitoring plans have not yet been developed and implemented, must be provided with such plans as soon as possible.

### **C.3 Publicity, information, public awareness and education**

15. Maps showing the distribution of the main meadows in each country will have to be elaborated and circulated to the actors on the littoral (municipalities, industry, tourism, fishermen, etc.). Physical planning and management plans will have to take account of these maps.

16. Public awareness and education programmes directed at stakeholders, the local population and the broad public will have to be implemented to help reduce the impact on marine vegetation, especially as regards organogenic surface formations. NGOs should be encouraged to participate in such programmes.

### **C.4 Scientific Research**

17. As regards scientific research on marine vegetation in the Mediterranean, priority must be given to:

- enhanced research at the assemblage, species and genetic level;
- the compilation of check-lists of vegetal taxa, assemblages and seascape as well as the determination and mapping of their distribution;
- the influence of environmental factors (temperature, nutrients in sea water and in the sediment, salinity, sedimentation, turbidity, etc.), environmental changes, the effects of pollution and biotic interactions;
- the study of incidental introduction and invasion of non-indigenous species and their impacts;
- the development of techniques of monitoring, mapping, environmental impact assessments and other tools for planning and management.

18. It is advisable to organize, within one year starting from the date when the present Action Plan is adopted, a Mediterranean symposium on marine vegetation in order to take stock of available scientific data. The symposium should be regularly held every four years.

### **C.5 Collection and circulation of data**

19. Since scientific data on the biology, ecology and conservation of marine vegetation in the Mediterranean are rare and frequently fragmentary, it is necessary to gather the information that is available in this field and set up a Mediterranean databank held by the RAC/SPA and regularly updated in collaboration with the experts and organizations concerned. This databank will be used to produce technical syntheses and other technical documentation. It must be made available for consultation on the Internet.

**20.** To facilitate exchange, a directory of specialists, laboratories and organizations concerned with marine vegetation in the Mediterranean shall be established and regularly updated.

### **C.6 Training**

**21.** It would be advisable to promote the training of specialists in the study and conservation of marine vegetation, especially in the countries of the south and east Mediterranean. To this end, it is important to identify already existing initiatives in this field and to give priority to taxonomy, conservation biology and techniques for monitoring marine vegetation, as well as the subjects of research set out in section C.4 above.

### **C.7 National plans**

**22.** To ensure more efficiency in the measures envisaged in the implementation of this Action Plan, Mediterranean countries are invited to establish national plans for the conservation of marine vegetation. Each national plan should take into account the concerned country's, or even areas', specific features. It must suggest appropriate legislative measures, particularly for the environmental impact assessment of coastal infrastructure (building works, pipelines out to sea, and deposits of material from dredging) and to control activities which could affect marine vegetation (such as fishing and anchorage). The national plan shall be based on the available scientific data and will include programmes for (i) collection and regular updating of data, (ii) training and refresher courses for specialists, (iii) awareness-raising and education for the general public, actors and decision-makers and (iv) the conservation of seagrass meadows and other vegetal assemblages of importance for the Mediterranean marine environment. The national plans must be brought to the attention of all concerned actors and, when possible, coordinated with the relevant national plans (e.g. emergency plan to deal with pollution).

## **D. REGIONAL COORDINATION STRUCTURE**

**23.** Regional coordination of the implementing of the present Action Plan will be guaranteed by the Mediterranean Action Plan's (MAP) secretariat through the Regional Activity Centre for Specially Protected Areas. The main functions of the coordinating structure shall consist in:

- collecting, validating and circulating data at Mediterranean level;
- promoting the drawing up of inventories of species, seagrass meadows and other vegetal assemblages of importance for the Mediterranean marine environment;
- promoting transboundary cooperation;
- promoting and coordinating the setting up of marine vegetation monitoring networks;
- preparation of reports on progress in the implementation of the Action Plan, to be submitted to the meeting of national focal points for SPAs and to meetings of the Contracting Parties;
- organizing meetings of experts on specific subjects relating to marine vegetation and training sessions.

24. Complementary work done by other international organizations, and aiming at the same objectives, shall be encouraged, promoting coordination and avoiding possible duplication of efforts.

#### **E. PARTICIPATION IN THE IMPLEMENTATION**

25. Implementing the present Action Plan is the province of the national authorities of the Contracting Parties. The concerned international organizations and/or NGOs, laboratories and any organization or body are invited to join in the work necessary for implementing the present Action Plan. At their ordinary meetings, the Contracting Parties may, at the suggestion of the meeting of National Focal Points for SPAs, grant the status of "Action Plan Associate" to any organization or laboratory which so requests and which carries out, or supports (financially or otherwise) the carrying out of concrete actions (conservation, research, etc.) likely to facilitate the implementation of the present Action Plan, taking into account the priorities contained therein.
26. The coordination structure shall set up a mechanism for regular dialogue between the participating organizations and, where necessary, organize meetings to this effect. Dialogue should be made mainly by mail, including E-mail.

#### **F. TITLE OF PARTNER OF THE ACTION PLAN**

27. To encourage and reward contributions to the work of applying the Action Plan, the Contracting Parties may at their ordinary meetings grant the title of "Action Plan Partner" to any organization (governmental, NGO, economic, etc.) that has to its credit concrete actions likely to help protect marine vegetation in the Mediterranean. Conditions for the awarding of the Partner title shall be adopted by the Contracting Parties following the advice given by the meeting of national focal points for SPA.

#### **G. ASSESSING THE IMPLEMENTATION AND REVISION OF THE ACTION PLAN**

28. At each of their meetings, the national focal points for the SPAs will assess the progress in the implementation of the Action Plan, on the basis of national reports on the subject and of a report made by the RAC/SPA on implementation at regional level. In the light of this assessment, the meeting of the national focal points for the SPA will suggest recommendations to be submitted to the Contracting Parties. If necessary, the meeting of the focal points may also suggest adjustments to the timetable given in the Annex to the Action Plan.

**Annex  
 Implementation Timetable**

<b>Action</b>	<b>Deadline*</b>
- Ratification of the SPA Protocol	As soon as possible
- Mediterranean symposium (see paragraph 18 of the Action Plan)	Within one year starting from the date when the Action Plan was adopted and, thereafter, every four years.
- Guidelines for impact studies (see paragraph 11 of the Action Plan)	1 year
- First version of the Mediterranean Data Bank (see paragraph 19 of the Action Plan)	1 year
- First issue of the directory of concerned specialists, laboratories and organizations	1 year
- Launching of the procedures for legal protection of species (see paragraph 9 of the Action Plan)	2 years
- Elaboration of national plans (see paragraph 22 of the Action Plan)	2 - 3 years
- Inventory of seagrass meadows and other marine vegetal assemblages that could be considered natural monuments (see paragraph 13 of the Action Plan)	3 years
- Preparation of management plans for the protected areas	3 years
- Preliminary inventory of species	3 years
- Setting up of networks for the monitoring of marine vegetation	4 years
- Mapping of seagrass meadows and other vegetal assemblages of importance for the marine environment	7 years

\* In the final text of the Action Plan, the figures in this column will be replaced by dates

## ANNEX X<sup>1</sup>

### NATIONAL REPORTS PRESENTED BY THE DELEGATIONS

### RAPPORTS NATIONAUX PRESENTES PAR LES DELEGATIONS

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<sup>1</sup> This annex includes the texts of national reports presented by the delegations during the meeting and transmitted in writing to the Secretariat. The information and opinions given are the responsibility of the delegations.

# BOSNIA AND HERZEGOVINA

## NATIONAL CO-ORDINATOR OFFICE FOR MAP

### COUNTRY REPORT

#### Institutional Framework

Till 1992 Bosnia and Herzegovina was a Republic belonging to ex-Yugoslavia. Its coastal area was mostly responsibility of two oceanographic institutes situated in Dubrovnik and Split, Croatia, and some investigations were done by biological institute from Sarajevo. In 1992, Bosnia and Herzegovina became an independent country but at the same time 4-years lasting war started. Dayton peace accord provided a constitution of State of Bosnia and Herzegovina by this constitution Bosnia and Herzegovina is a strongly decentralised country, consisting of two entities, named Federation of Bosnia and Herzegovina and republic of Srpska. Federation of Bosnia and Herzegovina further consists of 10 cantons.

Since Dayton constitution emphasised decentralisation of the Country, very few tasks belong to the State level – environment is not among them, it is responsibilities of entities. That means that both entities should have separate legislation related to the environment – in Federation of Bosnia and Herzegovina it is also responsibility of mentioned cantons.

Office of high representative (OHR) has opportunity (and responsibility) to prevent any action that could lead to destruction of Bosnia and Herzegovina.

Both Federation of Bosnia and Herzegovina and republic of Srpska has its own Ministry of physical planning and environment so as Ministry of Agriculture, Water Management and Forestry and their departments for environment and water management are responsible for developing general environment policy in creating conditions for sustainable development ; protection of soil, air, water, plant and animal world in the totality of their interactions; proposing,, promoting, monitoring environmental protection improvement measures, defining measures and requirement for issuing environmental permits, maintaining Environmental Protection Information System ; waste management, preparation of proposals for environmental standards, environmental inspection , etc ...

Authorities with competencies for environment and nature in State Bosnia and Herzegovina are :

1. *Legislative authority* : Bosnia and Herzegovina State Parliament.
2. *Executive authority* : Government of the Bosnia and Herzegovina and its Ministry of Foreign Affairs, Ministry of Communications .

Authorities with competencies for environment and nature in Federation of Bosnia and Herzegovina are :

1. *Legislative authority* : Federation of Bosnia and Herzegovina Parliament consisting of House of Representatives and House of Nations (Bosniaks and Croats are constitutive nations in FB&H) – both houses must adopt laws in exactly the same structure to put them into force.

2. *Executive authority* : government of the Federation of Bosnia and Herzegovina and Federal ministries (Ministry of Interior, Ministry of Physical Planning and Environment, of Foreign Affairs, Ministry of Communications, Ministry of Agriculture, Water Management and Forestry, Ministry of Health, Ministry of Science, Culture and Sport); Federation administration authorities (Public Water Management Enterprises – for Adriatic catchment area and for river Sava (or Danube) catchment area, Federation Hydro-meteorological Institute ; Institute for Cultural heritage) ; Canton governments and their related ministries.

Authorities with competencies for environment and nature in Republic Srpska are :

1. *Legislative authority* : Republic of Srpska Parliament.
2. *Executive authority* : Government of the Republic of Srpska and its ministries (Ministry of Interior, Ministry of Physical Planning and Environment, Ministry of Agriculture, Water Management and Forestry, Ministry of Health, Ministry of Science, Culture and Sport) ; Republic of Srpska administration authorities (Regional Public Water Management Enterprises, RS Hydro-meteorological Institute).

On State level recently an Environmental Steering Committee is established to co-ordinate works between these entities ; the work of National Co-ordinator's Office for MAP B&H began in June 1977.

### **Legal framework governing conservation of species and sites**

The laws and regulations in the field of nature and environmental protection that are in force in both entities are mostly overtaken from ex-Yugoslavia legislation. Very few laws were adopted after 1992, like Water Law adopted in Federation of Bosnia & Herzegovina in 1998. The preparation of law on environment started in both entities three years ago – it was even prepared for adoption in Federation of Bosnia & Herzegovina, but then OHR intervened to prevent adoption before this law and the same law in RS would be balanced. Laws on Land Use and Forestry are also in preparation phase.

### **Status of signature/ratification or relevant international agreements**

Bosnia and Herzegovina has accepted the internationally established legal framework for the nature and environmental protection by succession from ex-Yugoslavia. The principal activities in the Adriatic aimed at environmental protection with international co-operation are to be implemented within the MAP/UNEP and its centres ; unfortunately none of Conventions or Protocols are ratified by independent Bosnia & Herzegovina till now – prepared for adoption are Basel Convention, Climate Change Convention, Hazardous Waste Transboundary Transportation Convention.

## Marine and coastal protected area

Bosnia & Herzegovina has about 25 km of the Adriatic coast. Coastal area also covers Neretva river estuary. The Neretva Delta forms a valuable ecological entity with several internationally important and protected wetlands, ornithological and ichthyological reservations. Neretvanske Blatije, (main channel and a few secondary ones) including the fields of the lower Neretva, comprise the area about 19.000 hectares, out of which about 7.000 on territory of the Bosnia and Herzegovina and 12.000 on Republic of Croatia. A large part has been ameliorated and transformed into agricultural land, the rest wetland area constitutes a natural oasis with rich fauna and flora.

Protected natural position, rich water and land content, as well as the mild and wholesome climate have supported development of rich and original vegetation, as well as the versatile fauna of Neretvanske Blatije. The aquatic and marsh vegetation consists of about 450 species. In the area of Blatije about 300 bird species belonging to some 50 families have been recorded. This is an important ornithological area, in particular in the season of bird migrations, and also as the winter resorts for many species. In addition to freshwater fish, some sea fish species are also present in the water in Blatije, the most important among them being the eel.

