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**MEDITERRANEAN ACTION PLAN**



Second Meeting of the National Correspondents  
of the Project for the preparation of a Strategic  
Action Plan for the Conservation  
of Biological Diversity (SAP BIO)  
in the Mediterranean Region

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**DRAFT OF THE:  
SUMMARY OF THE ACTION PLANS ELABORATED  
WITHIN THE FRAMEWORK OF THE SAPBIO PROJECT**

***PROJET DE :  
RÉSUMÉ DES PLANS D'ACTION ÉLABORÉS  
DANS LE CADRE DU PROJET PASBIO***

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## **INTRODUCTION**

This document includes sheets summarising the National Action Plans (NAPs) on specific biodiversity issues prepared within the framework of the national processes of the SAP BIO Project. The NAPs were elaborated taking into account the needs and priorities identified by the national reports prepared as first step of the national process of the project.

For each NAP, this document includes a two-pages sheet. The first page follows a standardised layout giving information about objectives, rationale, expected results and other information about the NAP. The second page includes the calendar of implementation and the budget, often directly extracted, without changes, from the NAP document.

## **INTRODUCTION**

Le présent document est composé de fiches résumant les plans d'action nationaux (PAN) préparés dans le cadre des processus nationaux du projet PAS BIO. Les PAN ont été élaborés en tenant compte des besoins et priorités identifiés par les rapports nationaux dont la préparation a constitué la première étape du processus national du projet.

Pour chaque PAN, le présent document fournit une fiche de deux pages. La première page fournit, selon un format standard, les objectifs, les justifications, les résultats attendus et d'autres informations sur le PAN. La deuxième page comporte le calendrier d'exécution et le budget, souvent extraits, sans modifications, du document du NAP.

**Country:** Albania

**Budget:** 1 908 800 US\$

**National Action Plan for the building and exploitation of artificial reefs for the fisheries along the Albanian coast**

**Duration:** 2 years

**Key words:** Artificial reefs, *Posidonia oceanica* beds, fishery enhancement, trawling

**Geographic scope:**

Local **X**

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building **X**

Others

**Rationale:** A change of fishery structures in Albania in recent years has led to an increase of the fishing effort. This effort is concentrated mainly in the coastal zones, which are rich in high-value commercial fish species. According to Albanian law, trawling is prohibited in the coastal area at depths of less than 30 m. However many violations of this article, have seriously damaged to the *Posidonia oceanica* beds and depleted spawning sites of several fish species. Part of the Albanian fishing activity is illegally concentrated in the shallow waters of the lagoons communication channels with the sea. As a consequence fish recruitment in the lagoons is seriously affected and fishery resources are depleted in all the lagoons. The control of fishing areas by the inspectorate is almost impossible, because of the lack of technical supplies and because this control would not guarantee complete implementation of the law. Construction of artificial reefs could solve these problems.

**Relevance to**

**international treaties:**

CBD

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM **X**

Other:

**Objectives:** Construct artificial reefs (ARs) in the shallow Albanian water, mainly in front of the coastal Narta, Karavasta, Patok, Velipoja and Lezha Lagoons, aimed at protecting fish spawning areas and guaranting the lagoon replenishment.

**Specific objectives:** Protection through construction of ARs: (a) Areas in front of lagoons and the *Posidonia* beds, from bottom illegal fishing; (b) Representative types of coastal and marine ecosystems of adequate size, to ensure their long-term viability and to maintain their biological diversity; (c) Habitats which are in danger of disappearing in their natural area of distribution in the Mediterranean or which have a reduced natural area of distribution as a consequence of their regression or on account of their intrinsically restricted area; (d) Habitats critical to the survival, reproduction and recovery of endangered, threatened or endemic species of flora or fauna; (e) Sites of particular importance because of their scientific, aesthetic, cultural or educational interest.

**Priorities:**

1- Study (possible mapping of some areas) of the *Posidonia* beds, including the impact of bottom fishing;

2- Construction of artificial reefs to protect the areas of: Narta, Karavasta, Patoku and Lezha lagoons;

3- Establish Fisheries Management Organizations.

**Assumptions:** Effectiveness of the Pilot Fishery Development Project; collaboration with fishing and environmental inspectorates; involving Fisheries Management Organizations.

**Expected results/outputs:** Protection of Albanian coastal lagoons, reduction of illegal fishing activities in the shallow areas of the lagoons.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Fishery Research Institute of Durres and others under the Ministry of Science and Education (several universities) and the Science Academy; Ministry of the Environment; local fishing communities, NGOs.

**Calendar of implementation:**

Activity	1' month	2' month	3' month	4' month	5' month	6' month	7' month	8' month	9' month	1' year	2' year
Collecting of available documents and data											
Experts qualify in marine biology and marine ecology											
Mapping Posidonia beds											
Monitoring trawl fishing impact on Posidonia beds											
Identifying of priority areas for intervention and project preparation											
Issuing licenses from involved institutions											
Preliminary procedures for project implementation											
Constructing of the artificial reefs in approved areas											
Elaborating of area management plans and transfer of FMO structures for a ten-year period											
Biodiversity monitoring and the evolution of populations in artificial reefs											
Possible reviews of the area management plan based on monitoring results and its improvement											

**Detailed budget:**

Priority activities	Estimated cost in \$USD
Collecting of available documents and data	8 000
Experts qualify in marine biology and biodiversity	30 000
Mapping Posidonia beds	300 000
Monitoring trawl fishing impact on Posidonia beds	5 000
Identifying priority areas for intervention and project elaboration	5 000
Constructing of artificial reefs in approved sites	1 500 000
Biodiversity monitoring and the evolution of populations on artificial reefs	30 000/Year = 60 000
<b>Total</b>	<b>1 908 000</b>

**Country:** Albania

**National Action Plan for proclaiming the Marine National Park of Karaburuni Area**

**Key words:** Marine National Park of Karaburuni Area, biodiversity, proclamation, protection, management plan

**Rationale:** Karaburuni peninsula is the best track of the Albanian coast. The Karaburuni area is about 50 km long and some 15 km wide; it includes five main units: Sazani island, Karaburuni peninsula, Orikumi lagoon and the southern part of the Vlora bay, Rreza e Kanalit and Llogora, Llogara National Park. These are areas of great natural, scenic and historical interest and host potential habitats for reintroducing monk seals. The whole area should be restored and managed properly.

**Budget:** 638 500 US\$

**Duration:** 3 years

**Geographic scope:**

Local  
National **X**  
International **X**

**Type of project:**

Data collection **X**  
Protection **X**  
Interaction with fisheries **X**  
Capacity building **X**  
Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM  
Other

**Objectives:** Improve the protection and management of the marine and coastal biodiversity of the Karaburuni area by establishing the Karaburuni Marine National Park. Active participation of local stakeholders and authorities in the management system.

**Specific objectives:** 1- Prepare and implement a technical management plan for the MNP of Karaburuni area; 2- Promote, develop and regulate eco- and cultural tourism and other recreational-related activities so that all are compatible with the long-term sustainability of the marine and coastal ecosystem's biodiversity and its economic use; 3- Establish the legal and institutional frameworks for management that is responsive to the needs of the area; 4- Undertake the public awareness activities necessary for the marine and coastal biodiversity conservation objective of the sustainable management of the area; 5- Develop an eco-center able to train Albanian professionals and civil society in the inventorying and monitoring of marine biodiversity .

**Priorities:**

1- Promotional activities for the first Marine National Park of Karaburun;

2- Round tables with the stakeholders and managers of the Karaburuni;

3- Preparation of the proposal for the designation of the National Park (Marine and Terrestrial) of the Karaburuni area;

4- Preparation of the Management Plan for the Karaburuni area.

Creation and support for the Karaburuni Management Board and Authority; training for local stakeholders; environmental education; professional development and training.

**Assumptions:** None.

**Expected results/outputs:** Creation of Marine National Park of Karaburun and safeguarding of coastal and marine life in the area.

**Indicator of achievement of objectives:** Monitoring and reporting through progress reports.

**Actors:** Prime Minister (National Council of Territorial Adjustment-NCTA); Ministry of Environment Ministry of Defence; Ministry of Territorial Planning, Public Works and Tourism; Ministry of Agriculture and Food (General Directorate for Fisheries, General Directorate for Forestry and Pastures); Ministry of Local Government; Regional Council of Vlora; Prefecture; Vlora District Council of Territorial Adjustment; Vlora municipality; Orikumi municipality; Vlora University; Naval Academy of Vlora.

**Calendar of implementation:**

<b>Actions</b>	<b>Time / schedule</b>
<b>Promotional activities</b>	
A-1. Preparing of a video on the marine biodiversity values of the Karaburuni area	Three months after the beginning
A-2. Promoting the development of eco-tourism and cultural heritage	Four months after the beginning
A-3. Promoting sport-fishing and aquaculture	Four-to five months after the beginning
<b>Round tables with stakeholders</b>	One to four months after the beginning
<b>Preparing the proposal for designating the national park (marine and terrestrial) of the Karaburuni area and submitting of it to the Council of Ministers</b>	Five to six months after the beginning
<b>Next steps to follow</b>	
B-1. Preparation of the Management Plan	One year after the Marine Park is proclaimed
B-2. Preparation of the regulations for the Karaburuni MNP area	Six months after the Marine Park
B-3. Creation and support for the Karaburuni Management Board and the Park Administration	One to two months after the decision of the Council of Ministers to proclaim the Marine Park is issued
B-4. Training for local stakeholders	During the second year
B-5. Environmental education	During the second and third year
B-6. Professional development and training for the Park staff	During the second and third year
B-7. Study and mapping of the main marine-coastal communities of the Karaburuni area	One year after the Marine Park is proclaimed
B-8. Monitoring	Each year

**Detailed budget:**

<b>Priority actions</b>	<b>Estimates in \$ USD</b>
A-1. Preparing of a video on the marine biodiversity values of the Karaburuni area	10,000
A-2. Promoting the development of eco-tourism and cultural heritage	15,000
A-3. Promoting sport-fishing and aquaculture	8,000
B-1. Preparation of the Management Plan	250,000
B-2 Preparation of the regulations for the Karaburuni MNP area	5,000
B-3. Creation and support for the Karaburuni Management Board and the Park Administration	200,000
B-4. Training for local stakeholders	25,000
B-5. Environmental education	50,000
B-6. Professional development and training for the Park staff	30,000
B-7. Study and mapping of the main marine/coastal communities of the Karaburuni area	30,000
B-8. Monitoring	5,000 yearly



**Country:** Albania

**Budget:** 744 710 US\$

**Duration:** 5/10 year

**National Action Plan for the rehabilitation of the Kune-Vain Lagoon System**

**Key words:** Kune-Vain Lagoon System, wetlands, protected areas, restoration, monitoring

**Geographic scope:**

Local **X**

National **X**

International **X**

**Type of project:**

Data collection

Protection **X**

Interaction with fisheries

Capacity building **X**

Other

**Relevance to**

**international treaties:**

CBD

ACCOBAMS

Bern Convention

CMS

Medwet **X**

GFCM

Other: Directive habitats

**Rationale:** The Kune Vain Lagoon System (Hereinafter KVLS), is one of the most important wetlands in the Adriatic Sea in Albania, the first protected area of this country, proclaimed in 1940. The landscapes very rich in habitats, biodiversity and beautiful and attractive features, are the main reasons why KVLS is considered as one of the important sites of Mediterranean wetland - ecosystems. Despite the importance of the site, many negative changes have occurred in last 15 years in the area, which has led to habitat fragmentation and to a reduction of biocorridors. More than 60% of the area has been deforested and uncontrolled hunting and fishing occur as well.

**Objectives:** rehabilitation of the natural habitats of the Kune Vain Lagoon System.

**Specific objectives:** 1- Restoration of the Natural Reserve through the construction of bio-corridors which serve also as barriers to illegal human intervention; 2- Planting biocorridor/barriers with natural trees on the eastern and southern border of Vaini; 3- Control (as much as possible) coastal erosion in both littorals using planting methodology as an ecological intervention; 4- Coastal protection without using strong measures (rock/concrete or cutting wood); 5- Rehabilitation of nesting areas of waterfowls, egrets, and other birds living in the habitats between the lagoon and the sea waters; 6- Reopening of the channels between Kenalla and Merxhani Lagoons; 7- Closing of the existing man-made channel between Ceka and Sea; 8- reopening of the old channel in Vaini littoral; 9- Providing for the improvement of water quality in the lagoon system, using also surface fresh water; restoration of freshwater habitats in Kune Island and the Vaini area; 10- Control of water salinity in inland water habitats (small basins) to give opportunity for the re-development of the autochthonous biodiversity; establishing of a fauna oasis, mostly focused on waterfowl.

**Priorities:**

1- Planting;

2- Restoration of channels and coastal protection;

3- Reopening or repairing of wells and channels;

4- Public and decision-maker information and awareness; monitoring.

**Assumptions:** Stakeholders' active participation.

**Expected results/outputs:** Restoration of the area.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** General Directorate of Forests and Pastures; Directorate of Forest Service; Regional Environmental Agency; Environmental Ministry; Lezha Municipality; National Council of Waters; Ishull Lezha and Ishull Shengjini Village Headgroup; farmers; owners of tourist facilities; fishermen.

**Calendar of implementation:**

Not provided.

**Detailed budget:**

<b>N°</b>	<b>Activity</b>	<b>US\$</b>
1	Planting phase 1	7 500
2	Restoration of channels and coastal protection	46 000
3	Reopening or repairing wells and channels	4 200
4	Public and decision maker information and awareness	14 000
5	Monitoring	12 000
6	Opening new communication channels and closing existing ones	245 800
7	Planting phase 2	270 560
8	Operating the channel between river and lagoon and opening or restoring of wells and small inland channels	144 650
<b>Total</b>		<b>744 710</b>

**Country:** Albania

**Budget:** US\$ 892 500

**Duration:** 5/10 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building

Others

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention **X**

CMS **X**

Medwet **X**

GFCM

Other:

**National Action Plan for the Dalmatian Pelican in Albania**

**Key words:** Dalmatian pelican, wetlands , habitat protection

**Rationale:** The Dalmatian Pelican is a Globally Threatened Species and listed in several international conventions as a species whose conservation should be a primary concern. Albania is a full member of those different conventions and it is thus willing to implement the recommendations. In Albania the Dalmatian Pelican is on the list of Strictly Protected Species. Nevertheless the regulation is not fully implemented and the existence of the last colony is now under high risk. From 200-250 breeding pairs in the 80s' now Albania has not more than 20 nesting couples.

**Objectives:** Identify the main threats and the main actions to be undertaken in order to enhance the population of the species and to restore some of the degraded habitats.

**Specific objectives:** 1- Improve policy and legislation; 2- Ensure species and habitat protection; 3- Undertake monitoring and research; 4- Raise public awareness.  
In the short term to prevent the further decline of the population size below the level of 1997-98. In the medium term to prevent the further decline of the species below the level of 1990-91. In the medium to long term to increase the population size of the Dalmatian Pelican to a level at which it no longer qualifies as Endangered Species in Albania.

**Priorities:** 1- Raise public awareness; 2- Monitor ecological change; 3 Monitor wintering birds; 4 Control residues and pollution; 5- Improve the hydrological management; 6- Stimulate nesting through the use of artificial structures; 7- Carry out appropriate site management; 8- Ensure the safeguarding of the Dalmatian Pelican colony; 9 Control hunting; 10- Ensure the designation of protected areas; 11- Ensure site protection; 12- Finish, coordinate and implement the species action plan; 13- Promote sustainable development in wetlands; 14- Stop the trade in stuffed Dalmatian Pelicans; 15- Reduce and stop taking of birds; 16- Improve and implement legislation.

**Assumptions:** Survival of the Pelican colony in Karavasta until the Action Plan starts; active participation of all the stakeholders.

**Expected results/outputs:** full protection of the Dalmatian pelican colony in Albania.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Ministry of the Environment, General Directorate of Forestry and Pastures, Fishery Department –MAF, local municipalities, local NGOs, scientific institutions and local fishing enterprises.

**Calendar of implementation:**

Activity	Timing
1. Encourage the establishing of statutory temporary or permanent warden zones around the colonies,	1 <sup>st</sup> -6 <sup>th</sup> month
2. Establish a non-intrusion zone 200 m around the colony of Karavasta	1 <sup>st</sup> -6 <sup>th</sup> month
3. Establish a total ban on catching chicks or adults for tourist purposes	1 <sup>st</sup> -6 <sup>th</sup> month
4. Establish a total ban on displaying stuffed Pelicans to attract (shops, restaurants, bars, etc.)	1 <sup>st</sup> -6 <sup>th</sup> month
5. Forbid human intrusion (including fishermen, birdwatchers, photographers, tourists or even unauthorized researchers) in warden areas	1 <sup>st</sup> -6 <sup>th</sup> month
6. Hire four wardens from January-July to safeguard the colony from intruders	1 <sup>st</sup> -6 <sup>th</sup> month
7. Promote a ban on burning the nesting material (wood, <i>Salicornia</i> ) used by the previous nesting pairs	1 <sup>st</sup> year
8. Ensure the inclusion of those bans in the legal instruments for the protection and enhancement of biodiversity.	1 <sup>st</sup> year
9. Institutional strengthening of local NGOs.	1 <sup>st</sup> -3 <sup>rd</sup> year
10. Cooperate with international institutions for monitoring the intra-genetic exchange between different meta-populations.	1 <sup>st</sup> -5 <sup>th</sup> year
11. Inform wetland users, decision-makers at local, regional, national and international level about the importance of protecting of the Dalmatian Pelican.	1 <sup>st</sup> -5 <sup>th</sup> year
12. Monitor dead pelicans and identify the causes of death.	1 <sup>st</sup> -5 <sup>th</sup> year
13. Organize accompanied excursions with pupils from primary and secondary schools	1 <sup>st</sup> -5 <sup>th</sup> year
14. Organize talks in primary and secondary schools in the Karavasta area	1 <sup>st</sup> -5 <sup>th</sup> year
15. Train local NGOs on environmental education, conservation and management of birds, wildlife in general and wetlands.	1 <sup>st</sup> -5 <sup>th</sup> year
16. Undertake public awareness campaigns with hunters, fishermen, local communities, tourist agencies and officials involved in Dalmatian Pelican conservation.	1 <sup>st</sup> -5 <sup>th</sup> year
17. Annually monitor the number of breeding pairs and their reproductive success using trained staff only	1 <sup>st</sup> -10 <sup>th</sup> year
18. Maintain connecting channels in Karavasta and Narta	1 <sup>st</sup> -10 <sup>th</sup> year
19. Monitor and study the dispersal of the Dalmatian Pelican throughout the year by surveys and colour-ringing.	1 <sup>st</sup> -10 <sup>th</sup> year
20. Monitor fishery catches at key Dalmatian Pelican sites (Karavasta, Narta, Kune-Vaini, Patoku, Butrint etc.) in collaboration with the official services responsible for collecting such data.	1 <sup>st</sup> -10 <sup>th</sup> year
21. Monitor the number of wintering birds every mid-January, preferably by counting birds at roosting sites (Karavasta, Narta, Thana, Megali Prespa, Butrint etc.)	1 <sup>st</sup> -10 <sup>th</sup> year
22. Monitor water level, water quality and ecological change at key wetland sites (Karavasta, Narta, Thana, Megali Prespa, Butrint etc.).	1 <sup>st</sup> -10 <sup>th</sup> year
23. Organize special festivities (Pelican Day) to raise public awareness on conservation of the Dalmatian Pelican.	1 <sup>st</sup> -10 <sup>th</sup> year
24. Prevent the dumping of residue, chemical pollution and eutrophication at Dalmatian Pelican sites (Karavasta, Narta, Mikri Prespa, Butrint, etc.).	1 <sup>st</sup> -10 <sup>th</sup> year
25. Produce publications (leaflets, booklets, posters, etc.) about the national and international importance of the key sites of the Dalmatian Pelican.	1 <sup>st</sup> -10 <sup>th</sup> year
26. Promote the sustainable development model in key sites for the Dalmatian Pelican (Karavasta, Narta, Thana, Prespa, Drin delta, Patoku, Butrint, etc.)	1 <sup>st</sup> -10 <sup>th</sup> year
27. Designate new Protected Areas (Narta, Thana, Butrint, Shkodra and Patoku.)	2 <sup>nd</sup> -3 <sup>rd</sup> year
28. Undertake a cost-benefit analysis in order to identify and promote the economic benefits that derive from conservation of the Dalmatian Pelican.	2 <sup>nd</sup> -3 <sup>rd</sup> year
29. Implement of the ban on hunting in all wintering and staging areas where the Dalmatian Pelican occurs in large numbers. Encourage high penalties for those found guilty of harming the Dalmatian Pelican.	2 <sup>nd</sup> -4 <sup>th</sup> year
30. Undertake socio-ecological studies in key Dalmatian Pelican sites in order to identify existing or potential conflicts between people and pelicans.	2 <sup>nd</sup> -5 <sup>th</sup> year
31. Carry out proper water management in Karavasta, Narta, Mikri Prespa, Butrint	2 <sup>nd</sup> -10 <sup>th</sup> year
32. Enhance cooperation with Mediterranean institutions and organizations, international NGOs, scientific institutions, etc.	2 <sup>nd</sup> -10 <sup>th</sup> year
33. Establish and enhance cooperation on the conservation of trans-border wetlands. Promote international collaboration and information exchange.	2 <sup>nd</sup> -10 <sup>th</sup> year
34. Study the whole catchment basin of Karavasta, Narta, Butrint and especially the effect of hydrological intervention such as rivers diversions etc.	3 <sup>rd</sup> -5 <sup>th</sup> year
35. Promote the restoration of sites that have suffered from pollution.	3 <sup>rd</sup> -10 <sup>th</sup> year
36. Measure pesticides and heavy metal concentration in eggs	3 <sup>rd</sup> -10 <sup>th</sup> year
37. Encourage wetland restoration in sites of former importance for the Dalmatian Pelican.	3 <sup>rd</sup> -10 <sup>th</sup> year

**Detailed budget:**

Activity	Cost
I. Support for project management office and local NGOs	256.5
II. Operational Plan Development	58
III. Investment	262
IV. Implementation of Operational Plans	322
<b>Total</b>	<b>893.5</b>

**Pays :** Algérie

**Plan d'Action National sur l'inventaire et la mise en place d'aires marines et côtières protégées en Algérie**

**Mots-clés :** Biodiversité, aires protégées, protection, inventaire, sélection, gestion

**Justification :** L'érosion de la biodiversité marine, la raréfaction et la réduction des effectifs d'espèces à haute valeur écologique ressenties au Nord de la Méditerranée depuis déjà près de 30 ans commence à produire ses effets sur le versant Sud de la Méditerranée. L'Algérie n'échappe pas à cette tendance et la mise en place d'un réseau d'aires protégées devient urgent.

**Budget:** 1 254 000 US\$

**Durée :** 4 années

**Portée Géographique:**

Locale **X**  
Nationale **X**  
Internationale **X**

**Type de projets :**

Collecte de données  
Protection **X**  
Interaction Pêche  
Capacity building  
Autres

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM  
Autre :

**Objectifs :** Actions de conservation et de protection d'environ 127 km linaires côtes et une surface marine protégée de près de 18.000 hectares (11 sites sélectionnés et retenus).

**Objectifs spécifiques :**

A court terme - a) aboutissement du dossier de classement des îles Habibas; b) initier la procédure de classement de la zone marine d'El Kala; c) accélérer les études d'extension de Gouraya, Taza et de l'île Rachgoun.

A moyen terme - a) étendre les inventaires de différentes zones marines. A plus long terme - a) évaluer l'effet réserve sur l'écosystème; b) réviser et adapter, si besoin, les plans de gestion.

**Priorités:** Accélération des lenteurs administratives en matière de protection de l'environnement.

**Pré requis :**

- 1) adaptation de la réglementation algérienne;
- 2) extension de la liste des espèces protégées;
- 3) retenir le principe de précaution comme base de travail.

**Résultats attendus :** Intégration des aires marines protégées algériennes dans le réseau méditerranéens d'aires protégées.

**Indicateurs de réussite :** Suivi du renforcement du cadre juridique et du cadre institutionnel. Suivi des mesures de prospections, explorations et inventaires.

**Responsables et Participants:** Ministère de l'Aménagement du Territoire et de l'Environnement ; Ministère de l'Agriculture; Ministère de la Défense nationale; Ministère de la Pêche et des Ressources halieutiques; Ministère des Transports; Ministère du Tourisme; Ministère de l'Enseignement supérieur et de la Recherche scientifique.

## Calendrier d'exécution et budget détaillé :

Echéance	Description de l'action	Coût (en \$ US)
<b>Phase 1</b>		
2003-2004	Mise en place de la réserve marine naturelle des îles Habibas	130.000
	Mise en place de la réserve marine naturelle PNEK	120.000
	Etude en vue de mettre en place la réserve marine naturelle de l'île Rachgoun	40.000
	Etude en vue d'étendre le parc national de Gouraya à la zone marine	37.000
	Etude en vue d'étendre le parc national de Taza à la zone marine	37.000
	Etude en vue de mettre en place de la réserve mixte de Chenoua	25.000
	Etude en vue de son classement de l'île Agueli	10.000
		<b>399.000</b>
<b>Phase 2</b>		
2004-2005	Mise en place de la réserve naturelle marine de Rachgoun	130.000
	Extension du parc national de Gouraya à la zone marine	100.000
	Extension du parc national de Taza à la zone marine	100.000
	Mise en place de la réserve mixte de Chenoua	80.000
	Mise en place de réserve marine d'Agueli	35.000
	Etude en vue de mettre en place la réserve marine de Collo	40.000
	Etude en vue de mettre en place la réserve marine de Cap de Garde	40.000
	Etude en vue de mettre en place la réserve marine de Tizirt	30.000
		<b>555.000</b>
<b>Phase 3</b>		
2005-2006	Mise en place la réserve marine de Collo	110.000
	Mise en place la réserve marine de Cap de Garde	110.000
	Mise en place la réserve marine de Tizirt	80.000
		<b>300.000</b>
<b>Total</b>		<b>1.254.000</b>

**Pays :** Algérie

**Plan d'Action National pour la réduction de la pression des pêcheurs sur les zones côtières d'intérêt pour la diversité biologique marine en Algérie**

**Mots-clés :** Pêche artisanale; méthodes de substitution, systèmes de compensation, récifs artificiels, DCP

**Justification :** Initialement les projets de développement de la pêche artisanale visaient une extension vers le large des activités de pêche, avec pour conséquence, une réduction de la pression de pêche sur les petits fonds. C'est l'effet contraire qui a été obtenu. A proximité de la côte, l'arrivée massive de moyens de capture, bateaux et filets, a eu pour effet de multiplier les opérations de pêche sur les zones littorales, beaucoup plus faciles à "travailler" que les fonds accores, surtout pour de nouveaux pêcheurs généralement inexpérimentés soucieux de limiter les pertes en matériel onéreux. La conséquence immédiate qui a pu être observée a été l'aggravation de la dégradation des milieux littoraux qui constituent une zone prioritaire en raison de la présence des frayères.

**Budget:** 181 000 US\$

**Durée :** 3 années

**Portée Géographique:**

Locale  
Nationale  
Internationale

**Type de projets :**

Collecte de données  
Protection **X**  
Interaction Pêche **X**  
Capacity building  
Autres

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM **X**  
Autre :

**Objectifs :**

- 1) préserver les habitats particuliers représentés par les frayères littorales peu profondes ;
- 2) proposer des techniques de substitution plus sélectives et des systèmes de compensation.

**Objectifs spécifiques :**

- 1) localisation des frayères;
- 2) délimitation d'une profondeur minimale d'utilisation des filets maillant et trémaills;
- 3) immersion de récifs artificiels anti-chalut;
- 4) initier une approche socio-économique de compensation;
- 5) proposer de nouvelles techniques de pêche (nouvelles zones et DCP).

**Priorités:** Réduire la pression des pêcheurs sur les zones littorales sensibles d'intérêt pour la diversité biologique marine.