Locality of Hutovo Blato consisting of 7.411 hectares of wetland, is an extremely valuable resource in Neretvanske Blatije. Area includes hilly part of Londa and Koscela, waters of lakes Deransko, Jelim, Orah and Drijen and region of Donje Balto including Karaotok, ornithological reserve Skrka, lake Svitavsko jezero and river Krupa. As an ornithological reserve – a biotope with birds with marshy and aquatic flora and vegetation – Hutovo Blato fares as one of the most important reserves of this kind in Europe. Thanks to its geographic location, favourable climatic and hydrological conditions, and opening towards the Adriatic Sea, it provides unusually good conditions for development and survival of many animals species, especially water and wetland birds. It is an important resting-place (refugium) for birds of Central and North Europe in the period of migration and wintering and permanent habitat of several endangered species.

The area has been exposed to impacts of human activity and presence since 19<sup>th</sup> century. In spite of that the site was still capable to satisfying the criteria of the SPA Protocol (Programme of Mediterranean Specially Protected Areas of the Barcelona Convention) and was listed as MAR site (Scott. D.A. 1988 : Preliminary Inventory of Wetlands of International Importance for Waterfowl in West Europe and North West Africa, IWRB Special Publication n°2, p.86).

Another international recognition of Hutovo Blato came in 1988. That year the International Council for Bird Preservation (ICBP) finalized an inventory of internationally important bird habitats in Europe (ICBP, with IWRB and RSPB, 1988 : Important Bird Areas in Europe, ICBP Technical Publication n°9, pp. 859-880).

The value of Hutovo Blato was also recognized by internationally important agreements signed by ex Yugoslavia on protection of birds and bird habitats. Despite that ratification, conditions in Hutovo Blato were getting worse every day. According to the « Red List » of birds of Vojvodina (province in Yugoslavia), Hutovo Blato is important for 36 % (or 22) of the most endangered species, 70 % of the very endangered and 65 % of the endangered species.

In the construction of the hydropower plant Capljina (using the water from Trebisnjica river between Popovo polje field and Neretva), a part of Hutovo Blato has been submerged.



In late period due the war activities, having in mind that first front line was very close to Hutovo Blato, degradation of the area was continued through deterioration of quality and quantity of animal and plant habitats. Devastation and destruction of some parts of Hutovo Blato were caused by fire and uncontrolled deforestation, enormous fishing etc. During the winter bird species as most numerous (about 50,000 birds of different species) were significantly decreased. Estimated present number is about 10,000 specimens). Also the following facts stress the seriousness of the situation:

- out of almost 2,500 pre-war swampy specimens stayed 300;
- out of almost 160 partridges stayed only 12;
- out of almost 40 partridges gray stayed none;
- out of almost 160 rabbits, stayed 17;
- foxes and otters are almost gone.

#### **Elaboration and Implementation of National Biodiversity Strategy and Actions Plans - Preparing of Relevant Inventories**

Inventory of biological diversity data has not been established yet, but the process has started (flora red book is in preparatory phase). The ecosystem and habitat inventory has not been established yet.

#### **NGOs in Bosnia and Herzegovina**

The importance of nature and environment preservation is clearly visible through citizens associations, and a number of organisations (which are sometimes professional associations) actively engaged in environmental protection. The top positions among such NGOs is held by Una's Pearls, Fondeko, Bosnia Environmental Technologies Association (BETA) etc. NGO movement is still developing its capacities in Bosnia and Herzegovina.

## REPUBLIC OF CROATIA

### STATE DIRECTORATE FOR THE PROTECTION OF NATURE AND ENVIRONMENT - OFFICE FOR THE ADRIATIC

#### COUNTRY REPORT

##### Institutional Framework

The state Directorate for the Protection of Nature and Environment (SDPNE) is a governmental authority in charge of managing the Croatian nature and environment. SDPNE performs the following administrative and expert duties : developing general environmental policy in creating conditions for sustainable development ; protection of soil, air, water, plant and animal world in the totality of their interactions : proposing, promoting, monitoring, environmental protection improvement measures, defining measures and requirements for issuing environmental permits, maintaining Environmental Protection Information System ; waste management, preparation of proposals for environmental standards, environmental inspection. Another set of duties of the SDPNE includes : research, monitoring, registration, central information and documentation service, supervision over nature protection programmes financing, other duties within its competence. SDPNE is structured into 9 departments and 3 offices ; Office for Sea Protection, in Rijeka is in charge for implementation of measures and organization of activities according Sudden Adriatic Sea Pollution Contingency Plan ; management of the collection of data on coastal beach sea quality, proposing measures to improve sea quality ; preparation of a sanitation programme for elimination of coastal environmental pollution, development of international cooperation in environmental protection, etc.

Authorities with competencies for environment and nature in the Republic of Croatia :

1. Legislative authority – Croatian State Parliament-Hrvatski drzavni Sabor  
House of Representatives (Physical Planning and Environmental Protection Committee, Agriculture and Rural Affairs Committee, Maritime Affairs, Transport and Communications Committee, Tourism Committee) and House of Counties (Economy and Finance Committee).
2. Executive authority – Government of the Republic of Croatia and Governmental bodies of the Republic of Croatia : State Ministries (Ministry of Interior) ; Ministries (Ministry of Physical Planning, Building and Housing, Ministry of Agriculture and Forestry, Ministry of Maritime Affairs, Transport and Communications, Ministry of Health, Ministry of Culture) ; State administration authorities (State Directorate for the Protection of Nature and Environment, State Water Directorate, State Hydrometeorological Institute, State Hydrographic Institute) ; Local governmental and self-governmental authorities-Counties (Offices for Utility Management, Construction and Environmental Protection).

### **Legal Framework governing conservation of species and sites (main legal instruments)**

The laws and regulations in the field of nature and environmental protection :

*The Constitution of the Republic of Croatia* in its provisions defines environmental and nature protection. The Croatian State Parliament (Sabor) and the people directly and independently, in accordance with constitution and other laws, decide on the preservation and use of natural and cultural heritage. The sea, seacoast with islands, water, air, mineral and other resources, as well as land, forests, plant and animal world, other nature parts, real estate and objects of specific cultural, historical, economic and ecological significance, legally defined as being of interest for the Republic, enjoy its special protection.

*The Declaration of Environmental Protection in the Republic of Croatia* passed by the Sabor on June 5, 1992, contains guidelines for the development of legal system, in accordance with international treaties and European and global standards, which are to ensure complete, permanent, statutory and efficient environmental protection.

*Law on Environmental Protection, 1994*, regulates and determines environmental protection objectives and principles ; rights and responsibilities of the stakeholders ensuring efficient protection of the environment ; environmental protection implementation and liability for environmental pollution ; manner of performing environmental inspections. On the basis of this Law environmental protection documents are passed as follows : the strategy (the procedure is currently underway), programmes and environmental state report and the following by-laws has been developed /only related to the sea/ : By-law on Environmental Impact Assessment, 1997, By-law on Sea Quality Standards on Coastal Beaches, 1996.

*Law on Nature Protection*, according to this Law, nature protection is implemented by establishing protected parts of nature : national parks, parks of nature, monuments of park architecture, individual plant and animal species. On the basis on this Law, the following laws and by-laws have been enacted : laws on proclaiming protected parts of nature, by rule books on the protection of certain plant and animal species. Individual issues from the field of nature and environmental protection are regulated by other laws as well, in particular : Law on water, 1995 ; Maritime Code, 1994 ; Law on Marine Fisheries, 1997, Contingency plan in case of accidental pollution of the Adriatic sea, 1997 ; as well as certain other regulations setting issues of nature and environmental protection.

### **Status of signature /ratification of relevant international agreements**

The Republic of Croatia has accepted the internationally established legal framework for the nature and environmental protection by succession, setting its constitutional determinants accordingly. Conclusion and Enforcement of International Treaties of 1991, in particular to the Resolution on Enforcing Multilateral International Treaties, the Republic of Croatia has become a Party to numerous international treaties, through ratification or notification of succession. The principal activities in the Adriatic aimed at environmental protection with international co-operation are implemented within the MAP-UNEP and its centres, all within the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution (1976,1996) and the related Protocols :

Protocols	Signed	Ratified
The Protocol for the Prevention of Pollution of Mediterranean Sea by Dumping from Ships and Aircrafts	+	+
The Protocol Concerning co-operation in combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency	+	
The Protocol for the Protection of the Mediterranean Sea against land-based Sources and Activities	+	
The Protocol Concerning Specially Protected Areas and Biological Diversity in Mediterranean	+	
The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration of the Continental Shelf and the Seabed and its Subsoil.	+	
The Protocol in the Prevention of the Pollution of the Mediterranean resulting from the Transboundary Movement of Hazardous Wastes and their Disposal.		

Croatia hosts the Regional Activity Centre for the Priority Actions Programme. Co-operation has been established with all regional centres. The METAP financed several studies aimed at resolving important problems of environmental protection (waste water, solid waste, environmental management). Croatia actively participates in the work of other UNEP-MAP bodies, such as the Commission for Sustainable Development, and is also signatory of the Agenda 21 for the Mediterranean. Croatia also participates : in the activities of the European Association for Sustainable Development of Islands « INSULA » ; in the work of the Committee for the Environmental Protection Policy of the United Nations Economic Commission for Europe (UN/ECE) ; in the process « Environment for Europe » within the preparations for the Conference of European Ministers of Environmental Protection (Luzern-1992, Sofia-1995, Aarhus-1998) ; in co-operation with the European Environmental Agency on the preparation of the Report on the State Environment in Europe (Dobris Assessment) ; in co-operation with the Foundation for Environmental Education Europe (FEEE), and the Blue Flag Programme for beaches and marinas.

### **Marine and coastal protected areas (new development 1996, 97, 98)**

Some 7,5% of the national territory is protected, while the structure of national parks and parks of nature illustrates the richness and the diversity of Croatian nature. Three of the National Parks are situated on Adriatic islands (Kornati, Brijuni, Mijet) including the surrounding sea and two of them illustrate hydrographic and morphological curiosities (Plitvice lakes, the river Krka), while two of them are typical mountainous areas (Risnjak and Paklenica). In the coastal region there are 107 protected areas classified in eight categories : national parks (7), natural parks (6), strict reservations (2), special reservations (69), park-forests (23), protected landscapes (28), monument of nature (72), monument of park architecture (114). Related to new protected areas there is ongoing proposal project for establishing a few marine parks as specially protected areas : Vrsarski otoci, Medulinsko vanjsko otocje, Prvic-Grgur-Goli, Cutin, Silba and Palagruza. This project is a first phase in establishing and organization of marine net specially protected areas in Croatian part of the Adriatic Sea. The main expected results of proposed projects are conservation and protection of genetic and biological diversity, monitoring, making inventories of marine and coastal-islands flora and fauna, development of quality tourism, improving demographic situation on islands, improving employment situation, etc. Sites proposed for

ecological marine reserves are scientific (strict) reserves : Part of the eastern coast of Cres ; The Dolphin Reserve\* encompassing the area between Punta Kriza and the E part of the island of Losinj ; The reserves for sea turtles on the islands of Susak. Proposed marine special reserves : SE part of the Island of Susak ; NW part of the Island of Unije ; Coastal area surrounding Tramontana.

At present, the long term research on Cetaceans is a bottlenose dolphin research and conservation program on the island of Losinj-« Adriatic Dolphin Project », conducted by Tethys Research Institute in collaboration with Croatian Natural History Museum/research is based on day-to-day work with resident dolphin community numbering some 130 animals, present research framework include photoidentification, population size estimate, behavioural studies, etc. Recently, estimation of the number of dolphins has been done by the Veterinary Faculty with the support of UNEP/MAP-RAC/SPA.

### **Protected marine species of fauna and flora**

One of the most important features of the coastal and island region is due to a geographic position, mild Mediterranean climate, and expressly karstic relief. The region hosts some 3500 plant species, some of them are tertiary endemic relicts- *Degenia velebitica*, glacial relicts and neo-endemic species- *Dianthus*, *Leucanthemum*, *Campanula*, *Centaurea*...(it is ongoing preparation of regulation which will protect all the species from Croatian Red Book), 12 species of Amphibia, about 200 species of nesting birds, 79 species of mammals, 64 species of fresh water fish (40 are Mediterranean endemic, and 11 can be found only in Croatia), while the sea is home to 407 species and sub-species of fish, 660 benthic algae, 4 species of marine meadows, and several species of marine mammals.

Among the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean for the protection of marine species of flora and fauna, there are lots of national regulations which name taxonomically protected species, e.g. Regulation on protection of marine mammals.

### **Elaboration and Implementation of National Biodiversity Strategy and Actions Plans Preparing or Updating of Relevant Inventories (completed or ongoing)**

Inventory of biological diversity data has not been established yet, but the process has started as a part of the National Strategy for the Conservation and Sustainable Use of Biodiversity, that is currently being prepared. The grant from the World Bank/GEF for financing the National Strategy and Action Plan for Biological and Landscape Diversity Conservation was approved in 1997, and identification of components of biodiversity has been established so far only for higher plants and mammals, which makes only a small part of Croatian flora and fauna. The ecosystem and habitat inventory has not been established yet. There is ongoing project of preparing *Avertebrata* inventories.