**Pré requis :** Structuration et meilleure organisation de la profession (pêcheurs professionnels).

**Résultats attendus :** Modification des techniques de pêche en zone littoral et meilleure protection des zones sensibles et/ou riches.

**Indicateurs de réussite :** Les indicateurs de suivis sont en cours de développement.

**Responsables et Participants:** Organisme scientifique; Ministère chargé de l'Environnement; Responsables de l'Administration des Pêches; Service Hydrographique des Forces Navales.

## Calendrier d'exécution :

N°	Activité	1				2				3			
		1	2	3	4	1	2	3	4	1	2	3	4
1.1	<del>Localiser les frayères</del>	x											
1.2	<del>Délimiter une profondeur minimale</del>	x											
1.3	<del>Placer les obstacles</del>					x	x						
2.1.	<del>Initier une approche socioéconomique de compensation</del>												
	?? Mettre en place la chaîne de conditionnement			x	x	x	x						
	?? Organiser la profession au niveau local		x	x	x	x	x	x	x				
	?? Favoriser une action pilote					x	x	x	x				
	?? Créer les conditions d'échange et de dialogue entre les populations cibles												
2.2	<del>Définir les méthodes d'exploitation</del>												
	?? Relancer la fabrication d'engins traditionnels			x	x	x	x	x					
	?? Concevoir et réaliser une structure de stabulation		x	x	x								
	<del>Elaborer un cadre législatif approprié</del>			x	x	x							
	<del>Concevoir et expérimenter un système novateur</del>												
	?? Mouiller les obstacles contre le chalutage					x	x						
	?? Installer le DCP							x	x				
	<del>Acquérir un niveau d'organisation approprié</del>												
	?? Animer les réunions du Comité National	x	x	x	x	x	x						
	?? Animer les rencontres sur le terrain		x		x		x		x		x		x
	?? Assurer le suivi scientifique et technique	x	x	x	x	x	x	x	x	x	x		

## Budget détaillé :

N°	Activité	Montant (USD)
1.1	<del>Localiser les frayères<sup>(1)</sup></del>	14000
1.2	<del>Délimiter une profondeur minimale<sup>(2)</sup></del>	-
1.3	<del>Placer les obstacles (une dizaine)<sup>(3)</sup></del>	20000
2.1.	<del>Initier une approche socioéconomique de compensation</del>	
	?? Mettre en place la chaîne de conditionnement (conception et conseil)	5000
	?? Organiser la profession au niveau local (09 H/j) <sup>(4)</sup>	3600
	?? Favoriser une action pilote (15 H/j)	6000
	?? Créer les conditions d'échange et de dialogue entre les populations cibles <sup>(5)</sup>	24000
2.2	<del>Définir les méthodes d'exploitation</del>	
	?? Relancer la fabrication d'engins traditionnels (comprise avec <sup>(4)</sup> )	-
	?? Concevoir une structure de stabulation <sup>(6)</sup>	2000
	<del>Elaborer un cadre législatif approprié (15 H/j)<sup>(7)</sup></del>	6000
	<del>Concevoir et expérimenter un système novateur</del>	
	?? Concevoir et réaliser le DCP <sup>(8)</sup>	10000
	?? Installer le DCP	2000
	<del>Acquérir un niveau d'organisation approprié</del>	
	?? Animer les réunions du Comité National <sup>(9)</sup>	28800
	?? Animer les rencontres sur le terrain (comprise avec <sup>(6)</sup> )	-
	?? Assurer le suivi scientifique et technique <sup>(10)</sup>	23400
	Sous-total	144800
	Charges annexes (25% de la totalité, secrétariat rédaction du document de suivi de projet)	36200
	<b>Total</b>	<b>181000</b>

(1) : une partie théorique de 10 H/j et une partie pratique de 15 H/j (à 400 USD/j) = 10 000 USD et 10 j de mer, à raison de 400 USD/j, soit un total de 14 000 USD

(2) : compris dans l'activité 1.1.

(3) : chaque obstacle immergé revient à 2000 USD

(4) : 400 USD/j en trois déplacements, billet d'avion compris

(5) : opération mensuelle la première année, puis saisonnière ensuite

(6) : 05 H/j

(7) : la partie débat et échange est incluse en (2)

(8) : 15 H/j dont 05 jours pour une consultation internationale (6000 USD), 4000 USD pour la réalisation

(9) : réunions mensuelles d'un vingtaine de représentants à raison de 40 USD par personne

(10) : ne concerne que quelques activités la première année (12 H/j) puis 01 H/j de terrain et 05 H/j de traitement de données par trimestre à partir de la 2<sup>ème</sup> année = 09 H/j + 45 H/j = 54 H/j = 21600 USD + la location d'une embarcation 200 \* 9 = 1800 USD = 23400 USD



**Pays :** Algérie

**Budget:** 69 135 US\$

**Durée :** 2.5 années

**Plan d'Action National pour la mise en place d'un programme de collecte de données sur le phoque moine en Algérie**

**Portée Géographique:**

**Mots-clés :** Phoque moine, conservation, base de données, réseau d'observateurs, plan de gestion

Locale

Nationale **X**

Internationale **X**

**Type de projets :**

Collecte de données **X**

Protection **X**

Interaction Pêche **X**

Capacity building

Autres **Base de données**

**Justification :** Le phoque moine de Méditerranée (*Monachus monachus*), est considéré comme l'une des 12 espèces les plus vulnérables au monde. Sérieusement menacé dans son aire de répartition, il subsiste, actuellement, sous forme de groupuscules erratiques le long du littoral occidental algérien. Leur protection est urgente.

**Pertinents**

**internationaux**

CBD **X**

ACCOBAMS

Convention de Bern **X**

CMS **X**

Medwet

GFCM

Autre :

**Objectifs :**

- 1) Mise en place d'une base de données relative au phoque moine (biologie, distribution, évolution démographique,...) ;
- 2) Diagnostic du statut actuel du phoque moine dans la région et définition d'un plan de mise en œuvre d'actions à long terme pour sa conservation.

**Objectifs spécifiques :**

- 1) enquêtes de terrain à terre et en mer;
- 2) mise en place d'un réseau d'observateurs;
- 3) sensibilisation de l'opinion publique à l'aide de différents supports médiatiques.

**Priorités:** Les efforts de renforcement des capacités en matière de connaissance du statut du phoque moine en Méditerranée, en général et en Algérie, en particulier sont plus que prioritaires.

**Pré requis :** Aucun.

**Résultats attendus :** Elaboration d'un plan de gestion à long terme.

**Indicateurs de réussite :** Participation active du réseau d'observateurs mis en place.

**Responsables et Participants:** Ministère de l'Aménagement du Territoire et de l'Environnement; Laboratoires d'Université.

## Calendrier d'exécution :

<b>Activités du plan d'action</b>	<b>Durée</b>
<b>ACTIVITE 1</b> : Collecte de données sur le phoque moine ?? <b>Sous activité 1</b> : Enquêtes - Enquêtes auprès des gens de la mer - Prospection systématique du littoral - Patrouille sur terrain - Sorties en mer ?? <b>Sous activité 2</b> : Mise en place d'un Réseau d'observateurs ?? <b>Sous activité 3</b> : Actions d'information et de sensibilisation	3 mois 3 mois 3 mois 3 mois 5 mois 5 mois
<b>ACTIVITE 2</b> : Traitement des données ?? <b>Sous activité 1</b> : Intégration des données et synthèse ?? <b>Sous activité 2</b> : Configuration des données sur logiciel ?? <b>Sous activité 3</b> : <b>Développement d'un site Internet</b>	3 mois 3 mois 1 mois

## Budget détaillé : (Calculé sur la base 100 DA = 1 US \$)

<b>ACTIVITES DU PLAN D'ACTION</b>		<b>Montant</b>
		<b>(\$)</b>
<b>ACTIVITE 1</b> : Collecte de données sur le phoque moine		
	Sous activité 1 : Enquêtes sur terrain et missions en mer	
	1. Acteurs physiques	11200
	2. Support audio-visuel et informatique	2800
	3. Moyens de locomotion (location)	1100
	Sous activité 2 : Mise en place d'un Réseau d'observateurs	
	Sous activité 3 : Actions d'information et de sensibilisation	
	1. Moyens médiatiques simples	1695
	2. Impression de documents d'information et de sensibilisation	2600
	3. Moyens médiatiques spécialisés :	1500
<b>ACTIVITE 2</b> : Traitement des données		
	Sous activité 1 : Intégration des données et synthèse	750
	Sous activité 2 : Configuration des données sur SIG	600
	Sous activité 3 : Conception et alimentation d'un site Internet	800
	<b>Montant Estimatif / Secteur côtier</b>	<b>23045</b>
	<b>Montant Estimatif pour les 3 Secteurs côtiers</b>	<b>69135</b>

Pays : Algérie

Budget: 48 630 US\$

Durée : 1 année

**Plan d'Action National pour la mise en place d'un réseau de surveillance des herbiers à *Posidonia oceanica***

**Mots-clés** : Herbier à *Posidonia oceanica*, réseau de surveillance à long terme, monitoring, balisage, cartographie

**Portée Géographique :**

Locale **X**  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données  
Protection  
Interaction Pêche  
Capacity building  
Autres **Balisage et Cartographie**

**Justification** : Une gestion optimale de l'environnement requiert, de plus en plus, de disposer d'outils qui permettent d'appréhender rapidement et de manière fiable l'état général d'un milieu, puis d'en suivre l'évolution sur de longues périodes de temps. A l'instar des peuplements benthiques, les herbiers à *Posidonia oceanica* remplissent ces conditions et leurs réponses à une perturbation des conditions environnementales ont déjà été appréciées dans diverses situations à l'échelle de la Méditerranée occidentale.

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern **X**  
CMS  
Medwet  
GFCM  
Autre : Directive habitats

**Objectifs** : Mettre en place un outil de surveillance à long terme des herbiers de Posidonies, pour fournir des renseignements sur la dynamique des herbiers à *Posidonia oceanica* utilisés comme indicateurs biologiques de la qualité globale du milieu.

**Objectifs spécifiques :**

- 1) animation d'un atelier par un groupe de scientifiques sur les techniques de surveillance des herbiers à *Posidonia oceanica*;
- 2) mise en place du Réseau de surveillance Posidonies au niveau de trois stations-pilote.

**Priorités:** Compte tenu :

- (i) de l'importance économique de l'herbier de Posidonies,
  - (ii) de sa fragilité,
  - (iii) de la lenteur de son évolution et par voie de conséquence
  - (iv) de la nécessité de le surveiller de façon très fine à moyen et long terme,
- la mise en place d'un réseau de surveillance des herbiers à *Posidonia oceanica* s'avère une action prioritaire.

**Pré requis** : La sensibilisation des différents acteurs impliqués dans la mise en œuvre du réseau de surveillance Posidonies constitue une action essentielle. De plus, il est indispensable d'acquérir les équipements nécessaires et de prévoir la disponibilité des moyens à la mer (bateaux, GPS...) afin de planifier les activités.

**Résultats attendus** : Développement d'un outil fonctionnel de suivi de la qualité globale du milieu.

**Indicateurs de réussite** : Le maintien et le suivi à long terme du réseau.

**Responsables et Participants:**

- Le Ministère de l'Aménagement du Territoire et de l'Environnement (MATE) à travers la direction centrale chargée des actions dans le milieu marin.
- Le Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (MESRS) à travers l'Institut des Sciences de la Mer et de l'Aménagement du Littoral (ISMAL).
- Les wilayas définies dans le cadre du PAC "zone côtière algéroise" à travers les Inspections de l'environnement.

**Calendrier d'exécution :**

Activités	1 <sup>o</sup> mois	2 <sup>o</sup> mois	3 <sup>o</sup> mois	4 <sup>o</sup> mois	5 <sup>o</sup> mois	6 <sup>o</sup> mois	7 <sup>o</sup> mois	8 <sup>o</sup> mois	9 <sup>o</sup> mois	10 <sup>o</sup> mois	11 <sup>o</sup> mois	12 <sup>o</sup> mois
Réunions sur le Réseau de surveillance												
Missions préliminaires de terrain												
Achat du matériel												
Atelier de formation												
Mise en place du RSP												
Exploitation des données, rédaction du rapport												

**Budget détaillé :**

Activités	Responsabilités	Objectifs	Coûts estimatifs (\$ US)
<p><b>Première activité :</b>  <b>Réunions des différents acteurs impliqués dans le plan d'action</b>                      Les points suivants seront abordés :                      // importance de l'écosystème à <i>Posidonia oceanica</i> ;                      // intérêt du Réseau de Surveillance Posidonies (RSP) ;                      // le programme et les moyens à mettre en œuvre ;                      // arrêter l'enveloppe financière et les moyens de son utilisation                      // enfin, arrêter les responsabilités de chacun des acteurs.</p>	MATE	// Informer et sensibiliser tous les acteurs sur le plan d'action RSP. // Mise en œuvre du plan d'action.	1 000
<p><b>Deuxième activité :</b>  <b>Missions préliminaires sur le terrain</b>                      // Prospection et connaissance des herbiers dans la zone du PAC et en particulier entre Cap Matifou et Cap Djinet.</p>	LBEP de l'ISMAL.	// Faire une cartographie succincte des zones d'étude. // Définir les zones pour la mise en place des balises.	4 880
<p><b>Troisième activité :</b>  <b>Acquisition du matériel</b>                      // Le matériel est surtout prévu pour l'encadrement pratique des candidats (<i>in situ</i> et au laboratoire) lors de l'atelier de formation ;                      // Les pro forma sont fournies par les scientifiques ;                      // Son acquisition doit se faire impérativement avant le début de l'atelier de formation.</p>	MATE / Inspection de l'Environnement de wilayas.	// Assurer une formation pratique sur la mise en place et le suivi du RSP. // Equiper les communes chargées du RSP.	9 770
<p><b>Quatrième activité :</b>  <b>Atelier de formation sur le RSP</b>                      // Organisation d'un atelier de formation pour le personnel rattaché aux communes rattachées aux trois wilayas (Alger, Boumerdès et Tipaza)</p>	LBEP de l'ISMAL	// Former le personnel qui sera en charge de la mise en place et du suivi du Réseau de surveillance Posidonies.	10 360
<p><b>Cinquième activité :</b>  <b>Mise en place du balisage et études annexes</b>                      // Fabriquer et mettre en place les balises dans les trois sites retenus.                      // Prélèvements des échantillons, mesures <i>in situ</i>, prises de photographies sous-marines, etc.</p>	LBEP de l'ISMAL	// Mettre en place matériellement le premier Réseau de surveillance Posidonies dans les trois wilayas ; // Réaliser une micro-cartographie des limites inférieures des herbiers.	16 940
<p><b>Sixième activité :</b>  <b>Exploitation des données et rédaction du rapport</b>                      // Traitement des échantillons.                      // Exploitation des données.                      // Rédaction et mise en forme du rapport.</p>	LBEP de l'ISMAL	// Etablir un état zéro. // Permettre de suivre scientifiquement plusieurs descripteurs de la vitalité des herbiers concernés, d'analyser et de préciser leur dynamique dans le futur.	5680
<b>TOTAL</b>			<b>48 630</b>

**Country:** Bosnia and Herzegovina

**National Action Plan for the identification and preservation of endangered marine, freshwater and terrestrial habitats and plant communities in the Mediterranean zone of Bosnia and Herzegovina**

**Key words:** Biodiversity, endangered habitats, landscapes, inventory, mapping, protection.

**Rationale:** More than 10% of the plant species on the IUCN List of Rare, Endangered and Endemic Species can be found along the narrow coastal belt of B&H. In the last decades a loss of natural habitats resulted from enormous social and economic changes, as well as from development projects, basically in traffic and tourism. The overall diversity of habitats, communities (-species) and landscapes represents the basic value and main resource for further progress of Bosnia and Herzegovina, thus their protection is an imperative.