## **NGOs in Croatia**

Very strong environmental and nature protection initiatives were present in Croatia as early as the beginning of the century ; in 1960s first ecological associations are founded, while 1970s and 1980s are times of emergence of groups concerned about environmental pollution, made up predominantly of experts and scientists. The importance of nature and environment preservation is clearly visible through citizens associations, and a number of organisations which are actually professional associations actively engaged in environmental protection.

The top position among such NGOs is held by the Nature Friends Movements « Lijepa nasa » ("Our Beautiful Homeland"). Further, prominent position is taken by "Hrvatski savez zelenih" ("Croatian Green Alliance"), that gathers professional societies, ecological and other non-political eco-oriented organisations. Certain associations have developed and are maintaining cooperation with foreign and international organisations (e.g. «Green Action »-Zelena akcija).

The co-operation between NGOs and governmental authorities is carried out through a number of forms.

## IMPLEMENTATION OF THE ACTION PLAN FOR THE CONSERVATION OF CETACEANS IN THE MEDITERRANEAN SEA - ACTIVITIES CARRIED OUT IN CROATIA<sup>1</sup>

### *Legislation*

Dolphins living in the Adriatic sea together with all other Cetacean species found are strictly protected by Law on nature protection since 1996. By that it is forbidden to kill, disturb, pursue or harm them in any other way and to sell, buy or even poses any part of it. The basic law provides penalties (fines or imprisonment) for any contravention of the regulations and also provides indemnification price that has been set up to approximately 8000 USD per each dead animal or some percentage of that amount if some other harm has been done to the animal (disturbance, pursuing, harming, etc.).

Even though the law is very strict and fines are very high implementation of the law is not satisfactory. State agencies responsible for the implementation of the law does not have implementation strategy and up to now there has not been a single charge for the violation of the mentioned law.

### *Species*

During the past 150 years nine cetacean species were recorded from the Croatian part of the Adriatic Sea. They include the fin whale, *Balaenoptera physalus*; the sperm whale, *Physeter catodon*; the Cuvier's beaked whale, *Ziphius cavirostris*; the false killer whale, *Pseudorca crassidens*; the long-finned pilot whale, *Globicephala melas*; the Risso's dolphin, *Grampus griseus*; the bottlenose dolphin, *Tursiops truncatus*; the common dolphin, *Delphinus delphis*; and the striped dolphin, *Stenella coeruleoalba*. Except for the common and for the bottlenose dolphin which were encountered regularly in this region in historical times, all other cetacean species are represented by very rare occurrences of stray individuals.

### *Research*

The research and data are lacking for the most of the Adriatic sea, particularly about the southern part of Croatian Adriatic. Data collected show that at present the bottlenose dolphin is the only regularly seen species. Common dolphin, which by historic record was predominant species is only occasionally seen in the Northern Adriatic and there are no data about its presence in the southern part. Also, since 1990 appearance of striped dolphins has been documented with three stranded individuals and one well documented sighting.

At present the only long term research on Cetaceans is a bottlenose dolphin research and conservation program on the island of Lošinj, Northern Adriatic called "Adriatic Dolphin Project" and is conducted by Tethys Research Institute in collaboration with Croatian Natural History Museum. This research is based on day-to-day work with resident dolphin community numbering some 130 animals. The include photo-identification, population size estimate, individual home-range and habitat use, and behavioural studies (focussed on 1) foraging activities and strategies; 2) parental and alloparental care; 3) aggressive interactions among dolphins), interaction with fisheries, boat disturbance etc.

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<sup>1</sup> The present report aims at integrating the information provided by the Croatian delegation at the Meeting of Experts on the implementation of the action plans for marine mammals (monk seal and cetaceans) adopted within MAP (Arta, 29-31 October 1998)

Recently, estimation of the number of dolphins in the Croatian part of the Adriatic, has been done by the Veterinary Faculty for UNEP/MAP-RAC/SPA.

Also some efforts has been taken to establish formal monitoring programme, but the programme is still in the initial phase and is targeted to collection of information about found dead and stranded animals. For now poster and leaflets has been produced drawing public attention to dolphins and need to protect them and collect information. State institutions like Marine police, Harbours master offices, Surveillance and alert service has been kind enough to offer their help in gathering stranding data.

### *Conservation*

Regardless to the protection given by law, the lack of conservation programme is evident. Therefore common dolphins almost disappeared and actions to conserve "what is left" are absent. Similar situation is with bottlenose dolphins.

## **Proposed priority actions**

### *Protection and conservation*

- efficiently implement present legislation
- elaborate and establish conservation programme for the common dolphins and bottlenose dolphins
- reduce mortality and population decline in connection with fishing industry and overfishing
- establish a network of protected areas (marine parks)

### *Scientific research and monitoring*

- estimate population number and status of common and bottlenose dolphins and establish the status of newly appeared striped dolphins
- establish monitoring of dolphin population
- establish stranding programme (to include determination of mortality, sampling, epizootic monitoring etc)
- assess the interaction of dolphins and fisheries (including problems related to both net-entanglement and overfishing)





## ARAB REPUBLIC OF EGYPT

Egyptian Environmental Affairs Agency (EEAA)  
Department of Nature Protection (DNP)

### COUNTRY REPORT

#### **Institution Framework**

Egypt, throughout the past two decades, has paid increasing attention to environmental issues at both official and popular levels. Following the UN conference on Human Environment, Stockholm, June 1972, Egypt began formulating national institution responsible for environmental issues, in collaboration with all other concerned bodies.

At present, the principal national environmental mechanism is Egyptian Environmental Affairs Agency (EEAA) established in 1982 as an affiliate of the Council of Ministers. This body is responsible for setting national environmental policies and their implementation.

#### Protected Areas in Egypt

Egypt's experience with protected areas is rather young and goes back to the early eighties. With the passage of law 102 for 1983 concerning the establishment and management of protected areas in Egypt, since then 21 Protected Areas have been declared totalling some 80.000 Km<sup>2</sup> in area. And representing many of Egypt's most important natural heritage resources.

#### National Biodiversity Unit

Egypt has expressed concern over the preservation of the genetic resources of living organisms particularly plants, animals and microorganisms threatened with extinction. The country firmly believes that each generation should preserve for the next one a fertile and productive environment.

In 1992 Egypt established the National Biodiversity Unit (NBU) under the umbrella of the Department of Natural Protection. Egyptian Environmental Affairs Agency.

#### **Legal Framework**

- The main legal instrument that sets the framework for protected areas in Egypt is Law 102 issued in 1983. The law gives the EEAA full executive authority over all Protected Area affairs, and has proven an effective management tool to date.
- Law 4/1994 for protection of the environment.

### **International conventions and agreements**

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Convention on the Protection of European Wildlife and Natural Habitats (Bern Convention, 1979).
- Convention on Conservation of Migratory Species of Wild Animals (Bonn,1979)
- Convention on the Protection of the Mediterranean sea Against Pollution (Barcelona,1976).
- Protocol Concerning Mediterranean Specially Protected Areas (Geneva,1982)

### **Marine and Coastal Protected Area (New Development 1996-1999)**

Only one coastal protected area is declared from the last Focal Point meeting 1996 it is Lake Burullus.

Geographical Coordinates:  
31° 22 - 31° 36 N to 30° 33 - 31° 07 E

Lake Burullus is shallow fresh to brackish coastal lagoon situated in the central of the Delta along the Mediterranean coast. It is the second largest lake in Egypt, important wetland for waterfowl, several globally threatened species occur at the Lake.

In May 1998, the whole Lake Burullus was declared as Protected Area by Prime Minister decree N° 1444 of 1998 under Law 102 of 1983 for the Natural Protectorate. The Protected Area is covering about 420 Km<sup>2</sup>.

### **Protected Marine Species of Fauna and Flora**

Inside the protected areas all the species of fauna and flora are protected and all the species, which are listed in any annexes of the international agreements are protected either.

### **Implementation of the National Biodiversity Strategy and Action Plans**

In 1992, the National Biodiversity Unit was established as focal point for implementing the Biodiversity action plan in Egypt as well as providing the scientific and technical support for national programs for conservation of natural resources. The convention also requires ratifying countries to prepare inventories and assess biodiversity of the country (Egypt country study), to put forward a Biodiversity Data Management Plan and develop a national strategy for Biodiversity conservation.

A series of studies, mostly literature reviews and surveys of existing collection of biota were carried out, with the purpose of assessing the present state-of- knowledge. This produced a number of inventories of various taxonomic groups of plants and animals recorded in Egypt with

notes on habitat, geography, status, etc, these inventories provide launching programs that aim at the completion of these studies and the building up of a national data base for Biodiversity and for establishing a national mechanism for monitoring changes and updating information.

An experimental phase of data management was carried out with the aims of testing the methodologies and training the technical personnel in the NBU and in a number of reference collections kept in universities and research institutes.

The outcomes of this phase (1993-1996) included a number of publications summarizing the collected information and providing reports the state-of-knowledge of selected groups (flowering plants, mammals, reptiles, fungi, birds, Nile fishes).

### Updating of relevant inventories

The National Biodiversity Unit (NBU) have prepared an inventory of the following groups :

<b>Group</b>	<b>N° of Species in Egypt</b>	<b>N° of species in Mediterranean</b>
Annelida	41	.....
Brachyura	185	13
Bryophyta	223	49
Corals	178	.....
Crustacea	107	14
Echinodermata	254	47
Fish	461	50
Flora (seed plants)	2672	1200
Insecta	7324	1311
Mammals	132	31
Mites	268	.....
Mollusca	468	1
Pteridophyta	25	.....
Reptiles	98	15
Viruses	112	.....
<b>TOTALS</b>	<b>12548</b>	<b>2731</b>

By Waheed Salama Hamid

## FRANCE

### RAPPORT SUR LES ACTIONS MENEES POUR LA CONSERVATION DES SITES ET DES ESPECES

#### 1- Cadre institutionnel

Le vote des lois ainsi que la ratification des traités et accords internationaux sont assurés en France par un parlement composé de deux chambres : l'Assemblée Nationale et le Sénat.

La protection de la nature et des paysages relève du ministère de l'aménagement du territoire et de l'environnement.

En son sein c'est la direction de la nature et des paysages qui assume notamment les attributions en matière de conservation et de réhabilitation du patrimoine naturel, des sites, des paysages, des milieux et de la diversité biologique (faune et flore sauvages et écosystèmes).

#### 2- Cadre juridique régissant la conservation des espèces et des sites

Le premier texte de base est la loi du 10 juillet 1976 qui affirme la protection des espaces naturels et des paysages, la préservation des espèces animales et végétales, le maintien des équilibres biologiques et la protection des ressources naturelles contre toutes les causes de dégradation.

La loi du 3 janvier 1986 traite de l'aménagement, de la protection et de la mise en valeur du littoral.

La loi du 3 janvier 1992 sur l'eau vise, quant à elle, à préserver les écosystèmes aquatiques, les sites et les zones humides.

Une loi du 2 février 1995 est venue renforcer la protection de l'environnement notamment en organisant la transcription des directives communautaires "Oiseaux" et "Habitats".

La loi d'orientation pour l'aménagement et le développement du territoire du 4 février 1995, a introduit la notion de directive territoriale d'aménagement qui permet notamment de fixer les principaux objectifs de l'Etat en matière de préservation des espaces naturels, des sites et des paysages.

On peut citer trois autres lois importantes : la loi du 27 juillet 1960, qui a établi le cadre légal pour la création des Parcs nationaux, celle du 10 juillet 1975 qui a créé le conservatoire de l'espace littoral et des rivages lacustres pour développer une politique de sauvegarde des habitats naturels côtiers et celle du 3 janvier 1986 sur la conservation et l'évolution de la zone côtière.

### **3- Ratification des accords internationaux pertinents**

La France est partie à la plupart des conventions internationales : Barcelone (pour la protection de la Mer Méditerranée contre la pollution et les 3 protocoles qui s'y rattachent), Ramsar (zones humides), Bonn (conservation des espèces migratrices appartenant à la faune sauvage), Berne (conservation de la vie sauvage et des milieux naturels de l'Europe), Rio (diversité biologique).

Le protocole relatif aux aires spécialement protégées de la Méditerranée et à la diversité biologique n'est pas encore ratifié mais le dossier est en cours.

Par ailleurs, la France a transcrit dans son droit interne les directives "Oiseaux", "Habitats, faune, flore" et a adopté l'accord sur les cétacés.

### **4- Les aires protégées marines et côtières (nouveau développement 1996, 1997, 1998)**

Le littoral français s'étend sur environ 1700 Km de côte en Méditerranée, 123 aires protégées ont été inscrites à ce jour, qui ont été retenues selon différents niveaux de critères biologiques et esthétiques.

110 d'entre elles appartiennent aux espaces du Conservatoire de l'espace littoral et des rivages lacustres, 11 à des réserves naturelles, 1 à un parc national et la dernière à un parc naturel régional.

Les règlements qui s'y appliquent varient suivant leur appartenance.

Deux aires protégées sont en préparation :

- Le Parc international de Bonifacio, avec l'Italie ; ce programme est soutenu par l'Union européenne.
- Le Sanctuaire marin pour les mammifères de Méditerranée ; ce projet intéresse l'Italie, la principauté de Monaco et la France.

La nouveauté dans le domaine provient des expériences en cours en matière de directives territoriales d'aménagement. Depuis 1998, 5 directives sont expérimentées soit à l'embouchure de fleuves, Seine et Loire, soit dans les secteurs fortement urbanisés comme l'aire métropolitaine marseillaise, les Alpes maritimes (Nice), l'agglomération lyonnaise, soit encore dans des régions à risques, comme les Alpes du nord.

En plus des orientations fondamentales et des principaux objectifs de l'Etat en matière d'aménagement, des grandes infrastructures de transports, de la localisation des grands équipements, elles visent à garantir la préservation des espaces naturels, des sites et des paysages. Elles permettent notamment de veiller au respect des dispositions de la loi littoral dans ces secteurs sensibles où l'urbanisation représente un danger pour la préservation des espaces et des espèces.

## 5- Les espèces marines protégées de faune et de flore

Les textes législatifs sur la protection de la faune et de la flore sont compilés dans un document annexé au présent rapport. On peut citer quelques exemples d'espèces protégées sur tout le territoire et en tous temps.

### Dans le domaine de la faune,

- Mollusques **gastéropodes** (*Patella ferruginea*, patelle géante), de **bivalves** (*Pinna nobilis*, grande nacre, jambonneau hérissé), (*Pinna pernula*, jambonneau rude), (*Lithophaga lithophaga* datte de mer),

- Crustacés (*Scyllarides latus*, grande cigale de mer),

- Echinodermes oursins (*Centrostephanus longispinus*, oursin diadème, oursin à longs piquants).

### Dans le domaine de la flore,

Les espèces ci-après sont protégées en tous temps et sur le tout le territoire : Monocotylédones (*Cymodocea nodosa*, cymodocée, paille de mer), (*Posidonia oceanica*, pelote de mer, chiendent marin).

## 6- Elaboration et mise en œuvre de la stratégie nationale et de plans d'action pour la biodiversité

Un document de référence a été élaboré par la direction de la nature et des paysages, dans le cadre de la convention pour la diversité biologique.

## 7- Préparation ou mise à jour d'inventaires pertinents

Différents inventaires ont été réalisés. On peut citer celui portant sur les biocénoses remarquables qui a fait l'objet d'un ouvrage intitulé "Biocénoses marines et littorales en Méditerranée" (Un ouvrage du même type a été réalisé pour l'Atlantique) ou celui de l'inventaire sur les crustacés décapodes d'eau douce et marins ( données qualitatives uniquement).

D'autres inventaires sont en cours de mise à jour : à titre d'exemple, on citera l'inventaire des zones nationales d'intérêt écologique, faunistique et floristique (ZNIEFF-MER). Cet inventaire vise à identifier les secteurs marins et côtiers d'un grand intérêt écologique avec pour objectif principal la mise à la disposition des collectivités territoriales, d'un outil de connaissance et d'alerte en vue d'une meilleure endémiques ainsi que les écosystèmes et habitats menacés, les sites à valeur particulière et les aires protégées.

La méthode développée pour recenser ces zones paraît convenir aux utilisateurs et pourrait, moyennant une adaptation de la typologie, être développée dans d'autres secteurs de la Méditerranée.

## CONCLUSION

D'importantes difficultés subsistent dans la protection des zones côtières et du milieu marin méditerranéen :

- La côte française est fortement urbanisée ; ainsi toute action de protection doit-elle s'appuyer sur une large concertation entre les collectivités locales, les élus et l'Etat. La concertation s'accompagne souvent de conflits avec les promoteurs immobiliers, ce qui retarde d'autant la mise en œuvre d'actions de gestion concrète.
- Les spécialistes sont en nombre insuffisant pour réaliser les inventaires nécessaires du fait d'un manque de postes d'emplois publics ouverts dans ce domaine et de crédits d'études.
- Le développement d'infrastructures routières, l'urbanisation, la pollution tellurique, le développement de certaines activités sportives (scooters des mers) ou touristiques ("whale watching") sont autant de sujets qui mobilisent les services soucieux de la conservation harmonieuse de la Méditerranée.



## **GREECE**

### **COUNTRY REPORT**

#### **The institutional framework**

The Constitution of the Hellenic Republic includes in article 24 the obligations for the protection of the natural environment. Relevant environmental competence lies with the Ministry of Environment, Physical Planning and Public Works, as well as with several sectorial Ministries such as the Ministry of Agriculture, the Ministry of Merchant Marine, the Ministry of Development at the national level.

Several issues of environmental competence are de-centralized at the Regional and Prefecture levels of self-government, which are supervised by the Ministry of the Interior and Civil Services.

Major fields of the institutional framework comprise :

1. Establishment of protected areas
2. Protection of wild flora and fauna and their habitats, as well as of natural habitats
3. Procedures for Environmental Impact Assessments of infrastructure and other development projects
4. Measures against pollution
5. Regulations on hunting, fishing, agriculture, aqua-culture
6. Regulations on town planning, land use and construction development

#### **The legal framework governing the conservation of species and sites**

The main national legal instruments include :

- \* Law 1650/86 on the protection of environment (fields 1,2,3,4)
- \* P.D. 67/81 on the protection of native flora and fauna (field 2)
- \* Law 996/71 for National parks (field 1)

There are several regulations in force concerning hunting and protection-management of forests (The Forest Code) and the respective regulations concerning fishing (The Fishing Code), as well as Port Regulations.

As Greece is a Member State of the European Union, it has incorporated the relevant Directives of the European Communities on the protection of wild birds and their habitats (DIR 79/409/EC) and on the conservation of natural habitats, wild fauna and flora (DIR 92/43/EC) in its national legislation.

#### **Status of Signature / Ratification of relevant International Agreements**

The Hellenic Republic has ratified the following Conventions : Ramsar, Bern, Washington, Biodiversity, Barcelona (1979). Ratification is pending for the Bonn Convention, as well as its related Agreements, as well as for the amendments of Barcelona Convention (1995) and its 6th Protocol (1996).

### **Progress in marine and coastal protected areas (1996-1998)**

Apart from the already designated 9 Special Protected areas by Greece, which comprise marine and coastal protected areas, three coastal and marine sites were given protection status in the period 1990-1993. These sites were :

- \* a Nature Reserve in Laganas bay, Zakynthos (1990), for the conservation of the most important nesting beaches of the loggerhead sea turtle in the Mediterranean, which is to be extended and declared a National Marine Park in 1999.
- \* The coastal and marine Ramsar sites of Kotychi lagoon-Strofylia forest and the Messolonghi-Aetolikon lagoons, which are to be declared National Wetland Parks in 1999.

An additional three coastal and marine sites were given protection status in the period 1995-98. These sites were :

- \* The coastal and marine Ramsar sites of Vistonis Lake, Ismaris Lake and Nestos Delta, which formed the National Park of Thraki
- \* The coastal and marine Ramsar sites of Evros Delta and Axios-Loudias-Aliakmon Delta.

Pursuant to it's obligations set by the DIR 92/43/EC on the conservation of natural habitats, wild fauna and flora, Greece has included in the NATURA 2000 sites network (1996-97) 103 sites which host important marine and coastal habitats for which there was adequate scientific information.

Thirteen of these sites have almost exclusively marine/coastal character, and the rest of them present important biodiversity features both in their terrestrial and coastal/marine parts.

In 50 of the above mentioned sites active conservation programmes aimed at the marine/coastal part or the whole of the site, have been initiated by the local authorities and Non Governmental Organisations, financed and supervised by the Ministry of Environment and the European Communities. These programmes include surveys, awareness, monitoring, preparation of protective regulations (where not in place), enforcement of existing regulations, endangered species enhancement and habitat restoration.

### **Elaboration and Implementation of National Biodiversity Strategy and Action Plans**

A three years project was initiated in 1996-97 by the Ministry of Environment in the Zoological Museum of the Athens University, with the aim of elaborating the National Biodiversity Strategy and Action Plans in the frame of the Biodiversity Convention.

An Expert Committee was set up in order to cover main domains of expertise and there is adequate coverage for coastal marine ecosystems, aiming at presenting a specific Action Plan for this domain. Special attention to the marine/coastal environment is paid also by the National Wetland Strategy, expected to be finalised in 1999 as a part of the overall National Biodiversity Strategy.

Drafts of the Strategy have been prepared and a procedure of bilateral discussions with the relevant Services is underway for the determination of the contents of the Action plans. The outcomes of this procedure will be presented in public for comments, before the texts and reports are finalised.

### **Relevant Inventories**

- National Programme for coastal management- Section 5 : Coastal biotopes, 1981, Ministry of Co-ordination
- The Corine-Biotopes Inventory in Greece, Commission of European Communities 1986-88, update by National Polytechnic School of Athens, 1990
- Directive 92/43/EC, The Greek Habitat project NATURA 2000, An Overview, The Goulandris Museum of Natural History-Greek Biotope/Wetland Center, Thessaloniki 1996
- Checklist of the benthic marine algae of the Greek coast (Aegean and Ionian seas), 1996, Haritonidis, Lazaridou, Orphanides
- Threatened, protected and endemic animal species of Greece, 1995, rev 1997, ed. Legakis A.
- Report on the presence and status of the species listed in Annexes II and III of the 6th Protocol of the Barcelona Convention in Greece, 1998, Lazaridou.

## ITALY

### COUNTRY REPORT

#### **Institutional Framework**

The Ministry of Environment has the main responsibility for Nature and Biodiversity protection and conservation.

Regional authorities (some regions in Italy have an autonomous status) can protect some local coastal zones.

Biological resources and biodiversity management is carried out also by the Ministry of Agricultural Politics and in particular by Fishery Directorate.

#### **Legal Framework governing conservation of species and sites (main legal instruments)**

The main laws for marine protected areas are no: 979/82 and no: 394/91. In particular, the last one is the frame-law for all protected areas in Italy.

The main instrument is « Carta della Natura », a synthesis of knowledge on all the aspects of the environment and its management. Three years plans are established also for financial purpose.

#### **Status of signature /ratification of relevant international agreements**

Italy ratified and adopted in its legislation the following agreements, conventions, etc., dealing, even in a part, with marine environment :

E.C. Habitat Directive 43/92 (DPR no: 357, 8/9/97,G.U. no: 248, 23/10/97)

Berna 1979 (Law no: 503, 5/8/81,G.U. no: 250, 11/9/81)

Bonn, 1979 (Law no: 42, 25/1/83, G.U. no: 48, 18/2/83)

Rio, 1992 (Law no: 124, 14/2/84, G.U. no: 44, 23/2/84)

Ramsar, 1971 (D.P.R no: 448, 1976)

Italy participates, with the Liguria Region, in the RAMOGE agreement dealing with marine environment, between Marseilles and La Spezia.

Recently, Italy entered the International Whale Commission and ICCAT.

It seems that ASPIM and ACCOBAMS protocols are ready to be signed.

The institution of the Cetaceans Sanctuary in the Sardo-Liguro-Corso-Provençal Basin was reactivated during the last months.

#### **Marine and coastal protected areas**

Marine Parks. In the frame of Laws 979/82 and 394/91, 46 marine parks and (Cetacean Sanctuary) are provided in the Italian seas, 15 have been established.

Marine parks created in the last years are :

Tavolara –Punta Coda Cavallo (15.091 ha) D.M. 12.12.1997, G.U no: 47, 26.2.1998 ;  
Penisola del Sinis- Isola Mal di ventre (30.357 ha) D.M.12/12/1997, G.U. no: 45, 24/2/1998 ;  
Porto Cesareo (17.156 ha) D.M. 12/12/1997, G.U. no: 45, 24/2/1998;  
Golfo di Portofino (it is not a Gulf, but a Promontory) (372 ha) D.M. 6/06/1998, G.U. n°188,  
13/8/1998 ;  
Cinque Terre (2.784 ha) D.M. 12/12/1997,G.U. no: 48, 27/2/1998 ;  
Isole di Ventolene e Santo Stefano (2.787 ha) D.M. 12/12/1997, G.U. no: 45, 24/2/1998 ;  
Punta Campanella (1.128 ha) D.M. 12/12/1997, G.U. no: 47, 26/2/1998.

The marine park of Ciciopi, established in 1989 was redefined in 1996 (D.M. 17.5.1996,G.U.n°23, 9.11.1996).