**Budget:** US\$ 275 000

**Duration:** 3 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building **X**

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet **X**

GFCM

Other: Directive habitats

**Objectives:** Make an in-depth evaluation, to maintain and upgrade the existing diversity of habitats and communities (-species) in the Mediterranean region of the country; to find ways of preventing any further negative effects to habitats and communities.

**Specific objectives:** 1- inventoring, mapping, evaluating and analysing of certain types of endangered habitats; 2- protecting the most endangered sites, 3- establishing of a register of sea and shoreline pollutants; 4- organizing a program for in-depth research into flora and vegetation in regions that have been inadequately researched up until now; 5- establishing of a national (and/or county) committee for marshes; 6- raising the informational level of all interested parties and the public at large regarding the endangered habitats and communities in the region; 7- ongoing education of experts and members of non-governmental organizations; 8- cooperation with the Republic of Croatia in the preservation and use of the Bay of Mali Ston and the Malo More.

**Priorities:** In-depth and multi-disciplinary study of the Neretva River delta and its branches, particularly the effects of the water regime and chemistry on flora and vegetation. Preservation measures for habitats and communities outside the Natural Park of Hutovo Blato, including an eventual revision of conservation (of some sites) in the Park itself.

**Assumptions:** Active participation of governmental administrations at local and national level; collaboration of government administrations in both Croatia and Bosnia and Herzegovina; local community must ensure access to the sea by boat; park attendants in the natural park of Hutovo Blato are also expected to provide boats for research in the marshes.

**Expected results/outputs:** protection of biodiversity in the country.

**Indicator of achievement of objectives:** Monitoring before, during and after the action; meetings; reports.

**Actors:** Government; local and national administrations; Universities of Mostar and Sarajevo, Institute of Oceanography and Fisheries Dubrovnik; business sector (public companies involved in road construction, water supply, telecommunications, port authorities, etc.) and foreign organizations in the financing and supervision of the plan; non-governmental organizations; public press; local community.

**Calendar of implementation :**

Activity	2003	2004	2005
Identification of short-term and long-term gathering of data.	June, 1		
Inventorying and analysis of endangered types of habitat	Sept., 1		
Establishing a register of sea and shoreline pollutants.	Sept., 1		
Investigation of sea-grass meadows		Sept., 1	
Investigation of inland karstic communities		July 1	
Investigation of the Neretva River and its branches, communities		Oct., 1	
Compilation of a regional inventory of flora and communities, aimed at monitoring biodiversity.		Dec., 1	
Legal protection for communities (-localities)			Feb., 1
Setting up national (and/or county) committees for marshes and implementation of programs for the conservation and management of marshes.	July, 1		
Reporting to the public; education of experts in administration, non-governmental organization members.	Permanently	Permanently	Permanently
Cooperation with the Republic of Croatia; meetings and workshops	July, 1	Dec., 1	

**Detailed budget :**

Activities	US \$
Identification of short-term and long-term gathering of data.	10.000
Inventorying and analysis of threatened types of habitat.	25.000
Establishing of a register of sea and shoreline pollutants.	20.000
Investigation of sea-grass meadows	20.000
Investigation of inland karstic communities	35.000
Investigation of the Neretva River and its branches, communities	50.000
Compilation of a regional inventory of flora and communities, aimed at monitoring biodiversity.	20.000
Legal protection for communities (-localities)	25.000
Setting up of national (and/or county) committees for marshes and implementation of programs for the conservation and management of marshes.	25.000
Reporting to the public; education of experts in administration, non-governmental organization members.	20.000
Cooperation with the Republic of Croatia; meetings and workshops	25.000
<b>Total</b>	<b>275 000</b>

**Country:** Bosnia and Herzegovina

**National Action Plan for the sustainable development of marine and adjacent waters of Bosnia and Herzegovina: cross-border cooperation issue**

**Key words:** Marine coastal areas, wetlands, inventory, cross border cooperation, data base GIS

**Rationale:** One fact is that Bosnia-Herzegovina (B&H) is a genuine Mediterranean country; the other is that B&H owns “only” 25 kilometers of Mediterranean coastline. The latter point has never been recognized by international organizations. This project and its possible future execution wishes to represent the first step toward the creation of new sensitivity to give B&H nations the chance of using its marine resources, to reach this target. The marine coastal area of B&H is located inside the inshore Croatian waters, in Mali Ston Bay, the wetland areas of Hutovo blato Nature Park, part of Neretva River estuary. In the last two decades the two countries have had different regulations for the marine and coastal areas, and what was forbidden in one country was possible in the other. Present situation is characterised by the existence of no cooperation between the two countries as far as the management of marine waters is concerned. For example some species like *Lithophaga lithophaga* and *Pinna nobilis*, are protected in Croatia, but not in B&H.

**Budget:** 127 500 US\$

**Duration:** 8 month

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building

Others

**Relevance to international treaties:**

CBD

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other:

**Objectives:** Launching a new coastal management strategy, which will consider the need for cross-border cooperation between Croatia and B&H for the future sustainable use and development of the area.

**Specific objectives:** Carry out a small ecological survey to assess the ecological characteristics of the B&H coastline, using fish, shellfish and other marine organisms of the rocky coastline as ecological descriptors. This survey will create a database of the so-called “zero state” of marine waters, and will be used as a basis for future management steps. Collect and compare legislation on coastal and marine areas, ecosystems and species from Croatia and B&H. Set up an ecological monitoring program of Mali Ston Bay in both states.

**Priorities:**

1- Start with small-scale ecological research into marine waters of B&H;

2- evaluate the present status of legislation in both countries;

3- launch a cross border integrated coastal management plan for Mali Ston Bay, with special reference to the protection of threatened marine species;

4- initiate joint-monitoring and sanitary control of Mali Ston Bay waters.

**Assumptions:** The active participation of the administration at different levels, mainly county-canton and local (town of Neum) level and other institutions involved in environment protection and preservation (such as “Mareco” Public Company from Neum), is essential to ensure the success of the plan. Furthermore, a clear identification of the scientific research institutions and facilities (vessel disposability, microscopes, measurement devices, etc.) is needed

**Expected results/outputs:** Cross-border cooperation between Croatia and B&H for the management of Mali Ston Bay.

**Indicator of achievement of objectives:** Monthly reports, organization of workshops, preparation of a GIS based data base.

**Actors:** Ministry for Urban Planning, Building and Environment protection of Canton Neretva-Herzegovina in Mostar; Department for Planning and Nature Protection of Dubrovnik-Neretva County in Dubrovnik; MAP Office in Sarajevo; industries (including aquaculture), tourist managers and hotel owners.

**Calendar of implementation :**

<b>Activity</b>	1 <sup>st</sup> month	2 <sup>nd</sup> month	3 <sup>rd</sup> month	4 <sup>th</sup> month	5 <sup>th</sup> month	6 <sup>th</sup> month	7 <sup>th</sup> month	8 <sup>th</sup> month
Collection of available documents and publications on marine B&H waters								
Survey of marine waters: status of marine flora and fauna								
Evaluation of present status of legislation for the Mali Ston Bay in both countries and its comparison with international regulations								
Organization of workshop where results will be presented and adopted								
Preparation of cross-border coastal management plan and new law on threatened species								
Preparation of GIS-based database and monitoring system								

**Detailed budget :**

<b>Type of work</b>	<b>Description</b>	<b>Amount in US \$</b>
<b>First phase- scientific survey of marine waters</b>		
1. Wages	Six scientists x 6 months	1500 x 6 x 6 = US \$ 54 000
2. Transport and accommodation		6000
3. Material costs		4000
<b>Second phase- evaluation of present legislation</b>		
1. Wages	Two experts x 3 months	1500 x 2 x 3 = US \$ 9000
2. Transport and accommodation		1000
3. Material costs		1000
<b>Workshop- 3 days</b>		
1. Costs of organization	People, cars, etc.	US \$ 2000
2. Accommodation and food- 30 people	US\$ 50 per day - total is 30x 3 x 50= US\$4500	US \$ 4500
3. Transport and per-diems		US \$ 2000
4. Dissemination- book, CD, poster, leaflet		US \$ 5000
<b>Preparation of cross-border coastal management plan and new law on threatened species</b>		
1. Wages	Four experts x 3 months	1500 x 4 x 3 = 18 000 US \$
2. Transport and accommodation		1500
3. Material costs		1000
<b>Preparation of GIS-based database and monitoring system</b>		
1. Wages	Two experts x 2 months	6000 US \$
2. Production of CD		2000 US \$
<b>Project management</b>		
<b>Project manager</b>	6 months x 1500	9000 US \$
<b>Material costs</b>		1500 US \$
<b>Total costs</b>		<b>127 500 US \$</b>



**Country:** Croatia

**National Action Plan on biodiversity conservation as part of integral coastal management planning**

**Key words:** Biodiversity, conservation, integral coastal management

**Rationale:** It has been judged at international and national level that long-term conservation of biodiversity and sustainable use of natural resources of marine and coastal zones can be secured only if integrated coastal zone management (ICZM) planning is implemented, ensuring integration of all sectorial plans as well as adequate integration of biodiversity conservation measures into sectorial and ICZM planning processes. An ICZMP plan, that is to bring together users, stakeholders, and decision-makers in the coastal zone in order to secure more effective ecosystem management, still does not exist for Croatia. In particular biodiversity issues are not adequately integrated into strategic documents and the importance of biodiversity conservation and its potential for the development and improvement of the socio-economic situation in Croatia has not been sufficiently recognized

**Budget:** US\$1 025 000

**Duration:** 4 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building **X**

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other:

**Objectives:** Achieve conservation and long-term sustainable use of marine and coastal biodiversity in a manner that respects both socio-economic interests and the integrity of ecosystems. In such a way it would contribute to and complement the existing ASEMP (Adriatic Sea Environmental Master Plan) project that is in its initial phase.

**Specific objectives:** Identify the biodiversity elements and issues to be incorporated into the ICZMP for Croatia; identify the main environmental/socio-economic conflicts and provide environmental cost-benefit analysis; integrate biodiversity conservation into the planning process of all relevant sectors by defining guidelines for each sector; improve current management planning for protected and designated areas; raise involvement of all stakeholders into the planning process; raise public awareness about the need to integrate biodiversity issues into sectorial planning and management.

**Priorities:** Compile relevant data regarding: protected areas and designated areas as parts of the national ecological network, alien species, wetland conservation, integrated management of river basins, tourism, fishery, mariculture, hunting, collecting of aromatic plants, snails, fungi etc..., agriculture, forestry, physical planning – existing county physical plans; 2. GIS-development to include data from 1.; 3. Socio-economic analysis of coastal zone; 4. Identify ecological/socio-economic conflicts in sectors analysed under 1.; 5. Environmental cost-benefit analysis for different scenarios (pint 1.); 7. Preparation of guidelines for protected area management, water management; tourism, fishery; mariculture, hunting, agriculture, forestry and physical planning; 8. Sector-based workshops to discuss guidelines; 9. Finalise guidelines.

**Assumptions:** Other relevant projects ongoing in Croatia completed or well advanced according to schedule; affirmative attitude and cooperation of relevant sectors; effective approach to all stakeholders and their active involvement from the beginning.

**Expected results/outputs:** Conservation of coastal zone biodiversity in Croatia. Publish educational materials and disseminate results through Ministry of Environmental Protection and Physical Planning (MEPPP) web-site, promotion materials, newspaper, TV, radio etc.

**Indicator of achievement of objectives:** Reports related to data collecting, background studies, GIS-products, workshop reports, interim reports every 12 months.

**Actors:** MEPPP, Ministry of Agriculture and Forestry, State Directorate for Waters, Ministry of Reconstruction and Building, Ministry of Tourism, local authorities (counties), scientific and expert consultants, management authorities of protected areas, relevant sectors (physical planning, water management, agriculture, tourism, fishing and others), local people, NGO's.