Considering the wetlands, 103 main sites were selected, 47 of which are dealing with Ramsar Convention and 68 are coastal with at least partially marine or brackish environment. There are also some coastal and marine areas protected and managed by NGO and eight biological protection zones (Zone di Tutela Biologica, paragraph 98 of the Law 963/1965), ten of artificial reefs for protection and restocking. Italy will host next world conference on artificial habitats (Seventh International Conference on Artificial Reefs and Related Aquatic Habitats, 7<sup>th</sup> CARAH, October 7-11, 1999, Sanremo, Liguria, Italy).

### **Protected marine species of fauna and flora**

Marine species that are protected, are those of different agreements and conventions ratified by Italy. In particular, all marine mammals and turtles are protected also by ancient national laws. Birds and terrestrial organisms are not considered here.

### **Implementation of the National Biodiversity Strategy and Action Plans**

The elaboration of a national biodiversity plan is in progress. Special national action plans are in preparation for Selachians, Cetaceans, Monk seal and Sea turtles, with coordination of ICRAM and ICDM (Ministry of the Environment).

### **Updating of relevant inventories**

The inventory of Italian Fauna is completed and the number of species is evaluated about 57.344, of which 1.176 are vertebrates. In the check-list 9.194 marine species are recorded, of which 1.047 are Protozoa and 8.174 are Metazoa. Among Vertebrata 3 are Agnatha, 74 are Chondrichthyes, 429 are Osteichthyes, 5 are Reptilia and 15 are Mammalia. Birds are not considered here. For marine vegetation prof. G. Giaccone has listed 983 species of which 5 are Monocotyledones and 978 are Macroalgae. Macroalgae are represented by 540 Rhodophyceae, 205 Fucophyceae, 173 Chlorophyceae, 56 Cyanophyceae, 2 Xanthophyceae, 2 Incertae sedis. Terrestrial flora is evaluated about 5.820 species, of which 5.320 are herbaceous plants.

# LIBYAN ARAB JAMAHIRIYA

## COUNTRY REPORT

The growing public awareness of the environmental issues in the last few years has resulted in the call for and the establishing of several bodies, departments offices and working groups dealing with environmental concerns.

Based on the legislative act N° 7/1982, The Technical Centre for Environment Protection was established and it bears the responsibility for the protection and conservation of the environment in the Libyan Arab Jamahiriya.

For the conservation of wildlife, a decree N° 11/1990, issued by the general people's committee for the establishing of a technical committee for the protection of wildlife.

A number of legal instruments forms the ground for basic actions towards an effective conservation of wildlife, marine and coastal protected areas and national parks. They are in form of legislative acts or a decree of the general people's committee.

- Legislative act N° 28/1968 concerning hunting
- Legislative act N° 5/1982 for the protection of forest and range-land
- Legislative act N° 7/1982 for the protection of the environment
- Legislative act N° 1/1983 concerning agriculture inspectorate
- Decree N° 11/1990 for the establishing of the technical committee for the protection of wildlife

Between 1978 and 1998, eleven Specially Protected Areas and National Parks were established. The total surface is ranged between 200 and 160.000 hectares.

The status of signature/ratification of relevant international agreements, as of the end of 1998 is as follows:

### **Agreements signed and ratified**

- MAP Protocol of Specially Protected Areas in the Mediterranean region.
- International plant protection convention.
- Membership of the IUCN.
- Convention concerning the protection of the world cultural and natural heritage.

### **Agreements signed and not yet ratified**

- Convention on Biological Diversity.
- Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean approved by the Contracting Parties in Barcelona, in 1995.

**Agreements not signed**

- Convention on wetlands of international importance especially as waterfowl habitat.
- Convention on the conservation of migratory species of wild animals.
- Agreement on the conservation of cetaceans of the Black sea, Mediterranean sea and contiguous Atlantic area (ACCOBAMS).

Based on the legislative act N° 14/1989, for the protection of marine wealth, several action plans were suggested for the establishing of marine protected areas as well as for conservation of marine habitat (e.g. marine turtles).

Concerning the elaboration and implementation of national biodiversity strategy and action plans, an extensive work is being carried out in the frame work of the IUCN's North Africa program for biodiversity.

## **MALTA**

### **BRIEF COUNTRY REPORT**

#### **Brief description of the institutional framework**

The Environment Protection Department is responsible for biodiversity and its protection in the Maltese islands. Presently, there are two sections dealing with the protection of biodiversity : one for the protection of species and other biodiversity and the other for natural sites and habitats. The department of fisheries is responsible for the harvesting of fish.

#### **Brief description of the legal framework governing the conservation of species and sites**

The main legal framework is the Environment Protection Act. This is an empowering law and a number of regulations for the protection of species and natural sites have been published under this primary legislation.

#### **Status of signature/ratification of the relevant international agreements**

A number of nature conservation convention have been signed and/or ratified. These include:

- The Convention on international trade in endangered species of wild flora and fauna (better known as CITES or the Washington Convention) (acceded)
- The Council of Europe Convention on the conservation of European wildlife and natural habitats (Bern Convention) (acceded)
- Convention on the protection of wetlands of international importance (RAMSAR) (acceded)
- Barcelona Conventions and its protocols
- The Convention on biological Diversity which has been signed
- The Specially Protected Areas Protocol which has been acceded too. However the new Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean has as yet only been signed but not yet ratified

#### **Marine and coastal protected areas (new development 1996, 1997, 1998)**

There has not been any new sites declared as protected to those which appear in the directory issued by RAC/SPA some years ago. However, there are others which are proposed.

#### **Protected marine species of fauna and flora**

At the moment advanced preparation are under way to issue a legal notice protecting a number of marine species. These include those which have been adopted by the Bern Convention and also those which are listed in the new SPA Protocol. We hope that before the end of the year these will be legally protected.



### **Elaboration and implementation of national biodiversity strategy and action plans**

A number of plans are underway to elaborate and implement the national biodiversity strategy and action plan. These include :

- Seminars and training sessions
- Education material, both formal and non formal
- Coordination with the biology department of the university of Malta for the further research on biodiversity
- Drawing up of policy statements and action plans for various species or groups of biodiversity

### **Preparation or updating of relevant inventories (completed or on going)**

Inventories and data correction has also been initiated although it is not working as fast as one would like better it too. However, there is an on going project in this respect and we hope to be able to strengthen it by the addition of more personnel.

A state of the environment report has also been undertaken and is now being finalised.

## MAROC

### RAPPORT NATIONAL

#### **Cadre institutionnel**

La conservation de la nature et de la biodiversité au Maroc relève du Ministère Chargé des Eaux et Forêts (Division de la Chasse, de la Pêche et de la Protection de la Nature) en concertation avec les Départements et Institutions concernés, entre autres les Ministères de l'Environnement, de l'Equipement, des Affaires Culturelles, des Pêches Maritimes, de l'intérieur, l'Institut Scientifique et les Universités.

#### **Cadre juridique**

La conservation de la nature et des espèces remonte au début du siècle, précisément en 1917, date à laquelle entrait en vigueur le "dahir" (loi suprême du Maroc) sur la conservation et l'exploitation des forêts, suivi en 1922 et 1923 respectivement par les "dahirs" sur la Pêche dans les eaux continentales et la police de la chasse et leurs arrêtés annuels qui réglementent la pratique de ces activités et fixent les espèces et les sites protégés. En 1934, la loi sur la création des parcs nationaux était élaborée et entrait en vigueur le 11 septembre de la même année.

Le premier parc national fut créé en 1942, en l'occurrence le parc national de Toubkal, suivi des parcs nationaux de Tazekka en 1950, Souss Massa en 1992 et Iriki en 1994.

La nouvelle restructuration relative à la gestion des parcs nationaux au Maroc adoptée en 1998 stipule la nomination par le Ministre des Eaux et Forêts du Directeur du parc national et la création par décret du comité consultatif du parc regroupant les représentants des différents Départements concernés en plus des collectivités locales et des ONG.

#### **Statut de Signature / Ratification des Accords pertinents**

Sur proposition des Départements techniques concernés, les signatures et ratifications des Accords pertinents relèvent de Ministère des Affaires Etrangères et de la coopération, appuyés par le Conseil du Gouvernement et sont adoptés par le Parlement. Le Maroc fait partie des plus grandes Conventions Internationales (CITES, RAMSAR, BONN, BIODIVERSITE...), et d'autres Accords dont la procédure de ratification est en cours notamment AEWA et ACCOBAMS.

#### **Les aires protégées**

En 1996, le Maroc a élaboré une étude nationale sur les aires protégées qui a permis d'évaluer le statut actuel des milieux naturels marocains à travers l'actualisation des données sur tout le territoire du Royaume pour les grands types d'écosystèmes (39), les espèces rares, endémiques, menacées et remarquables de plantes, de mammifères, d'oiseaux et de reptiles ayant connu un déclin remarquable.

En vue de préserver un échantillon représentatif de notre biodiversité, cette étude a permis également l'identification d'un réseau national de 168 sites d'Intérêt Biologique et Ecologique (S.I.B.E.) répartis sur 154 unités spatiales différentes dont :

- 6 parcs nationaux et 2 parcs naturels (5 disposent d'un plan d'aménagement et de gestion)
  
- 146 réserves naturelles dont :
  - \*108 couvrant le domaine continental (29 spécialisées sur les zones humides)
  - \*38 couvrant le domaine littoral (5 sur le littoral méditerranéen avec 70 Km de côte sur 450 Km de côte méditerranéenne marocaine, ce qui représente environ 15.5% du littoral méditerranéen proposé pour la conservation et la gestion durable)

Toutefois, les études sur les espèces marines restent fragmentaires et nécessitent d'être approfondies notamment en matière d'inventaire, du moins pour les sites proposés par l'étude susmentionnée, cette démarche a été amorcée récemment en concertation avec l'Institut scientifique de Rabat, l'Institut de Recherche Halieutique de Casablanca et le Ministère Chargé des Pêches Maritimes.

Enfin, grâce à un financement de l'UE, le GEF et l'Etat marocain, la mise en œuvre d'une partie importante de l'étude précitée est prévue dans les quelques mois à venir et concerne 5 parcs nationaux dont le parc national d'Al Hoceima qui figure en priorité et 10 autres S.I.B.E. également prioritaires.

## MONACO

### RAPPORT NATIONAL

En Principauté, les questions environnementales sont traitées par une Cellule Environnement-Développement pour la coopération internationale. Un secteur environnement fait également partie d'un ensemble qui comprend aussi le secteur de la construction.

En Principauté de Monaco, existent deux aires marines bénéficiant d'une protection :

- La zone du Larvotto qui inclut la totalité de l'herbier de Posidonie de Monaco et qui est prolongé en France par la zone protégée de Roquebrune.
- Le tombant des Spélugues qui correspond à une zone de développement de coralligène avec un peuplement notable de Corail rouge.

Ces zones sont couvertes par des strictes interdictions prises dans le cadre de la réglementation sur la Police maritime.

Un Code de la Mer a été publié en 1998. Cet instrument va permettre de prendre des mesures de protection et de gestion plus adaptées.

La gestion de ces deux aires a été confiée à une association non gouvernementale.

La Principauté de Monaco a signé la majorité des Conventions et Accords Intergouvernementaux pertinents pour la biodiversité méditerranéenne.

Dans le cadre de la Convention de Barcelone, le Protocole relatif aux Aires Spécialement Protégées et à la Biodiversité a été ratifié et les amendements à la Convention elle-même, acceptés.

Toujours dans le domaine intergouvernemental, la Principauté, particulièrement appuyée par la France a présenté des amendements à la Convention de Berne afin d'en harmoniser les annexes avec celles du Protocole relatif aux Aires Spécialement Protégées et à la Biodiversité de la Convention de Barcelone .

La Principauté de Monaco est dépositaire de l'Accord pour la conservation des cétacés de la Mer Noire, la Méditerranée et les eaux Atlantiques adjacentes (l'ACCOBAMS) sous l'égide de la Convention de Bonn sur la conservation des espèces migratrices appartenant à la faune sauvage. Monaco assure à l'heure actuelle le Secrétariat intérimaire de cet Accord.

Sur le plan sous-régional, la Principauté abrite le Secrétariat de l'Accord Ramoge entre la France, l'Italie et Monaco. Cet accord se préoccupe des modalités de protection des sites, des espèces et étudie les zones qui présentent un important potentiel pour la gestion de la biodiversité régionale.

Enfin, la Principauté de Monaco, en coopération avec la France et l'Italie, participe aux discussions relatives à la création d'un Sanctuaire Marin Sardo-Corso-Liguro-Provençal destiné à la protection des cétacés notamment en haute mer.

Les espèces marines bénéficiant d'une protection en Principauté, sont les Mammifères marins et deux espèces de Poisson: le Mérou et le Corb.

Le tout récent Code de la Mer permettra de prendre des mesures de protection pour l'ensemble des espèces listées dans l'Annexe II du Protocole relatif aux Aires Spécialement Protégées et à la Biodiversité de la Convention de Barcelone.

En application des Conventions et recommandations pertinentes, des inventaires exhaustifs ont été réalisés.

Actuellement nous disposons de listes précises pour la végétation marine, les Poissons, les Echinodermes et les Mollusques.

Un inventaire des Spongiaires et des espèces remarquables de Crustacés est prévu pour l'année 99.

## **SLOVENIA**

### **National report on the activities carried out in the field of natural sites and species conservation**

#### **Institutional and legal framework**

The conservation of natural heritage, which includes also the institution of protected areas, is regulated by the Law on Natural and Cultural Heritage from 1981. The formal proposals for conservation and protection of sites and species are entrusted to seven regional institutes for the conservation of natural and cultural heritage, whilst the implementation is supposed to be a common (public) task included also in the physical planning process. Most of the protected areas throughout Slovenia were proclaimed as such by municipal decrees. The above mentioned law does not foresee the institution of management bodies for the protected areas with the exception of national and regional parks.

According to the Natural and Cultural Heritage Law a governmental decree on the protection of endangered animal species was adopted in 1993.

In 1994 the Ministry of Environment and physical planning appointed Boris Krizan, head of the Regional Institute for the Conservation of Natural and Cultural Heritage Piran, as National Focal Point for the Protocol on Specially Protected Areas and Biological Diversity in the Mediterranean and at the same time as a member of the working group for the implementation of the Barcelona Convention. The activities concerning the institution of marine and coastal protected areas, and to a much lesser extent the implementation of conservation measures and the implementation of the Action Plans are carried out by the Regional Institute for the Conservation of Natural and Cultural Heritage Piran in collaboration with the Piran Aquarium (Mediterranean marine turtles), with Mrs. Vanja Svetina (Cetaceans) and with the Marine Biological Station (Biodiversity).

The Law on Natural and Cultural Heritage is supposed to be replaced in June 1999 by a much broader Law on Nature Conservation which will enable effective management of protected areas.

#### **Signature / Ratification of the relevant international agreements**

The Protocol concerning Mediterranean Specially Protected Areas was ratified by the former Yugoslav Parliament in 1985. The act on succession of the Barcelona Convention and its Protocols was adopted by the Slovene Parliament in 1993. However Slovenia has not yet ratified the new version of the Convention adopted in Barcelona in 1995 and recorded as Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and nor has ratified the modified protocols.

Nevertheless Slovenia has signed the final act on the adoption of the three Annexes to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean.

Slovenia ratified the Convention on Biological Diversity and the Convention on Conservation of Migratory Species of Wild Animals. The Convention on the Protection of European Wildlife and Natural Habitats and the Convention on International Trade in Endangered Species of Wild Fauna and Flora should be ratified in the year 1999.

## Marine and coastal protected areas

The situation concerning marine and coastal protected areas is much the same as it was at the time of the previous Focal Points meeting. According to that the protected areas are the following: Secovlje salt-works landscape park, Ramsar site from 1993 (coastal - 864 ha), Cape Madona natural monument (marine - 12,8 ha), Strunjan Nature reserve (marine and coastal - 160 ha), Štjuza lagoon (coastal - 15,3 ha), Debeli rtič(natural monument (marine and coastal - 24,3 ha). No mayor development of the activities is due mostly to the changes that Slovenia is undergoing in the political system, the shift from public property to private ownership, the inclusion of natural heritage protection in the field of work of the Ministry of Environment and Physical Planning, the reorganisation of the last and the ineffectiveness of the present Law on Natural and Cultural Heritage.

Nevertheless an important coastal wetland was declared as nature reserve by the Slovene parliament (Law on the Nature Reserve of Škocjanski zatok) in 1998 and a protection and development plan was set up.

The proposal for the protection of the only *Posidonia oceanica* meadow was put forward to the municipality of Koper in 1994 but no legal act was adopted yet.

## Protected marine species of fauna and flora

As marine flora is concerned no species are formally protected. However *Posidonia oceanica* is listed in the Red List of Endangered Plants.

As mentioned before in the report, a governmental decree on the protection of endangered animal species was adopted in 1993. The decree includes numerous animal marine species, among them also species listed in the Annexes II and III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean. The following taxa of marina fauna are protected:

- *Porifera* (all species - hereafter a.s.),
- *Turbellaria* (a.s.),
- *Nemertina* (a.s.),
- *Cnidaria* (*Cerianthus membranaceus*, *Cladocora caespitosa*, *Parazoanthus* sp., *Epizoanthus* sp., *Alcyonium* sp., *Eunicella* sp.),
- *Mollusca* (*Astrea rugosa*, *Mitra zonata*, *Cassidaria echinophora*, *Opisthobranchia* sp., *Pinna nobilis*, *Lithophaga lithophaga*, *Lima lima*, *Lima inflata*),
- *Polychaeta* (*Spirographis spallanzani*, *Serpula vermicularis*, *Eunice aphroditois*),
- *Sipunculida* (a.s.),
- *Echiurida* (a.s.),
- *Crustacea* (*Astacus gammarus*, *Dromia vulgaris*, *Upogebia litoralis*, *Pilumnus hirtellus*, *Pachygrapsus marmoratus*, *Maia squinado*, *Maia verrucosa*, *Inachus dorsettensis*, *Macropodia longirostris*, *Macropodia rostrata*, *Pinnotheres pinnotheres*, *Eryphia spinifrons*, *Lissa* ssp., *Pisa* ssp., *Lambrus* ssp., *Galathea* ssp.),
- *Bryozoa* (*Retepora beaniana*)
- *Brachipoda* (a.s.),
- *Echinodermata* (*Antedon mediterranea*, *Spatangus purpureus*, *Anseropoda placenta*, *Marthasterias glacialis*),
- *Enteropneusta* (a.s.),
- *Acrania* (*Brachiostoma lanceolatum*),
- *Tunicata* (a.s.),

- *Cyclostomata (Myxine glutinosa)*,
- *Pisces (Cetorhinus maximus, Hippocampus guttulatus, Johnius umbra, Lepadogaster gouani, Mola mola, Syngnatus ssp., Nerophis ophidion)*,
- *Chelonia (a.s.)*,
- *Cetacea (a.s.)*.

### **National biodiversity strategy and action plans**

The National Biodiversity Strategy and Action Plan (NBS&AP) are currently in preparation. In the preliminary phase a participatory approach has been introduced. A questionnaire was sent to different institutions, governmental and non-governmental organisations that might have an interest in the biodiversity issues. It is anticipated, that co-ordinated by the Ministry of Environment and Physical Planning (MEPP) and represented by the key economic sectors, research institutes and NGOs, a council and board will be established to provide political and general guidance for the implementation of the Convention on Biodiversity (CBD), to enable intersectoral co-operation and to direct cross-sectoral co-operation carried out in the working groups. On the basis of the Pan-European Biological and Landscape Diversity Strategy 18 working groups have been established, among them the Coastal and Marine Ecosystems Working Group. The implementation of the NBS&AP is foreseen at three levels: political (involving GOs, NGOs, private sector), operational (including experts, institutes and organisations) and public (biodiversity forum).

### **Inventories**

As animal and plant species of the Slovenian coastal area are concerned no inventories with the aim of assessing or monitoring the different elements of biodiversity were done up to 1998. In spite of that there are a lot of data available from the Red Lists of endangered plant and animal species in Slovenia, from different taxonomic works (e.g. The Slovenian Flora), inventories of species in proposed or declared protected areas and last but not least surveys that were carried out in connection with EIA for different human activities in the coastal area. The mentioned works were carried out by different research institutions, mainly by the National Institute of Biology, the Marine Biology Station, the Natural History Museum of Slovenia, institutes and faculties of the Universities in Ljubljana and Maribor and others including NGOs. There are quite exhaustive data available on plant and animal species (notably birds) of the coastal wetlands. However according to the above mentioned NBS&AP a five year project, with the aim of assessing the biodiversity of the coastal and marine ecosystems and co-ordinated by the Marine Biological Station, started in 1998. Together with the lists of animal and plant species, the results of the project are supposed to give a clear picture also on the topography of different marine ecosystems.

In ending the report we would like to point out some activities that were carried out in the last three years within the framework of the activities of the Regional Activity Centre for Specially Protected Areas of assistance to the Mediterranean countries to develop protected areas. This activities were as follows:

1. The signing of a Memorandum of Understanding between the RAC/SPA and the Regional Institute for the Conservation of natural and Cultural Heritage in Piran.
2. The organisation of a mission of RAC/SPA experts to Slovenia in order to:
  - collect data and evaluate the status of existing coastal and marine protected areas;



- review and analyse the legal and institutional framework for nature protection;
- identify activities that concerned Slovenian authorities could develop with support from RAC/SPA;
- propose recommendations.

3. The organisation of a study mission to France to visit protected salt-pans sites.

4. The financing of a study visit at the University in Corse in the laboratory of the Coastal Ecosystems Group in order to perform lepidochronological analysis on *Posidonia oceanica*.

# SPAIN

## COUNTRY REPORT

### **Brief description of the institutional framework**

The 1978 Spanish Constitution established a decentralised political and administrative structure within the Spanish Kingdom, and adopted a division of the Spanish territory into 17 Autonomous Regions. Their parliaments enjoy wide powers that have been developed and consolidated over the last two decades.

Aside from its other responsibilities, the Central Administration is also responsible for the national basic jurisdiction, including environmental laws, the adaptation of European jurisdiction and the fulfilment of international commitments, whereas the Autonomous Administrations can develop basic regulations, establish further protection measures and are also responsible for the management of natural resources.

#### Central Administration

The Ministry of Environment was established in May 1996, and it brought together several departments that had previously been distributed throughout different ministries.

Attached to this ministry there is an "Advisory Council for the Environment", that includes representatives from the Autonomous Administration and the Central Administration, research institutions, trade unions, and social movements.

#### Autonomous Administration

The institutional organisation of the Autonomous Regions is not equitable. There is usually a Council or Department, unified to various different degrees, that takes over most of the responsibilities that are related to the environment and nature preservation (Council of Environment, Agriculture, Territorial Policy, etc.) The "Sectorial Conference of Environment" is the main agency for the inter-administration co-ordination and the unified action of Autonomous and Central Governments. It consists of representatives from the Ministry of environment, and the 17 councilors responsible for environment in their Autonomous Regions. There is also a "National Commission of Nature Protection" (established in 1989) that arranges coordination in the aforementioned matters.

### **Brief description of the legal framework governing the conservation of species and sites**

Since the 1978 Constitution and the integration of Spain in the European Community (1986), a wide legislative reform has taken place, some of which includes environmental aspects and nature preservation, and this reform is still in force. Many Autonomous Regions have developed the basic Jurisdiction of the State or have adapted European Regulations directly, to the point of establishing measures that are even more restrictive than the National or European standards.

The Law 4/89 on "Preservation of Natural Areas and the wild Flora and Fauna" defines the basic jurisdictional framework for the whole Spain in the sphere of nature preservation and natural resources management, as well as the distribution scheme of responsibilities between Central and Autonomous Administration. The Autonomous Regions have developed, although differently, the basic jurisdiction and there is already a considerable body of territorial regulations on protected waters, species recovery, resource management, etc. In 1997 this law was modified so that Central and Autonomous Administrations could cooperate between them in the National Parks management.

In 1995 a Royal Decree transferred to the Spanish Legislation the European Habitats Directive 92/43/CEE.

It is important to highlight the fact that the new 1995 Criminal Code establishes new environmental crime patterns, including crimes against natural resources and the environment and crimes related to protection of flora and fauna.

**Status of signature/ratification of the relevant international agreements (listed in order of date of ratification)**

- 1971 "Convention of Open Seas" on fisheries and preservation of wildlife resources in open seas.
- 1975 "Convention of Paris" on the protection of Universal Patrimony.
- 1976 "Convention of Barcelona" related to the protection of the Mediterranean Sea.
- 1982 "Convention of Ramsar" related to internationally important wetlands, specially regarding waterfowl habitats.
- 1985 "Convention of Bonn" related to the preservation of wildlife migratory species.
- 1986 "Convention of Washington" related to International Trade of Wild Flora and Fauna Endangered Species (CITES).
- 1986 "Convention of Bern" related to Preservation of wildlife and natural environment in Europe.
- 1993 "Convention on Biological Diversity".
- 1998 "Convention of OSPAR" related to the protection of the marine environment of the north-east Atlantic.
- 1999 Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)- Bonn Convention.

**Marine and coastal protected areas (new development 1996, 1997, 1998)**

The Habitat Guidelines is the European Union's most direct contribution to the nature conservation, and, in particular, the Natura 2000 Network, which is one of its most advanced instruments. It will contribute to protect numerous marine and coastal areas. A preliminary list of 29 coastal and marine "Places of Interest to the European Community" in the Mediterranean Sea has been proposed to the European Commission to be declared as "Special Areas of Conservation".

In addition, though they have not been properly considered as protected areas, the Ministry of Agriculture, Food and Fisheries Boards has established since 1982 nine "Marine Reserves" created under the protection of fishing legislation, in the Mediterranean Sea.

"Cap de Creus" (Catalunya) has been protected by the Autonomous Administration as a Natural Park (1998).

### Protected marine species of fauna and flora

The monk seal (*Monachus monachus*) is included in the National Catalogue of Endangered Species.