**Calendar of implementation and detailed budget:**

<b>Activity</b>	<b>Implementation time required</b>	<b>Budget</b>
1. Compile relevant data	12 months	\$100.000
2. GIS-development	45 months	\$ 120.000
3. Socio-economic analysis of coastal zone	12 months	\$30.000
4. Identify ecological /socio-economic conflicts	9 months	\$70.000
5. Environmental cost-benefit analysis	9 months	\$100.000
6. Sectoral workshops to discuss results	12 months	\$100.000
7. Guidelines for protected areas management	3 months	\$20.000
8. Guidelines for water management	6 months	\$20.000
9. Guidelines for tourism	6 months	\$20.000
10. Guidelines for fishery	9 months	\$20.000
11. Guidelines for mariculture	3 months	\$5.000
12. Guidelines for hunting	6 months	\$20.000
13. Guidelines for agriculture	12 months	\$20.000
14. Guidelines for forestry	6 months	\$10.000
15. Guidelines for physical planning	9 months	\$20.000
16. Sectoral workshops to discuss guidelines	12 months	\$100.000
17. Finalise guidelines	12 months	\$30.000
18. Publish materials and disseminate results	6 months	\$70.000
19. Project management	48 months	\$150.000
<b>TOTAL</b>	<b>48 months</b>	<b>1.025.000 \$</b>

**Country:** Croatia

**National Action Plan to combat the negative impact of hunting, poaching and commercial collecting on the coastal zone biodiversity, including introduction of new game species on islands**

**Key words:** Bird fauna, poaching, hunting, protection, international conventions

**Rationale:** Poaching, commercial collecting and inefficient control of hunting grounds in general represent a very serious problem in the Croatian coastal zone. In Croatia all bird species except four species of Corvidae are protected under either the Nature Protection Act or the Act on Hunting. In spite of this, illegal hunting is widespread on the islands and Croatian coast, regardless of protection status or the hunting season. According to the Croatian Bird Red Data Book, hunting affects most threatened bird species (78.4%). Unfortunately no statistical data or estimation number of birds annually killed by poachers is available. Illegal hunting is serious problem in the protected areas, too. Some efforts were already made to raise public awareness against the traditional hunting and consumption of songbirds and other bird species which are not considered as game animals.

**Budget:** 299 500 US\$

**Duration:** 2.5 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM **X**

Other:

**Objectives:** Control illegal hunting of birds and reptiles which is widespread in Coastal Croatia. Improve the implementation of Nature Protection Law and raise public awareness against illegal killing and harvesting of protected animals.

**Specific objectives:**

- 1- Stop the traditional hunt;
- 2- Make stricter control of hunting tourism for prevention of illegal hunting (changes in the Act on Hunting);
- 3- Improve training of law enforcement personnel;
- 4- control the introduction of game animals;
- 5- Prevent illegal poisoning in nature;
- 6- stop illegal harvesting and export of reptiles;
- 7- raise public awareness about importance and protection needs of native fauna.

**Priorities:** a) preparation of changes to be included in The Act on Hunting (including education of hunters); b) provisions of training in wildlife law enforcement techniques for police, game wardens and custom officers.

**Assumptions:** Good cooperation with the Ministry of Environmental Protection and Physical Planning and with the Ministry of Agriculture and Forestry; on preparation of changes to the Act on Hunting. Cooperation with the Ministry of Internal Affairs, Custom Service and Judiciary in Croatia and neighbouring countries.

**Expected results/outputs:** Eradicate or reduce hunting, poaching and commercial collecting of protected bird species in Croatia.

**Indicator of achievement of objectives:**

Elaborating half-yearly report about the progress of the Action plan; questionnaire about the understanding of the problem of illegal hunting and collecting of the autochthonous species among Police and Custom Officers at the beginning and in the end of the period of the implementation of the Action plan; developing an annual report about the number of seizures on Custom service; questionnaire for hunters and hunting organizations (to show their knowledge about protected species, understanding of laws, understanding the problems linked to commercial hunting and hunting tourism); the effects of public awareness campaign will be monitored through survey of public awareness at the beginning and in the end of the period of the implementation of the Action plan.

**Actors:** Ministry of Environmental Protection and Physical Planning; Ministry of Agriculture and Forestry; Policy; Croatian Custom; Judicature; the Committee for Problematic of Illegal Use of Poisons in the Nature; Croatian Hunting Association; Institute of Ornithology; Croatian Academy of Arts and Sciences; Croatian Natural History Museum, Zagreb; local NGOs; local hunting organizations – achieving and keeping high standards among hunters.

**Calendar of implementation and and detailed budget :**

Project duration: 2.5 years

Duration of particular activity:

- o preparation of changes to be included in Act of Hunting – 1 year
- o implementation of changes of Act of Hunting – 6 months
- o provisions of training in skills of determination of birds for hunters – 6 months for preparation of training
- o cooperation plan with Ministry of Internal Affairs, for increasing monitoring of the illegal bird hunting activities – 6 months
- o cooperation plan with Croatian custom service – 6 months
- o cooperation plan with Croatian judiciary – 6 months
- o provisions of training in wildlife law enforcement techniques for police, game wardens and custom officers – 8 months for preparation of training
- o control of illegal hunting in all protected areas - permanent
- o control of the illegal use of poisons in the nature - permanent
- o publishing a booklet and short film about birds and against hunting of birds – 6 months
- o publishing posters and booklets for Custom offices, with autochthonous reptile species - 4 months
- o publishing posters, stickers and leaflets against hunting of birds – 2 months
- o distribution of materials in schools, hunting organisation, touristic organisation etc – 2 months

Activity	Implementation time required	Budget
Preparation of changes to be included in Act of Hunting	1 year	\$50.000
Implementation of changes of Act of Hunting	6 months	\$16.000
Provisions of training in skills of determination of birds for hunters	6 months for preparation	\$20.000
Cooperation plan with Ministry of Internal Affairs	6 months	\$25.000
Cooperation plan with Croatian custom service	6 months	\$25.000
Cooperation plan with Croatian judiciary	6 months	\$25.000
Provisions of training in wildlife law enforcement techniques for police, game wardens and custom officers	6 months for preparation	\$20.000
Control of illegal hunting in all protected areas	permanent	\$25.000
Control of the illegal use of poisons in the nature	permanent	\$30.000
Publishing a booklet about birds and against hunting of birds	6 months	\$12.500
Producing films about birds and against hunting of birds	8 months	\$36.000
Publishing posters and booklets for Custom offices, with autochthonous reptiles	4 months	\$5.000
Publishing posters, stickers and leaflets against hunting of birds	2 months	5.000 \$
Distribution of materials in schools, hunting clubs, touristic organisation	2 months	\$5.000
		<b>\$ 299.500</b>

**Country:** Croatia

**National Action Plan for mapping, threat assessment and protection of submerged karstic phenomena in Croatia**

**Key words:** Karstic phenomenon, sea level rise, habitats, caves, protection

**Rationale:** Along the eastern Adriatic coast a number of submerged karst phenomena are found (caves, submarine springs, poljes) due to the recent (Late Pleistocene-Holocene) sea level rise of the order of 120 m. Most of the Croatian Adriatic coast is formed of karstified limestone and belongs to the Dalmatian-type coast. Caves and sinkholes (along with other karst features such as dolinas) are common below sea level. Most of them were formed in subaerial conditions during periods of lowered sea level. The natural and scientific value of these phenomena is great. The problem of implementing protection for such habitats lies in a general non-awareness of their value, which is not recognised as possible source of economic well-being .

**Budget:** 120 000 US\$

**Duration:** 2.5 year

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building

Other

**Relevance to international treaties:**

CBD

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other:

**Objectives:** Pay full attention to the uniqueness and diversity of karst phenomena like marine lakes, submerged river canyons or submerged naked karst, which deserve action and are threatened by human activity nearby.

**Specific objectives:** 1- Determine threats and existing damage to sites with Submerged Karst Phenomena SCP; 2- identify gaps in recent knowledge about these phenomena; 3- raise public awareness about the natural and scientific value of SCP and at the same time about possibilities for sustainable use of such sites as long-term economic resources; 4- minimize negative impact on selected SCP sites (one marine lake, one vrulja, one submerged canyon, one descending cave) which are not under legal protection by proposing basic guidelines for the management of such sites, and at the same time improve protection for SCP in already protected areas (two marine lakes, two marine caves).

**Priorities:** Raise public awareness about the natural and scientific value of SCP and about possibilities for sustainable use of such sites as long-term economic resources; propose basic guidelines for the management of such sites in Croatia.

**Assumptions:** None.

**Expected results/outputs:** Increase awareness on the unique phenomenon of karst in Croatia.

**Indicator of achievement of objectives:**

Production of 4 reports: 2 midterm short reports and 2 elaborated reports – at the end of first year and at the end of project.

**Actors:** Ministry of Environmental Protection and Physical Planning; Ministry of Science and Technology; Ministry of Tourism; Ministry of Maritime Affairs, Traffic and Communication; County Institution for the Management of Protected Areas; National Park Management; Nature Park Management; Croatian Diving Association; Diving Centres; non governmental organizations.

**Calendar of implementation and detailed budget:**

<b>Activity</b>	<b>Implementation time required</b>	<b>Budget</b>
Collecting and compiling existing data	1 year	\$30.000
Provisions for training people from CIMP, CDA, NcP and NtP in sustainable management (use) of SCP (preparation of basic guidelines for management of such sites)	6 months for preparation	\$15.000
Cooperation plan with stakeholders (applying knowledge from above activity)	6 months	\$15.000
Publishing a booklet about SCP (its natural values and possibilities for sustainable use)	6 months	\$10.000
Producing film(s) about SCP (its natural values and possibility of sustainable use)	10 months	\$40.000
Publishing posters, booklets, stickers and leaflets	4 months	\$5.000
Distribution of materials in tourist organisations, DCs and local communities	5 months	\$5.000
<b>TOTAL</b>	<b>2.5 years</b>	<b>\$ 120.000</b>

**Country:** Croatia

**National Action Plan for a net of Mediterranean wetlands in Croatia – management and restoration**

**Key words:** Wetlands, inventory, data base, network

**Rationale:** Wetlands represent one of the greatest values of biological and landscape diversity. Croatia has wealth of wetland habitats. Out of four Ramsar sites that Croatia has designated so far, only one is in the coastal zone – Lower Neretva Valley, including the delta of the karstic river Neretva. This area is also a candidate SPAMI area. Obviously there are a number of other coastal wetlands that deserve to be designated as Ramsar and SPAMI sites, but they have not been adequately evaluated yet. According to the Ramsar Convention, there are several major wetland systems and all of them are represented in the coastal area of Croatia: marine, estuarial, lake, riparian, wetlands in *sensu stricto*, artificial wetlands (saltpans) and karst hydrological systems. Generally, wetlands are among the most threatened ecosystems. This situation exists in Croatia, too. Reclamation of wetlands to turn them into agricultural land, changes in water regimen through drainage and the regulation of watercourses, pollution by municipal and industrial waste water, excessive utilization of wetland resources or introduction of alien species are some of human activities responsible for the disappearance and degradation of wetland habitats in Croatia.

**Budget:** 400 000 US\$

**Duration:** 2 year

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building

Others

**Relevance to international treaties:**

CBD

ACCOBAMS

Bern Convention

CMS

Medwet **X**

GFCM

Other: Directive habitats

**Objectives:** Inventorying, evaluation, management and restoration of Croatian wetlands.

**Specific objectives:** 1- Evaluate coastal wetlands (international, national and local value); 2- designate new Ramsar and SPAMI sites, and new nationally protected areas; 3- create a net of wetlands as a part of the national ecological network; 4- improve the mechanism of management for protected wetlands; 5- conserve small wetlands and ponds, specially on islands; 6- integrate wetland conservation into all relevant sectors and into integrated coastal zone management planning; 7- argument need and possibilities of wetland restoration; 8 increase involvement of local authorities in wetlands conservation and management; 9- raise public awareness about the need to conserve wetlands.

**Priorities:** 1-Develop evaluation methodology; 2- analyse gaps in data needed for evaluation; 3- develop protocols to include local NGOs and schools in data collecting; 4- collect additional data needed for evaluation, including field work; 5- evaluate coastal wetlands based on inventory and classify wetlands into classes of international, national and local importance; 6- complete the MedWet and Natura 2000 databases with new data; 7- prepare proposals for new protected areas, Ramsar and SPAMI sites; 8- complete the network of wetlands as a part of the national ecological network; 9- prepare guidelines for management of protected wetlands, including transboundary planning; 10- prepare guidelines for management of ponds and small wetlands; 11- prepare guidelines for integration of wetland conservation measures into relevant sectors; 12- prepare guidelines for wetland restoration; 13- raise public awareness through workshops and dissemination of project results; 14- project management.

**Assumptions:** Preliminary wetland inventory finished by the beginning of 2004; habitat mapping finished during 2003; project of national ecological network well advanced; effective approach to all stakeholders and their active involvement from the beginning.

**Expected results/outputs:** Implementation of the network of Croatian wetlands.

**Indicator of achievement of objectives:** Reports related to data collecting; number of proposals for new designations; completion of databases; seminar and workshop reports; produce documents (guidelines); interim reports every 6 months.

**Actors:** Ministry of Environmental Protection and Physical Planning, Ministry of Agriculture and Forestry, State Directorate for Waters, Ministry of Reconstruction and Building, Ministry of Tourism, local authorities (counties) in the coastal area, scientific institutions, management authorities of protected areas, relevant sectors (physical planning, water management, agriculture, tourism, fishing and others), local people, NGOs.

**Calendar of implementation and detailed budget:**

<b>Activity</b>	<b>Implementation time required</b>	<b>Budget</b>
1. Develop evaluation methodology	6 months	\$30.000
2. Analyze gaps in data needed for evaluation	3 months	\$15.000
3. Protocols for NGO's and schools - data collecting	6 months	\$30.000
4. Collect additional data needed for evaluation	12 months	\$50.000
5. Evaluate and classify coastal wetlands	6 months	\$30.000
6. Complete the MedWet and Natura 2000 databases	9 months	\$10.000
7. Prepare proposals for new designations	9 months	\$20.000
8. Complete the national ecological network	6 months	\$10.000
9. Guidelines -management of protected wetlands	12 months	\$30.000
10 guidelines -management of ponds /small wetlands	12 months	\$10.000
11. Guidelines - integration into relevant sectors	15 months	\$40.000
12. Guidelines for wetland restoration	15 months	\$15.000
13. Raising of public awareness	24 months	\$40.000
14. Project management	24 months	\$70.000
<b>TOTAL</b>	<b>24 months</b>	<b>\$ 400.000</b>



**Country:** Israel

**National Action Plan for the conservation of marine and coastal birds in Israel**

**Key words:** Coastal and marine birds, legal protection habitats, marine and coastal reserves, national parks

**Rationale:** The Israeli coastline consists of a variety of habitats for marine and coastal plants, invertebrates, and vertebrates, including marine and coastal birds. About 43 km of the coast have been designated or declared as 14 marine nature reserves, 20 coastal nature reserves, 2 national parks, 2 islet reserves and 2 natural asset protected belts. For the most part marine and coastal birds were not surveyed systematically in Israel. 11 marine and coastal threatened and endangered bird species use habitats along the Israeli Mediterranean, hence there is a great need to increase our knowledge about the status of these species in along the coast.