Recently, the next taxa have been included in it :

Category	Taxa
In danger of extinction	<i>Patella ferruginea</i>
In danger of extinction	<i>Eubalaena glacialis</i>
Vulnerable specie	<i>Pinna nobilis</i>
Vulnerable specie	<i>Charonia lampas lampas</i>
Vulnerable specie	<i>Dendropoma petraeum</i>
Vulnerable specie	<i>Astroides calycularis</i>
Vulnerable specie	<i>Tursiops truncatus</i> (population of Canary islands)
Vulnerable specie	<i>Globicephala macrorhynchus</i> (population of Canary Islands)
Sensitive to change of habitat	<i>Asterina pancerii</i>
Sensitive to change of habitat	<i>Megaptera novaeangliae</i> (population of peninsular Atlantic Ocean and Mediterranean Sea)
Specie of special interest	<i>Centrostephanus longispinus</i>
Specie of special interest	<i>Globicephala macrorhynchus</i> (population of peninsular Atlantic Ocean)
Specie of special interest	<i>Megaptera novaeangliae</i> (population of Canary Islands)

### Elaboration and implementation of national biodiversity strategy and action plans

The new Spanish Strategy for the Conservation and Sustainable Use of Biological Diversity has been presented recently.

#### Scope

The strategy recognises the ecological, genetic, scientific, education, cultural and aesthetic value of biodiversity, as well as its social and economic value, as its importance is critical for both the evolution and maintenance of vital basic systems, as well for satisfying human needs. The Ministry of the Environment has promoted the new Spanish Strategy on Biodiversity and its application was conceived for the whole Spanish State, without detriment to the authorities within the autonomous regions on this subject. The final document will be published for general use and awareness.

The autonomous regions are free to implement the national Strategy directly or to draw up their own strategies designed to address local needs. It is however to be hoped that the national Strategy will contribute to stimulate the process and to minimise the current gaps existing between some autonomous regions in regards to others in the rate of progress being made on environmental issues.

#### General Objectives

- Define a reference framework on a nation-wide level, so as to encourage sustainable use of biological resources and the maintenance of the biodiversity.
- Promote a change in tendencies and in current practices, which are incompatible with biological diversity, with the object of providing better conditions to guarantee the well being and socio-economic growth of the present and future generations.
- Incorporate principles of recovery, conservation and sustainable use of biological diversity into economic activities and processes into sectors and inter-sectors, as well as management planning of natural resources in the medium and long term.
- Promote a high degree of knowledge, information and awareness among citizens so as to strengthen the social commitment to conserving the biodiversity and to promote its sustainable use.
- To achieve active international co-operation in this field, through bi-lateral and multi-lateral programmes.

#### Structure

##### Block 1. Introduction

- a) The Legislative basics of the Strategy
- b) Philosophy of the Strategy
- c) The Reference Framework
- d) Governing principles

##### Block 3. Operating Framework

- a) Specific Objectives
- b) Guidelines for taking action
- c) Measures for taking action

##### Block 2. Diagnosis of Spanish biodiversity

- a) Biological
- b) Institutional
- c) Regulatory
- d) Economic and financial

##### Block 4. Programme for Action

#### Participation procedures

So as to draft out this strategy, a process of broad participation has been established, with a Technical Coordination Group and six tables from different sectors at which a broad spectrum of Spanish society is represented, from public administration to research centres, non-governmental organisations and others from the social services. The tables for the sectors are as follows :

- Central Government (6 Ministers)
- Social services agents (trade unions, residents associations, farmers' groups, hunting groups, representatives of employers, consumer-groups and managers, etc. – 15 in total)
- Autonomous Communities (all 17)
- Local institutions (about 12 municipalities and the Federation of municipalities)
- Research institutions and universities (33 specialists)
- Non-government organisations (13, nation-wide)

The draft of the Strategy was debated at the Environment Advisory Council and at the National Commission for the Protection of Nature, organisations with a key role to play in following-up on the implementation of the Strategy.

**Preparation or updating of relevant inventories (completed or ongoing)**

The National Inventory of Cetacean Species, the Inventory of Birds and Mammals and the National Inventory of Habitats of the European Directive have been carried out.

The Atlas of Habitats (the rest of the Spanish habitats not included in the European Directive), Atlas of Flora and Atlas of Amphibious and Reptiles will be drawn up at an early date.

## TUNISIE

### RAPPORT NATIONAL

sur la conservation des sites naturels et des espèces

#### I. CADRE INSTITUTIONNEL

Plusieurs Ministères sont impliqués à divers degrés dans la conservation de la diversité biologique et dans la gestion des aires protégées. On note principalement le rôle important du **Ministère de l'Environnement et de l'Aménagement du Territoire (MEAT)** qui est chargé notamment de la coordination et de l'élaboration de la politique de l'environnement en Tunisie et de celui du **Ministère de l'Agriculture** dont les tâches se rapportent surtout aux questions techniques et de gestion. Les Ministères de la Défense et de l'Intérieur jouent plutôt un rôle de contrôle et de surveillance dans les milieux insulaires.

Trois organismes importants sont placés sous la tutelle du Ministère de l'Environnement et de l'Aménagement du Territoire :

1/ **l'Office National de l'Assainissement** qui est chargé de la lutte contre la pollution hydrique et de la protection des ressources en eau ;

2/ **l'Agence Nationale de Protection de l'Environnement** qui, d'une part, analyse l'état de l'environnement du pays et en suit l'évolution et, d'autre part, mène des actions pour lutter contre toutes les sources de nuisance et de dégradation du milieu naturel (examen des études d'impact, information et sensibilisation du public, éducation des jeunes, contrôle et verbalisation des pollueurs).

3/ **l'Agence de Protection et d'Aménagement du Littoral** qui compte parmi ses missions la gestion des espaces littoraux, la régularisation et l'apurement des situations foncières, le suivi des opérations d'aménagement. Elle a aussi un rôle d'observatoire.

A l'instar de la Commission du Développement Durable mise en place par le Conseil Economique et Social de l'ONU à la suite du Sommet de Rio, la **Commission Nationale pour le Développement Durable** a été créée en 1993. Cette commission est avant tout une instance de coordination entre les différents acteurs nationaux du développement. Son but est de réajuster les programmes de développement et de les harmoniser afin de concilier développement économique et social et préservation des ressources naturelles. Elle réunit et fait coopérer toutes les parties, gouvernementales ou non gouvernementales, concernées par la mise en œuvre d'une politique de développement durable.

En 1996, deux nouvelles structures viennent compléter le dispositif institutionnel :

Le **Centre International des Technologies de l'Environnement de Tunis** à qui a été confié une mission de formation et une mission de recherche et d'adaptation des technologies au contexte environnemental national.

La **Commission Nationale pour la Prévention et la Lutte contre les Evénements de Pollution Marine** représente l'organe central du Plan National d'Intervention Urgente qui est censé assurer la célérité et l'efficacité des interventions ainsi que la mise en œuvre coordonnée des moyens de lutte contre les accidents de pollution marine.

A côté de ces institutions publiques, il existe près d'une cinquantaine d'associations non gouvernementales à vocation environnementale et avec lesquelles l'administration collabore.

Viennent s'y ajouter aussi les associations d'origines étrangères et qui possèdent un bureau de représentation en Tunisie.

## II. CADRE JURIDIQUE

### **Pour les ressources en sol**

Les lois du 07/10/58 visent la conservation des forêts et des terres.

La loi du 11/03/87 protège les terres agricoles contre toute utilisation autre qu'agricole.

Le Code de l'Urbanisme et de l'Aménagement du Territoire (1979 ; remanié en 1994) prévoit une planification et une gestion rationnelles des espaces urbains et péri-urbains.

Depuis 1995, vient aussi s'ajouter la loi sur le Domaine Public Maritime.

### **Pour les ressources en eau**

Le Code des Eaux (1975) représente le texte le plus important. Il prévoit des mesures propres à la prévention de la pollution des eaux de surface et souterraines et traite, en partie, de la protection des eaux maritimes (eaux littorales).

### **Pour les ressources biotiques**

Au niveau des ressources du milieu terrestre naturel, le Code Forestier représente actuellement le document le plus important. Ce code a été promulgué par la loi n° 66-60 du 04/07/66, et a été refondu par la loi n° 88-02 du 13/04/88.

Les articles qui concernent directement la Conservation des ressources biotiques portent principalement sur:

1/ Le régime forestier

2/ La chasse et la conservation du gibier

3/ La pêche

### **Pour les aires protégées**

La législation de base est celle contenue dans le Code Forestier. Les articles 218 à 222 définissent les parcs nationaux, les réserves naturelles et les forêts récréatives, les conditions de leur création, les limitations de droits d'utilisation des ressources dans ces zones, les mesures de protection, etc.

L'article 223 précise que, sauf exceptions prévues à l'article 15 du Code Forestier, les parcs nationaux et réserves naturelles ne peuvent être déclassés.

La création d'un parc national se fait par décret présidentiel avec une réglementation décidée par arrêtés du Ministère de tutelle alors que la gestion est donnée aux autorités compétentes.

## III. ACCORDS INTERNATIONAUX (voir annexe)

Sur le plan international, la Tunisie est signataire de la plupart des conventions relatives à la protection de la flore et de la faune sauvages et des habitats naturels.

Elle a également ratifié les amendements à la Convention de Barcelone, les amendements à ses Protocoles ainsi que les nouveaux Protocoles (nouveau Protocole pour les ASP, ...).

L'accord ACCOBAMS a été signé en 1996. La procédure de ratification est en cours.



#### **IV. ESPECES MARINES PROTEGEES**

Il y a plus de vingt ans que la Tunisie a commencé à traduire les directives et recommandations de ces conventions en termes de droit tunisien.

Bien que, pour la plupart, n'étant pas encore protégées par des textes spécifiques, plusieurs espèces bénéficient indirectement d'un statut de protection par la réglementation d'activités économiques comme l'exercice de la chasse et de la pêche. C'est comme ça qu'un arrêté du Ministère de l'Agriculture (28/09/95) délimite les espaces maritimes des zones de pêche. Il interdit la capture du phoque moine et des cétacés et la pêche des tortues marines dans les eaux territoriales ainsi que leur commerce et leur détention.

Ces espèces, ainsi que certaines espèces d'oiseaux marins notamment, bénéficient également d'un statut de protection par la mise en défense de leurs habitats.

La Tunisie compte, à l'heure actuelle, huit Parcs Nationaux (dont une zone humide et un archipel) et seize Réserves Naturelles (dont trois formations insulaires).

Toutefois, il y a souvent recours aux textes du domaine terrestre, ce qui ne répond généralement pas aux mêmes objectifs. C'est dire qu'il persiste un vide juridique concernant le domaine marin.

C'est pourquoi, la Tunisie est en train de travailler sur de nouveaux textes réglementaires afin que les taxons qui figurent dans les Annexes des conventions internationales bénéficient aussi d'une protection spécifique en Droit Tunisien.

#### **V. LES AIRES MARINES ET COTIERES**

Depuis 1996, il n'y a pas eu de création de nouvelles aires protégées. D'un autre côté, consciente du manque d'aires marines et côtières protégées, la Tunisie a déjà identifié, dans le cadre du Programme National sur la Diversité Biologique, cinq nouvelles zones méritant d'être protégées. Le rapport de synthèse sur la biodiversité en Tunisie, publié en 1998, propose d'étendre certaines ASP existantes (archipel de La Galite), d'inclure certains systèmes lagunaires côtiers (lagune d'El Bibane qui contient des formations organogènes de surface), les herbiers de l'archipel des Kerkennah ainsi que certaines zones de l'île de Djerba.

#### **VI. BIODIVERSITE**

Dans le but d'honorer ses engagements vis-à-vis de la Convention sur la Diversité Biologique, la Tunisie a établi la Monographie nationale, la Stratégie et le Plan d'Action sur la diversité biologique avec l'assistance financière du FEM. La Tunisie a également bénéficié d'assistances financières dans le cadre de la coopération bilatérale, notamment avec l'Allemagne et la Suède.

La **Stratégie Nationale** sur la Diversité Biologique a été préparée en 1998. Cette stratégie présente la problématique de la conservation de la biodiversité en Tunisie dans son contexte méditerranéen et les causes de sa dégradation ainsi que les mesures à prendre. Elle propose aussi d'atteindre un certain nombre d'objectifs d'ordre général (préservation et restauration des milieux fragiles et/ou riches en biodiversité ainsi qu'une utilisation rationnelle des ressources biologiques) et des objectifs programmes concernant plusieurs domaines d'interventions (amélioration des connaissances, éducation et sensibilisation, conservation et utilisation durable, biosécurité et les mesures socio-économiques, juridiques et réglementaires nécessaires).

Le rapport de synthèse de la stratégie nationale sur la diversité biologique souligne, entre autre, le besoin de mise en cohérence de l'environnement institutionnel notamment par une redistribution des rôles et un élargissement au secteur privé et aux communautés.