**Budget:** US\$50 040

**Duration:** 3 years

**Geographic scope:**

Local  
National **X**  
International **X**

**Type of project:**

Data collection **X**  
Protection **X**  
Interaction with fisheries **X**  
Capacity building **X**  
Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention **X**  
CMS **X**  
Med wet **X**  
GFCM  
Other:

**Objectives:** Fill the wide gap in knowledge about marine and coastal birds along the coast of the country. Ensure legal protection and technical impact reduction measures. Enforcement at national level of international agreements.

**Specific objectives:**

- 1- List the tools needed for surveying and monitoring the status of marine and coastal bird populations in Israel;
- 2- Specify the actions needed to identify better and monitor the threats to marine and coastal birds in Israel;
- 3- Identify, according to current knowledge, the actions needed to improve the status of marine and coastal birds and their habitats;
- 4- List the steps needed to monitor the achievements of the Action Plan.

**Priorities:** Take all the necessary measures needed to protect the habitats for marine and coastal birds. Among these, declaration of designated marine and coastal reserves and national parks, and nature assets belts are of first priority; have management plans for each of these designated areas and other parts of the coastline, and make soon substantial progress in conducting rehabilitation plans for the coastal rivers; enforcement of laws and regulations conduct the national survey and monitor the status of marine and coastal birds and their habitats; conduct the long-term research to identify better the requirements of marine and coastal birds.

**Assumptions:** None

**Expected results/outputs:** Fill the gap in knowledge on Israeli coastal and marine bird fauna and achieve its protection.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Ministry of the Environment; Ministry of the Interior; Lands Authority; NGOs: Society for the Protection of Nature in Israel (SPNI) and the Israel Union for Environmental Defense (IUED); coastal municipalities; companies and planning offices that are involved in the development of the coast and coastal rivers; universities; fishermen.

**Calendar of implementation :**

<b>Activity</b>	<b>Time needed</b>
National survey of marine & coastal birds	1 year
Survey of breeding sites each season	4 months each
Designating new areas for protection	18 months
Management plans for protected areas	4 months each
Training, education and public awareness	Continuously, 1 <sup>st</sup> year mainly
Long-term research	3 years
Management programs for bird species	4 months each
Monitoring bird populations and habitats	Continuously

**Detailed budget :**

1. The minimal national survey and yearly monitoring will require 6 sites X 1 observer X 12 days X \$60/observer/day = \$4320 every year. A full survey during the first year will cost about twice = \$8640.
2. Assuming 10 breeding sites to visit each season, the budget needed is: 10 sites X 1 observer X 18 half-days X \$60 = \$5400.
3. Preparation of each management plan (area or species): \$2000.
4. Training, education and public awareness: \$4000.
5. Long-term research: \$30000.

**Country:** Lebanon

**Budget:** 411 700 US\$

**National Action Plan for Palm Islands & Tyre Coast Nature Reserves**

**Duration:** 4 years

**Key words:** Nature reserves, tourism, awareness facilities, protection

**Geographic scope:**

Local **X**  
National **X**  
International

**Type of project:**

Data collection  
Protection **X**  
Interaction with fisheries  
Capacity building **X**  
Other

**Rationale:** Lebanon has seven protected areas declared by law, including one marine and one coastal: Palm Islands Nature Reserve (PINR) in the north and Tyre Coast Nature Reserve (TCNR) in the south of Lebanon. Through its involvement in the Mediterranean Action Plan, Lebanon has the opportunity for participating in the SAP/BIO initiative, benefiting from support for the development of priority Action Plans for the conservation of its coastal and marine biodiversity. This present Action Plan comes as a complement to the five national priority Action Plans. Special attention should be given to the fact that both PINR and TCNR will benefit from the objectives and actions set up within these plans. Both reserves have been witnessing a resurgence of illegal poaching and fishing as well as intensive tourist activities (bathing, snorkelling etc...). Activities in the sites have been completely dissociated from the conservation efforts and awareness and benefits from these reserves are not being properly linked to the local communities. There is an urgent need for the development of awareness and tourist infrastructures in these sites.

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM  
Other:

**Objectives:** Protection of Palm Islands Nature Reserve (PINR) and Tyre Coast Nature Reserve (TCNR) through the development of resource-generating activities and adequate awareness facilities for the benefit of biodiversity.

**Specific objectives:**

Need to develop of awareness and tourist infrastructures in PINR and TCNR to:

- a) restore local and national pride in the coastal and marine sites,
  - b) raise awareness on the importance of their conservation,
  - c) provide tourists with nature-related experiences to raise funds for furthering the conservation of the sites.
- Moreover: involve the local communities in promoting nature reserves for the benefit of conservation; provide tourists, both local and international, with nature-related experiences in the sites; minimize the impact of tourists on the natural resources of the sites.

**Priorities:** At PINR: construction of a visitor centre; setting up of interpretive signs (identification of important spots along the visiting trail, evaluation of the guided tour speech, identification and design of the most convenient sign material, identification of information and design of sign lay-out, etc.) starting bird watching and underwater activities. At TCNR: setting up of light structure for awareness; preparation of interpretive material for sensitization and awareness; boardwalks and trash cans; fencing and protection; rehabilitation of the fresh water pond; interpretive signs and trails; equipment and educational displays for the natural history museum; marine training center on turtle monitoring; rehabilitation of the Ras El Ain sources; rehabilitation of the two water mills.

**Assumptions:** At PINR the Tripoli Municipality being part of the GAC, the provision of the land and the issuing of permits should not pose any problems. At the level of TCNR, only the rehabilitation of one of the watermills could be problematic in that it is currently squatted by an illegal family. Negotiations are under way to clear this watermill and should be finalized prior to the initiation of the activity.

**Expected results/outputs:** Improvement of Palm Islands Nature Reserve and Tyre Coast Nature Reserve.

**Indicator of achievement of objectives:** Monitoring through indicator of success and comments in visitor log books/questionnaires.

**Actors:** Ministry of Equipment, Ministry of Defense, Ministry of Tourism, the equipment of the Natural History Museum, Ministry of Environment, the municipalities and local NGOs.

## Calendar of implementation and detailed budget:

	Activity	Sub-activity	Budget	Calendar
1	Visitor center	Identification of site for the visitor center with best location and financial offers	6000	Mth 1 to 9
		Purchase/rental of land	To be determined	Mth 9 to 15
		Construction or rehabilitation of selected site	100 000	Mth 15 to 33
		Equipping the center	25000	Mth 33 to 39
		Design and purchase of informative displays	5000	Mth 1 to 6
		Hiring and training of center administrator and guide	10000	Mth 39 to 43
		Launching center	2000	<b>Milestone</b>
	Monitoring and evaluation of the performance of the visitor center	1500	On-going	
		<b>Subtotal</b>	<b>149500</b>	
2.	Bird-watching activity	Identification of important birds and their characteristics	5000	Mth 1 to 3
		Development of a field guide of the birds of Palm Islands	6000	Mth 4 to 9
		Development of one or more bird watching towers/hides	3000/hide	Mth 1 to 6
		Development of informative display material on the birds and their habits (habitat, feed habits, benefits, ecological value...)	10000	Mth 4 to 12
		Purchasing equipment for bird-watching (binoculars, telescopes...)	4000	Mth 7
		Development of interpretation schemes around birds, migration and the importance of protecting habitats	4000	Mth 7 to 12
		Training of staff for receiving and guiding visitors, monitoring birds ...	2000	Mth 7 to 12
	Initiation of a bird library at the reserve/visitor center	1000	Ongoing	
		<b>Subtotal</b>	<b>35000</b>	
3.	Underwater activity	Identification of important species in the reserve	To be determined	Mth 1 to 6
		Identification of diving routes in the reserve	10000	Mth 1 to 6
		Development of diving maps and guide	3000	Mth 7 to 12
		Development of submersible identification sheets	2000	Mth 7 to 12
		Training of locals in the identification of marine species for monitoring	1500	Linked to 1
		Development of interpretation themes around the marine environment and species to be delivered before or without diving	5000	Mth 7 to 12
		Initiation of a marine library at the reserve/visitor center.	1000	Ongoing
		<b>Subtotal</b>	<b>22500</b>	
4.	Interpretive signs	Identification of important spots along the visiting trail	2000	Month 1
		Evaluation of the guided tour speech	200	Mth 1 to 4
		Identification and design of the most convenient sign material	2000	Mth 1 to 3
		Identification of information, design and production of signs layout	5000	Mth 3 to 7
		Putting up signs.	1000	Mth 7
				<b>Subtotal</b>
<b>TOTAL FOR PINR</b>			<b>217200</b>	
5.	Boardwalks and trash cans	Conduct preliminary study to identify paths for boardwalks and location of trash cans	2000	3 months
		Identify design and material for boardwalks and trash cans	3000	2 months
		Install boardwalks and trash cans	8000	1 month
		<b>Subtotal</b>	<b>13000</b>	
6.	Light structure for awareness	Identify type and location of structure	1000	1 month
		Purchase or order structure	5000	3 months
		Set up structure	500	2 weeks
		<b>Subtotal</b>	<b>6500</b>	
7.	Interpretive material for sensitization and awareness	Collect relevant information	1000	3 months
		Identify type, design and produce interpretive material	5000	3 months
				Ongoing
		<b>Subtotal</b>	<b>6000</b>	Ongoing
8.	Fencing and protection	Identify best fencing alternative	2000	3 months
		Purchase or order fencing material	To be determined	6 months
		Set up fences	5000	6 months
				<b>Subtotal</b>
9.	Interpretive signs & trails	Identification of important spots and design of visiting trail	4000	3 months
		Identification and design of the most convenient sign material	2000	3 months
		Identification of information and design of sign layout	3000	3 months
		Putting up signs.	1000	1 month
				<b>Subtotal</b>
10.	Rehabilitation of the Ras El Ain sources	Conduct feasibility study	5000	12 months
		Design rehabilitation plan and obtain permit	6000	12 months
		Commission and undertake rehabilitation	To be determined	2 years
				<b>Subtotal</b>
11.	Rehabilitation of the fresh water pond	Conduct environmental impact assessment	5000	5 months
		Prepare rehabilitation plan	3000	6 months
		Commission and undertake rehabilitation	5000	1 year
		<b>Subtotal</b>	<b>13000</b>	
12.	Rehabilitation of the two water mills	Conduct feasibility study	5000	5 months
		Design rehabilitation plan and obtain permit	5000	6 months
		Commission and undertake rehabilitation	To be determined	One year
				<b>Subtotal</b>
13.	Marine training center on turtle monitoring	Conduct feasibility study and identify location	7000	7 months
		Design and construct center	60000	2 years
		Design, produce and purchase equipment	35000	<b>Milestone</b>
		Launch center	1000	Ongoing
				<b>Subtotal</b>
14.	Equipment and educational displays for the natural history museum	Identify and collect educational information to be displayed	2000	7 months
		Design and produce displays	12000	8 months
		Launch museum	1000	<b>Milestone</b>
				<b>Subtotal</b>
<b>TOTAL FOR TCNR</b>			<b>194 500</b>	
<b>TOTAL FOR NAP</b>			<b>411 700</b>	

**Country:** Lebanon

**National Action Plan for organizing awareness campaigns for the Lebanese coastal communities and the public sector**

**Key words:** Coastal communities, awareness campaign, protection, conservation, education

**Rationale:** Lebanon's population and economic activities are concentrated in the coastal zone. The coastal zone extends over about 162,000 ha of coastal plains and mountains (16% of Lebanon's surface area), is inhabited by an estimated 2.5 million people (about 60% of total population), and contributes about 73% of Lebanon's GDP. The Lebanese coastal zone is heavily urbanized. Based on 1995 satellite images, almost 50% of it is urbanized: urban extensions (21%), large industrial and commercial units (10%), seaside tourist resorts (7.5%), ports (5.3%) and sea embankments and dumpsites (4%). Lebanese communities are generally not well informed about coastal ecosystems and marine wildlife. Many reasons for this include reduced public access to beaches, poor documentation on marine life, and unplanned urbanization of the coastal zone. These factors have generally disenchanted the Lebanese population, and particularly the coastal communities, and kept them from taking part in marine conservation and environment friendly activities in the coastal zone.

**Budget:** US\$ 534 000

**Duration:** 3 year

**Geographic scope:**

Local

National **X**

International

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building **X**

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other: Directive habitats

**Objectives:** Organize awareness campaigns for Lebanese coastal communities and the public sector to: lever on-going efforts and campaigns to inform the public on the importance of preserving marine wildlife and coastal habitats; mobilize public opposition to new urban development projects that are planned in the coastal zone and do not safeguard remaining beaches, sensitive areas and hot spots; and demonstrate viable income-generating activities such as bird and marine turtle watching on sand/rock beaches and coastal habitats.

**Specific objectives:** 1- Develop and disseminate information material and guidelines on coastal habitat protection; 2- develop and promote bird-watching/monitoring activities; 3- support marine turtle awareness programs; 4- support facilities that inform the public on marine wildlife (a- Wonders of the Sea Exhibit (facility exists, needs support); b Lebanese Museum on Marine and Wildlife (facility exists, needs support); c National Center for Marine Sciences Aquarium (proposed facility); d - visitor centers at Palm Island and Tyre Coast Nature Reserve (proposed facilities); e) Marine Training Center (proposed facility); f) information signs and interpretive panels; g) launch an interactive website on marine wildlife and ecology); 5- develop and disseminate information material and guidelines on coastal protection; 6 develop and promote bird-watching/monitoring activities; 7 support marine turtle awareness programs.

**Priorities:**

1. Develop and disseminate information material and guidelines on coastal protection;
2. Develop and promote bird-watching/monitoring activities;
3. Support marine turtle awareness programs.

The present Action Plan comes as a complements the five national priority Action Plans and should be coordinated with the other four.

**Assumptions:** The following should be available: specialized scientists and researchers; academic programs and research institutions in the field of Aquatic Sciences; research equipment (field and laboratory equipment); endorsement and legal support by public institutions; cooperation on regional agreements and technical support from other Mediterranean countries; prevention of all forms of pollution and unplanned development along the coast.

**Expected results/outputs:** Increase the Lebanese population's awareness of habitat conservation and biodiversity.

**Indicator of achievement of objectives:** Monitoring through verifiable indicators. For example the most significant indicator of success would be the continued existence of all 19 beaches (that were identified as potential nesting sites for the Mediterranean marine turtles) at the end of the implementation of the NAP.

**Actors:** Ministry of the Environment, Ministry of Agriculture, Ministry of Transport, local municipalities, NGOs, media, divers federation, schools, fishermen's union, UNIFIL Mediterranean countries.

## Calendar of implementation and detailed budget:

Activity	Sub-activity	Time required (months)	Tentative Budget (US\$)
1.	<del>///</del> Develop information material (also covering conventions and protocols, as well as the materials needed under activities 2 and 3)	6	30,000
	<del>///</del> Produce information material (leaflets, posters, brochures)	3	70,000
	<del>///</del> Organize seminars, field visits, other outdoor events, etc.	Ongoing	50,000
	<b>Subtotal</b>		<b>150,000</b>
2.	<del>///</del> Build a dozen bird monitoring sheds	9	60,000
	<del>///</del> Develop and produce bird-watchers' guides	12	20,000
	<del>///</del> Organize bird-watching/counting excursions	Ongoing	20,000
	<del>///</del> Develop and produce submersible fish diving guides	12	20,000
	<b>Subtotal</b>		<b>120,000</b>
3.	<del>///</del> Conduct surveys to develop baseline awareness data	4	10,000
	<del>///</del> Develop the marine turtle mascot (design and launching event)	3	10,000
	<del>///</del> Conduct targeted seminars to municipalities, fishermen's union and diving centers on marine turtle conservation principles and techniques	12	30,000
	<del>///</del> Organize sea turtle monitoring campaigns and conduct intermittent awareness surveys to monitor results	Ongoing	25,000
	<b>Subtotal</b>		<b>75,000</b>
4.	<del>///</del> Develop and implement a marketing strategy to promote Wonders of the Sea marine exhibit	12	40,000
	<del>///</del> Prepare a feasibility study to expand the marine exhibit and identify potential sources of funding	6	15,000
	<del>///</del> Prepare a FS of a public aquarium at NCMS	6	15,000
	<del>///</del> Establish and equip visitor/information centers at Palms Islands and Tyre Coast nature Reserves	24	60,000
	<del>///</del> Establish a Marine Training Center	36	To be determined
	<del>///</del> Install information signs and interpretive panels	6	50,000
	<b>Subtotal (not including Marine Training Center)</b>		<b>180,000</b>
5.	<del>///</del> Design website and contact potential contributors	5	5,000
	<del>///</del> Update website regularly and monitor visitor traffic	Ongoing	Per year 4,000
	<b>Subtotal</b>		<b>9,000</b>
	<b>TOTAL</b>		<b>534,000</b>

**Pays :** Liban

**Plan d'Action National pour la Législation libanaise**

**Mots-clés :** Législation, exploitation littorale, études d'impacts, aires marines protégées, ratification, homogénéisation

**Justification :** L'utilisation de la bande littorale est très importante au Liban et le maintien en l'état de biotopes ou de paysages rares. Pour faire face à ces impacts et menaces, les outils législatifs sont désuets, voire totalement absent. Le chevauchement dans les fonctions et responsabilités et l'absence d'une mise à jour et l'absence des mécanismes d'exécutions des textes légis latifs ont ajouté à la dégradation de la côte et de ses ressources.

**Budget:** 180 000 US\$

**Durée :** 3 années

**Portée Géographique:**

Locale

Nationale **X**

Internationale

**Type de projets :**

Collecte de données

Protection

Interaction Pêche

Capacity building

Autres **Législation**

**Pertinents**

**internationaux**

CBD

ACCOBAMS

Convention de Bern

CMS

Medwet

GFCM

Autre :

**Objectifs :** 1) Assurer la conservation des espèces animales et végétales en Méditerranée par la mise en œuvre de textes de lois contenant des mesures de gestion et de protection légales; 2) Légiférer en vue d'éviter la perte et la dégradation de ces espèces et d'autres formations significatives pour le milieu marin et les maintenir dans un état de conservation favorable; 3) Créer une loi programme d'aménagement complet pour le littoral, en vue de gestion de la zone côtière au Liban.

**Objectifs spécifiques :** Élaboration de textes juridiques et/ou législatifs spécifiques aux différentes espèces ou paysages.

**Priorités:**

1) Rassembler et réviser les textes de lois nationaux en vigueur concernant l'exploitation du littoral;

2) Mettre en place des aires protégées marines et proposer des mesures législatives appropriées notamment en matière d'étude des impacts des aménagements littoraux.

**Pré requis :** Aucun.

**Résultats attendus :** Création d'outils législatifs régissant l'exploitation et assurant la conservation des ressources marine et côtière.

**Indicateurs de réussite :** Aucun.

**Responsables et Participants:** Parlement et divers Ministères en charge du littoral, de l'environnement et de l'Agriculture; Conseil du Développement et de la Reconstruction.

**Calendrier d'exécution :**

Objectif 1 – Convention et Accords internationaux																	
Activités	mois?	1	2	3	4	5	6	...	12	...	18	...	24	...	30	...	36
Rassembler les Conventions et Accords INTERNATIONAUX		X															
DEMARCHES pour amener le Liban à adhérer		X	X	X													
Ratifier les Accords par le Parlement							X	X	X	X	X						
INTRODUIRE les Conventions dans les textes nationaux												X	X	X	X	X	X
Objectif 2 – textes légaux nationaux																	
Rassembler textes existants		X															
Rassembler et examiner les autres plans d'actions préparées dans le cadre du projet SAP-BIO		X	X	X													
Préparer les textes de loi qui conviennent					X	X	X										
Etablir les lois (Vote et promulgation)							X	X	X	X	X	X	X	X	X	X	X
Elaborer les décrets (en conseil des ministres)							X	X									
Elaborer les décrets simples et arrêtés							X	X									

**Budget détaillé:**

Le budget est calculé pour le Bureau Central : Cinq mille dollars mensuellement pendant 3 ans, y compris honoraires des collaborateurs, frais administratifs, déplacements et frais du bureau.



**Country:** Lebanon

**National Action Plan for establishing conservation strategies for coastal habitats**

**Key words:** Vermetid terrace bioconstruction, sand dunes, invasive species, fishery, conservation, GIS maps

**Budget:** US\$ 1 040 300

**Duration:** 4 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building **X**

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other: Directive habitats

**Rationale:** The Lebanese environment has been and still is experiencing a period of neglect, never recorded before, with constant attacks from unregulated development and the depletion of the endemic fauna and flora. These attacks come in different forms including: pollution, deforestation, land appropriation from the sea, indiscriminate fishing using conventional and non-conventional methods, unregulated hunting of native and migrating birds, indiscriminate construction etc... This neglect and lack of interest are rooted in several events. One major event, the Lebanese civil war, played a destructive role by abolishing the dreams and expectations of several generations and favoured, if not actually encouraged, the unplanned urbanization of the Lebanese coast and virgin forests. In order to preserve the remaining Lebanese marine biodiversity and protect the necessary habitats, national conservation strategies falling within the framework of regional agreements need to be established, funded and implemented. This present Action Plan complements to the five national priority Action Plans.

**Objectives:** Establish conservation strategies for coastal habitats in order to ensure the protection and sustainable use of marine resources.

**Specific objectives:**

- 1- Protection of endangered habitats: vermetid terrace bioconstruction (*Dendropoma petraeum*), sandy beaches, dunes and river mouths;
- 2- Evaluate the effects of Invasive species;
- 3- Study the impact of dangerous fishing techniques on fish species diversity in order to devise conservation strategies for marine species in general and target species in particular.

**Priorities:**

- 1- Generate GIS maps to locate and characterize hot spots and infer current and future impacts on affected habitats;
- 2- Identify actions needed to prevent pollution;
- 3- Develop coastal land use zoning;
- 4- Develop conservation priorities including the identification of habitats that should be protected;
- 5- Develop conservation strategies including the sustainable use of habitats that require protection;
- 6- Develop management strategies for the control of exotic invasive species.

**Assumptions:** The following should be available: specialized scientists and researchers; academic programs and research institutions in the field of Aquatic Sciences; research equipment (field and laboratory equipment); endorsement and legal support by public institutions; cooperation on regional agreements and technical support from other Mediterranean countries; prevention of all forms of pollution and unplanned development along the

**Expected results/outputs:** starting conservation strategies for coastal habitats in Lebanon.

**Indicator of achievement of objectives:** The success of this Action Plan should be appraised according to the BACI method (Before, After, Control, Impact). The field studies, in combination with the available published information, will establish baseline data that will act as a starting point to assess of marine and coastal biodiversity.

**Actors:** Concerned governmental bodies; academic and research institutions; non-governmental organizations; unions of fishermen; industrial sector; tourist sector; local communities; Mediterranean countries.

**Calendar of implementation and detailed budget:**

<b>Activity</b>	<b>Duration</b>	<b>Budget</b>
Protection of terraces	4 years	191,900
Protection of remaining sand beaches and dunes	4 years	199,400
Assessing the impact of invasive species on coastal habitats	4 years	279,200
Protection of river mouth habitats	4 years	209,900
Impact of fishing techniques on fish species and population dynamics	4 years	159,900
<b>TOTAL</b>	<b>4 years</b>	<b>1,040,300</b>

**Pays :** Liban

**Plan d'Action National pour la surveillance permanente de la diversité biologique marine et côtière**

**Mots-clés :** Surveillance permanente, diversité biologique, bioindicateurs, conservation, gestion durable

**Justification :** Le milieu marin et le littoral libanais abritent au moins 2400 espèces animales et végétales qui jouent un rôle primordial dans le maintien de l'équilibre des écosystèmes marins. La régression et la disparition de certaines espèces pourraient avoir des conséquences néfastes sur le plan écologique. Il est donc extrêmement urgent d'établir une stratégie et des actions de valorisation et de protection visant la conservation et la gestion durable de la diversité biologique pour continuer à en profiter tout en assurant sa pérennité.

**Budget:** 416 000 US\$

**Durée :** 3 années

**Portée Géographique:**

Locale  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données **X**  
Protection **X**  
Interaction Pêche  
Capacity building  
Autres **Monitoring**

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM  
Autre :

**Objectifs :**

- 1) Surveillance permanente des communautés vivantes des plates-formes à vermetes;
- 2) Surveillance permanente de la diversité biologique par bioindicateurs;
- 3) Surveillance permanente des deux espèces de tortues présentes;
- 4) Surveillance permanente des herbiers de *Cymodocea* et *Halophila*;
- 5) Etude de la dynamique des populations piscicoles;
- 6) Développement d'une recherche scientifique et d'une surveillance continue sur le grand dauphin.

**Priorités:** La zone côtière paraît être plus affectée par les activités anthropiques que la pleine eau et nécessite une stratégie de conservation et de développement plus urgente.

**Pré requis :** a) Disposer des programmes de recherches orientés, b) avoir des équipements et du matériel, c) disposer de moyens financiers, d) orienter des programmes de sensibilisation.

**Résultats attendus :** Conservation et suivi régulier de la biodiversité marine et côtière.

**Indicateurs de réussite :** Aucun.

**Responsables et Participants:** Différents Ministères (Environnement, Agriculture; Travaux Publics, Ressources Hydrauliques); Conseil du Développement et de la Reconstruction; Instituts académiques; Secteur industriel.

**Calendrier d'exécution et budget détaillé:**

Chacune des 6 actions dure 3 ans.

Action 1 : Surveillance permanente des communautés vivantes des plates-formes à vermetes.  
**68 800 \$**

Action 2 : Surveillance permanente de la diversité biologique par la méthode des "bioindicateurs".  
**62 800 \$**

Action 3 : Surveillance permanente des deux espèces de tortues *Caretta caretta* et *Chelonia mydas*.  
**66 800 \$**

Action 4 : Surveillance permanente des herbiers à *Cymodocea nodosa* et *Halophila stipulacea*.  
**68 800 \$**

Action 5 : Étude de la dynamique des populations piscicoles in-situ

Action 6 : Développement d'une recherche scientifique et surveillance continue du grand dauphin *Tursiops truncatus*.  
**48 800 \$**

Une coordination avec l'action prioritaire nationale numéro 3 alloue **100 000 \$** à l'achat d'un bateau de 15 m.

**Country:** Lebanon

**Budget:** 2 500 000 Euros

**Duration:** 4 years

**National Action Plan to determine the physical parameters of the Lebanese marine environment**

**Key words:** Physical parameter, research vessel, integrated research, data base GIS

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection  
Protection  
Interaction with fisheries  
Capacity building **X**  
Other

**Relevance to international treaties:**

CBD  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM  
Other:

**Rationale:** Lebanon almost completely lacks of information on physical marine parameters. Determining the physical parameters of the Lebanese marine environment is the key to a well-oriented scientific track to prepare the prerequisite data needed by marine environmental scientists to methodically study , evaluate, assess , improve and protect the biologically productive ecosystems that provide habitats and food resources for the diversified marine population in our coasts. Results from this Action Plan could be used to prevent or mitigate the negative impact and effect of some microbiological / industrial pollutants – dumped by public sewage utilities and coastal industry in marine habitats and communities. The present Action Plan comes as a complement to the five national priority Action Plans.