Le **Plan d'Action National** pour la préservation de la Diversité Biologique a été adopté en 1998 par la Commission Nationale du Développement Durable. Plusieurs programmes ont été identifiés. Parmi ceux-ci s'inscrit le Programme national pour le suivi et la protection de la tortue marine *Caretta caretta*.

A ce titre, des campagnes de suivi sont menées depuis ces dernières années sur d'importants sites de nidification avec le soutien logistique et financier du CAR/ASP. Actuellement, une station d'observation saisonnière est en phase d'être réalisée par le MEAT pour l'accueil des chercheurs. Il est également en train de finaliser les études de faisabilité pour l'implantation du premier centre de soin pour tortue marine sur les rives Sud de la Méditerranée, et ce à proximité du plus important site de ponte en Tunisie.

Par ailleurs, et toujours dans le cadre de la conservation de la biodiversité marine, il convient aussi de mentionner l'initiative du MEAT d'avoir mis en œuvre un programme d'information et de sensibilisation avec la participation d'institutions de recherche ainsi que du CAR/ASP pour pouvoir faire face aux risques d'invasion de l'espèce *Caulerpa taxifolia*. Des campagnes de prospection ont également été menées en collaboration avec des ONG locales (GPT, GEXS) afin de localiser d'éventuelles colonies.

D'autres ONG collaborent étroitement avec le MEAT dans la réalisation de projets s'inscrivant dans la protection et la restauration d'habitats. C'est le cas du projet de réhabilitation d'écosystèmes insulaires fragiles qui est actuellement dans sa phase de démarrage et auquel est associée l'Association 'les Amis des Oiseaux'.

## VII. INVENTAIRES

Dans le cadre du Programme National pour la Conservation de la Diversité Biologique et avec l'aide du CAR/ASP, des monographies sectorielles ont été élaborées par différents experts. Celles-ci renseignent sur l'état de la Biodiversité sur le territoire tunisien et mettent en exergue, dans une certaine mesure, les aspects particuliers dans chaque domaine.

Il s'agit de près de 20 inventaires dressant la liste d'espèces végétales et animales, terrestres, aquatiques et marines, d'écosystèmes et d'agrosystèmes ainsi que d'études thématiques traitant d'aspects socio-économiques, de gestion, etc.

Dans une seconde étape, la compilation de ces monographies sectorielles a permis d'en extraire un document de synthèse. Ce rapport, publié en 1998, donne, dans le cadre d'une approche analytique, le bilan global de l'état des connaissances actuelles dans la perspective d'élaborer une stratégie nationale pour la conservation de la biodiversité et l'utilisation durable de ses richesses.

Conformément aux lignes directrices établies par le PNUE,

1/ il identifie les écosystèmes riches en biodiversité tout en précisant leur degré de sensibilité et leur état de dénaturation (une dizaine de nouvelles zones méritant d'être protégées ont été reconnues) ;

2/ il définit les caractéristiques bio-écologiques des zones remarquables en tant que réservoir génétique et source de matériel biologique d'espèces autochtones pour un éventuel usage durable ;

3/ il présente les recommandations ainsi que les bases pour l'élaboration d'une stratégie visant la conservation et l'utilisation durable de la biodiversité.

ANNEXE

Etat de signature et de ratification des principales conventions internationales en matière de conservation des ressources naturelles et de protection de l'environnement :

<b>Convention</b>	<b>adoption</b>	<b>ratification</b>	<b>Loi</b>
Ramsar <sup>1</sup>	1971	1980	80-09 du 03/03/80
Paris <sup>2</sup>	1972	1974	74-89 du 11/12/74
Washington <sup>3</sup>	1973	1974	74-12 du 11/05/74
Alger <sup>4</sup>	1975	1976	76-91 du 04/11/76
Barcelone <sup>5</sup>	1976	1977	77-29 du 25/05/77
Bonn <sup>6</sup>	1979	1986	86-63 du 16/07/86
Berne <sup>7</sup>	1979	1995	95-75 du 07/08/95
Genève <sup>8</sup>	1982	1983	83-44 du 22/04/83
New York <sup>9</sup>	1992	1993	93-45 du 03/05/93
Rio <sup>9</sup>	1992	1993	
Alghero <sup>9</sup>	1995		
ONU <sup>10</sup>	1994	1995	95-52 du 19/06/95
Madrid <sup>11</sup>	1994	1998	98-15 du 23/02/98
Barcelone <sup>12</sup>	1995		
Barcelone, Monaco <sup>13</sup>	1995-96		
Syracuse <sup>14</sup>	1996		
Izmir <sup>15</sup>	1996		
Monaco <sup>16</sup>	1996	en cours	

- 1 : Convention relative aux zones humides d'importance internationale.
- 2 : Convention relative à la protection du patrimoine mondial culturel et naturel.
- 3 : CITES : Convention sur le commerce international des espèces de faune et de flore menacées d'extinction.
- 4 : Convention africaine pour la conservation de la nature et des ressources naturelles.
- 5 : Convention pour la protection de la mer Méditerranée contre la pollution.
- 6 : Convention sur la conservation des espèces migratrices de la faune sauvage.
- 7 : Convention relative à la conservation de la vie sauvage et des milieux naturels d'Europe
- 8 : Protocole relatif aux Aires Spécialement Protégées de la Méditerranée.
- 9 : Conventions sur la biodiversité.
- 10 : Convention des Nations Unies sur la lutte contre la désertification dans les pays gravement touchés par la sécheresse et/ou la désertification, en particulier en Afrique.
- 11 : Protocole relatif à la protection de la mer Méditerranée contre la pollution résultant de l'exploration et de l'exploitation du plateau continental, du fond de la mer et de son sous-sol
- 12 : amendements à la Convention pour la protection de la mer Méditerranée contre la pollution et amendements au Protocole relatif à la prévention de la pollution par les immersions effectuées par les navires et aéronefs.
- 13 : Protocole relatif aux aires spécialement protégées et à la diversité biologique en méditerranée.
- 14 : amendements au Protocole relatif à la protection de la mer Méditerranée contre la pollution provenant des sources situées à terre.
- 15 : Protocole relatif à la prévention de la pollution de la mer Méditerranée par les mouvements transfrontaliers de déchets dangereux.
- 16 : ACCOBAMS 'Accord sur la conservation des cétacés de la mer Noire, de Méditerranée et de la zone atlantique adjacente'.

## TURKEY

### COUNTRY REPORT

In Turkey various institutions, ministries and organizations have undertaken duties and responsibilities for the protection of natural sites and species.

Ministry of Environment (MOE) creates policies, planning and coordination for the environmental protection, management activities which are carried out by some other institutions and ministries.

Ministry of Forest (MOF), through the General Directorate of National Parks and Wildlife is the principal institution responsible for management of the protected areas.

Ministry of Agriculture and Rural Affairs mainly aims the conservation of plant and animal species and their genetic diversity.

Ministry of Culture (MOC), is responsible for protection of areas of national and international historical and cultural significance, classified as "historically", "archeologically", "culturally" and "natural" significant sites.

Also, the Authority for the Protection of Special Areas under Ministry of Environment is presently responsible for conservation and protection of environmental values in areas declared as "Specially Protected Areas" by the Cabinet of Ministers.

Within the legislation of Turkey, there are numerous laws, which are related directly or indirectly to the protection of nature.

The main nature protection laws are:

- The Environment Law (Code no: 2872, 1983) and its regulations
- The National Parks Law (Code no: 2873, 1983)
- Law for the Protection of Cultural and Natural Assets (Code no: 2863, 1983)
- The water Products Law (Code no: 6896, 1956 ; 2896, 1983 ; 3302, 1986)
- The Forest Law (Code no: 6896, 1956, 2896, 1983, 3302, 1986)
- The Coast Law
- The Hunting Law

Also, "Central Hunting Commission", constituted under the Hunting Law and "The Water Products Circular" constituted under the Water Products Law, which are met and published annually, have principles to protect the threatened species and their habitat.

For the protection of habitats; "Specially Protected Areas (SPAs)" which the requirements for the establishment and declaration of an SPAs are stated under Environment Law ; "**National Park**", "**Nature Park**", "**Nature Reserve**" and "**National Monuments**" described in National Park Law ; "**Game Reserve**" and "**Captive Breeding Areas**" within the terrestrial ecosystems described in

Hunting Law ; “**Natural and Cultural Assets**” status described in Laws for the Protection of Cultural and Natural Assets give responsibilities for protecting the natural environment.

In addition to the national legislation, Turkey is a party to several international Conventions such as :

- Convention on Protection of Birds
- Convention on Protection of World's Cultural and Natural Heritage
- Barcelona Convention
- Ramsar Convention
- Washington Convention
- Convention on Biological Diversity
- Convention on Combat to Desertification
- Bern Convention
- CITES Convention

Up to now 12 specially protected areas have been established in Turkey and they were all established before 1996. The Specially Protected Areas are unique regions with historical, natural, cultural etc. values based on national and international ecological criteria. There are also, 32 National Parks, 12 Nature Parks, 33 Nature Protection Areas and 54 Nature Monuments in Turkey.

Also, the decision of the establishment of a Marine Underwater Park in Gökçeada was published in the Official Gazette in 21 February 1999. This initiative has been undertaken by the collaboration of Ministry of Agriculture and Rural Affairs and Turkish Marine Research Foundation.

Turkey is a peninsula surrounded by four different seas-Mediterranean Sea, the Eagean Sea, the Marmara Sea and the Black Sea, all having very different ecological feature. It boasts the highest biological diversity in the Mediterranean system.

Approximately 3000 species have been identified in Turkey's seas. Marine vegetation species from different division (Magnoliophyta, Chlorophyta, Phaeophyta) have been widely observed along the Turkish coast of Mediterranean.

There are about 20 species of mammals in Turkish seas including seals and dolphins and less than 50 live seals (*Monachus monachus*) on the coasts of Turkey. As well as two marine turtle species (*Caretta caretta*, *Chelonia mydas*) and Nile Soft-shelled Turtle (*Trionyx triunguis*) have been observed along the Turkish coast of Mediterranean.

Strictly protected marine species of flora and fauna expressed in the Fishing Regulation Circulary of the Ministry of Agriculture and Rural Affairs are:

*Posidonia oceanica*, *Zostera noltii*, **all species of Porifera**, *Hippocampus hippocampus*, *Salmo trutta labrax*, *Delphinus delphis*, *Caretta caretta*, *Chelonia mydas*, *Trionyx triunguis*, *Monachus monachus*, *Acipencer sturio*, *Huso huso*, *Sciaena umbra*, *Corrallium rubrum*, *Gerardia savaglia*, *Pinna nobilis* and all the endangered or threatened species which are living in Turkish marine environment and listed in the Appendix I and II of Bern Convention have been protected.

According to the commitments of the Biological Diversity Convention, all the Parties have to prepare their national Biodiversity Strategy and Action Plans in order to secure sustainable development, national objectives and policies related to environment need to be determined along with all other plans and policies. With this regard, an initiative began in early 1985 to prepare a "National Environmental Action Plan (NEAP)" under the coordination of the State Planning Organization of Turkey and the Ankara Office of the World Bank.

As a result of these activities, the National Biodiversity Strategy and Action Plan has been completed. The Strategy presents a vision for Turkey of:

A society that lives and develops as part of nature, values the diversity of life, takes no more than can be replenished and leaves to future generations a world, rich in biodiversity.

In support of this vision, the Strategy also presents a series of guiding principles that provide a foundation for implementing its strategic actions.

The strategy's goals are:

- i) conserve biodiversity and use biological resources in a sustainable manner;
- ii) improve our understanding of ecosystems and increase our resource management capability;
- iii) promote an understanding of the need to conserve biodiversity and use biological resources in a sustainable manner;
- iv) maintain or develop incentives and legislation that supports the conservation of biodiversity and the sustainable manner and share equitably the benefits that arise from the utilization of genetic resources.

Proposed mechanisms for implementing the Turkish Biodiversity Strategy include:

- a) initiating priority actions integrated with ongoing activities;
- b) reporting on policies, activities and plans aimed at implementing the Strategy;
- c) coordinating the implementation of national and international elements of the Strategy;
- d) ensuring that there are mechanisms in place to encourage full participation in the implementation of the Strategy; and
- e) reporting on the status of biodiversity.

Successful implementation of the Strategy will be largely determined by the degree to which all parts of Turkish society adopt its vision and principles, and contribute to achieving its goals.

The Strategy prescribes actions proposed to build on existing infrastructure and activities which will contribute to the achievement of conservation of biodiversity and sustainable use of biological resources as required by the Biodiversity Convention. The priority action plan calls for a range of projects which begin the integrated implementation of the Strategy for Turkey. Actions outlined for immediate pursuit are as follows:

1. Establishment of protection areas and preparation of management plans for endemic and endangered species.
2. Establish new wildlife sanctuaries, refuge centers, breeding stations and arboretums
3. Provide training on conservation concepts and principles
4. Develop environmental public awareness through cooperation with all stakeholders (agencies, NGOs, media)
5. Provide education for local communities in rational utilization of natural resources.