**Objectives:** Setting up a Lebanese Marine Data Base UNIT(MDBU) equipped with a research vessel and the necessary scientific instruments. Provide some of the needed tools ( physical parameters data) to the National Biodiversity Unit to develop and implement its strategy (as part of Lebanon's obligations - generated from the ratification of environmental conventions) in order to conserve, study and use natural resources and marine biological diversity in a sustainable way.

**Specific objectives:** 1- Establish a readily accessible marine national data base unit; 2- assess the impact of the aforementioned physical parameters on marine biodiversity, population dynamics and target indicators species versus the time; 3- develop models to predict fluctuations of these physical parameters; 4- identify hot spots and land based sources of pollution in addition to man - caused maritime sources of pollution such as petroleum as well as the trend of the possible spillage spread; 5- generate GIS based maps of the physical parameters and cartography of the benthos species.

**Priorities:**

1- Establishing of a Marine Data Base Unit within the framework of the " National Center for Marine Sciences (NCMS), which is part of the National Council for Scientific Research (NCSR);

2- Collection of existing data; setting out the specifications of the field survey equipment; primary training of the technical staff;

3- Owning the equipment;

4- Studying the impact of the physical parameters on marine biodiversity, population dynamics and target indicator species.

**Assumptions:** Fund to cover the unit formation expenses, purchase of research boat and equipment, yearly running costs; developing of the infrastructure of the MDBU; availability of the research boat; availability of survey equipment; availability of specialized scientists and researchers.

**Expected results/outputs:** Setting up the Lebanese Marine Data Base Unit.

**Indicator of achievement of objectives:** Monitoring through planned periodic and final assessment. Performing final inspection based on the policy quality plan. The Quality Controller - which is one of the Unit Staff - will be responsible for monitoring the system process by undertaking a regular Unit Self Assessment on the processing performance and goals.

**Actors:** Ministry of the Environment, Ministry of Agriculture, Ministry of Public Works and Transport,, Army Geographic Department, municipalities of the major coastal cities / zones (Tripoli, Jounieh, Beirut, Saida), local communities, universities.

**Calendar of implementation:**

Activity	N° months	1	4	7	10	13	16	19	22	25	28	31	34	37	40	43	46	Budget		
																			Fixed	Running
Formation of a Marine Data Base Unit	3	■	■	■														50 000	25 000	75 000
Collection of the existing Data	2		■	■														—	25 000	25 000
Setting out the specification of the field survey equipment	2			■	■													—	50 000	50 000
Primary training of the technical staff	2				■	■												—	750 000	75 000
Owning the equipment	3				■	■	■											850 000	50 000	900 000
Planing and executing the surveys	24					■	■	■	■	■	■	■	■	■	■	■	■	—	500 000	500 000
Study the impact of the physical parameters on marine biodiversity	18							■	■	■	■	■	■	■	■	■	■	—	200 000	200 000
Data processing	30							■	■	■	■	■	■	■	■	■	■	50 000	200 000	250 000
G.I.S presentation	20																■	50 000	150 000	200 000
Quality control and improvement	34																■	—	100 000	100 000
Change hands	2																■	—	125 000	125 000
<b>Total</b>																				<b>2 500 000</b>

**Detailed budget:**

Activity	Euros	%
Boat and instrumentation cost	800,000	32
Office furniture and processing equipment	150,000	6
Staff charges	800,000	32
Field survey & laboratory expenses	300,000	12
Office expenses	120,000	5
General and unexpected expenses	330,000	13
<b>Total</b>	<b>2,500,000</b>	<b>100</b>

**Country:** Libya

**National Action Plan for the conservation of marine and coastal birds in the Libyan Arab Jamahiriya**

**Key words:** Marine and coastal birds, protection, legislation, monitoring, education, management

**Rationale:** Marine and coastal birds and their habitats face many threats and hazards from various human activities. Some species seem to be endangered or nearly extinct and deserve protection. Libya's coastline is 1970 km long; one feature is its many wetlands, used as stopover routes for many migratory marine and coastal birds. They provide food, shelter and nesting grounds for many avifauna migrating from their homes to their wintering grounds. Land filling and infrastructure construction along the coast represent the main threats for bird fauna. There is a lack of information and knowledge on these topic in Libya.

**Budget:** US\$ 420 000

**Duration:** 4 years

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection **X**  
Protection **X**  
Interaction with fisheries  
Capacity building Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention **X**  
CMS **X**  
Medwet **X**  
GFCM  
Other:

**Objectives:** Ensure the conservation of coastal and marine bird species by implementing integrated management; ensure the protection of proposed sites to conserve the marine and coastal bird species and the ecosystem processe; avoid loss of coastal zones and marine bird species by implementing legal protection measures; establish marine and coastal bird monitoring network and tagging centers.

**Specific objectives:**

- 1- Protect birds from agricultural encroachment;
- 2- stop habitat clearance by over-exploitation (including the hunting and poaching of birds and other fauna);
- 3- mitigate tourist activity;
- 4- Plan urban expansion, the construction of roads and industrial development on coastal and infra-littoral habitats to include the conservation of important sites for marine and coastline birds;
- 5- Regulate fishing activities and salt collecting to avoid disturbing nesting marine birds or marine birds resting for the winter during their migration.

**Priorities:**

- 1- Develop and revise the existing regulations;
- 2- collect and study all legal texts relating to marine and coastal birds;
- 3- establish Protected Areas for Marine and Coastal Birds (PAMCB);
- 4- establish a national management and research program;
- 5- promote education and capacity-building;
- 6- conserve endangered and threatened marine and coastal birds;
- 7- support the setting up of a monitoring network for marine birds;
- 8- Strengthen collaboration with the organizations, authorities and NGOs.

**Assumptions:** The various institutions and authorities (e.g. research centers, universities, GOs and NGOs) will collaborate with each other.

**Expected results/outputs:** Protection of Libyan coastal and marine birds.

**Indicator of achievement of objectives:** Monitoring and periodical project reports.

**Actors:** Environment General Authority (EGA), the General Authority of Animal Wealth (GAAW), Marine Biology Research Center (MBRC) and its branches, local authorities (shaabiya), People's Committees of the shaabiya, Environment Protection Office, universities, fishermen's associations and the general scout movement.

**Calendar of implementation:**

ACTION	1 <sup>ST</sup> 6 MONTHS	2 <sup>ND</sup> 6 MONTHS	2 <sup>ND</sup> YEAR	3 <sup>RD</sup> YEAR	4 <sup>TH</sup> YEAR
<b>Legislation</b>					
Developing and revising the existing regulations	☞	☞			
<b>Establishing protected areas for marine and coastal birds</b>					
1. Selection of sites	☞	☞			
2. Issuing declaration decree for PAMCB			☞		
3. Implementing the declaration decree			☞	☞	☞
<b>Setting up a national management and research program</b>					
1. National consultation process	☞	☞			
2. Setting up a national working team		☞	☞		
3. Implementing the national program				☞	
<b>Promoting education and capacity-building</b>					
1. Preparing qualified personnel	☞	☞	☞		
2. Conducting public awareness campaign	☞	☞	☞	☞	☞
3. Monitoring program and capacity-building project			☞	☞	☞

**Detailed budget:**

NO.	ITEM	ESTIMATED COSTS
1.	Revision of legislation	US\$5,000
4.	Establishing protected areas for marine and coastal birds, for the 6 main sites (US\$50,000 for each site)	US\$300,000
2.	Promoting a workshop on the conservation of marine birds and their habitats (20 persons)	US\$20,000
3.	Inventorizing important areas for marine and coastal birds. 3 phases with bird watching equipment	US\$60,000
5	Organizing a training course for 12 participants	US\$10,000
6.	Conducting a public awareness campaign and capacity building project draft	US\$25,000
<b>Total</b>		<b>\$ 420,000</b>



**Country:** Libya

**National Action Plan on proposed new marine and coastal protected areas and national parks**

**Key words:** MPA, legislation, flora and fauna inventories, selection process, management plan

**Rationale:** Along the Libyan coast there are some valuable sites to protect. However the present list is too short and almost always concerns areas of bird importance. According to the potential value of other sites, the lack of data about species to protect and the anthropogenic impact, the lack of legal status, and the lack of environmental sensitisation for flag species, this national Action Plan is proposed.

**Budget:** US\$719 000

**Duration:** 6 years

**Geographic scope:**

Local **X**  
National **X**  
International

**Type of project:**

Data collection **X**  
Protection **X**  
Interaction with fisheries **X**  
Capacity building Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM  
Other:

**Objectives:**

- 1) To propose a legal framework enhancement for MPAs, and sensitisation phase;
- 2) To do pilot tests of policies and actions on pre-selected areas;
- 3) To start the new site selection process.

**Specific objectives:**

- a) To assess available information on the proposed marine and coastal sites;
- b) To propose the required actions to be taken;
- c) To implement these actions;
- d) To increase community awareness of the danger of misuse of marine and coastal areas;
- e) To involve international organisations and governments in co-operating and assisting in implementing the Action Plan.

**Priorities:** Priority of implementation of any Action Plan may be given to areas vulnerable to deterioration, i.e. heavily threatened, such as Farwa Lagoon and Ain-Zayanah Lagoon. The eastern region (Cyrenaica coast) will then be a priority for the second stage of the Action Plan.

**Assumptions:** The Action Plan requires the appointing of bureau members and selection of international experts specialising in MPA selection and prospection. Funds, and setting up a national committee, are also needed to start up the Action Plan.

**Expected results/outputs:** Legal framework enhancement and new MPA implementation.

**Indicator of achievement of objectives:** None.

**Actors:** Environment General Authority; Marine Biology Research Center.

**Calendar of implementation and detailed budget:**

<b>Stage A actions</b>	<b>Duration</b>	<b>Budget</b>
MPA network selection bureau implementation	2 months	\$ 5,000
Initiating a legal framework for implementing a Protection Decree for the eight proposed sites	2 months	\$ 2,000
3-day initiation workshop for local authorities		\$ 2,000
1-week special sensitization program (with booklet distribution, media and involvement of educational institutions)		\$ 10,000
<b>Total</b>	<b>3 months</b>	<b>\$ 19,000</b>
<b>Stage B action</b>	<b>Duration</b>	<b>Budget</b>
Recruiting international and national experts	3 months	\$ 40,000
7-day training workshop on selection criteria for local experts		\$ 6,000
Setting up the National MPA Selection Committee and meeting programs	2 months	\$ 4,000
Session for proposing test of selection criteria on 8 previously selected sites	1 month	\$ 2,000
Site study (see Tables b and c below)	18-24 months	\$ 320,000
Elaboration of proposal on these sites and of selection criteria	2 months	\$ 1,000
National Committee session for ratification of the selected guiding principles and criteria in a new policy guideline	1 month	\$ 2,000
Projects of management plan and capacity-building for the newly designated MPAs	2 months	\$ 5,000
<b>Total</b>	<b>36 months</b>	<b>\$ 380,000</b>
<b>Stage C actions</b>	<b>Duration</b>	<b>Budget</b>
Recruiting international field teams	4 months	\$ 60,000
5-day "planning the prospecting program" workshop	1 month	\$ 5,000
Implementation of data collection (see Table b below)	18 - 24 months	\$ 200,000
Analysis and synthesis	8 months	\$ 32,000
Applying the criteria session	2 months	\$ 10,000
Workshop for submission of final list	2 months	\$ 10,000
National Committee meeting for implementing the list	2 months	\$ 3,000
<b>Total</b>	<b>36 months</b>	<b>\$ 320,000</b>

**Country:** Libya

**National Action Plan for the conservation of marine turtles and their habitats in Libya**

**Key words:** Sea turtles, nesting areas, conservation, national regulation, turtle protected areas

**Rationale:** Libya’s beaches are among the favorite Mediterranean sea turtle nesting sites, notably *Caretta caretta* loggerhead turtles. Although the national legislation protects marine turtles, “ hunting and catching of marine turtles and tortoises of different species, by any means is banned in the Libyan Arab Jamahiriya” lack of implementation and enforcement exists so that these species remain endangered. Risks come from fishing activities, habitat degradation, the natural and human predation of eggs and nesting female predation.

**Budget:** US\$133 000

**Duration:** 4 years

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection  
Protection **X**  
Interaction with fisheries  
Capacity building  
Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention **X**  
CMS **X**  
Medwet  
GFCM  
Other:

**Objectives:** 1. Developing and enforcing the existing regulations; 2. establishing a national management, research and monitoring program; 3. establishing marine turtle protected areas; 4. promoting education and capacity building; 5. conducting public awareness and information programs; 6. strengthening regional and international cooperation.

**Specific objectives:**

1. Setting up a national scientific program to prepare a suitable national strategy for the conservation of marine turtles and continuing the surveying of the Libyan coast, on the basis of long-term monitoring of selected beaches.
2. Building up the national capacities to execute the fieldwork by training young people and volunteers with the help of experienced countries and relevant regional organizations.
3. Selection and declaration of some nesting areas as specially protected areas for marine turtles, and issuing the needed regulations and management plans.

**Priorities:** Setting up of turtle protected areas; the national regulations for protection of marine turtles should be developed and properly implemented, along with field surveys along the coastline, but this is impossible without capacity building of qualified young researchers and assistants via collaboration with regional and international organizations experienced in these activities.

**Assumptions:** Full communication and coordination between the different stakeholders and responsible authorities. All national relevant institutes, authorities and NGO’s should participate in planning and executing of this proposed program. Funding. Collaboration with regional and international organizations experienced in these activities.

**Expected results/outputs:** Full protection of Libya’s turtle nesting beaches.

**Indicator of achievement of objectives:** Monitoring and project assessment made through a national consultation process.

**Actors:** Information and public awareness activities: Environment General Authority (EGA) and NGOs; studies and surveys: Marine Biology Research Center (MBRC), EGA and universities; Establishing protected areas: MBRC (selecting sites), Shabiyates (management and financing) and EGA (follow-up).

## Calendar of implementation:

ACTION	1 <sup>ST</sup> 6 MONTHS	2 <sup>ND</sup> 6 MONTHS	2 <sup>ND</sup> YEAR	3 <sup>RD</sup> YEAR	4 <sup>TH</sup> YEAR
<b>I. Legislation</b>					
1. Developing and revising the existing regulations	☞	☞			
2. Enforcement phase					☞
<b>II. Establishment of national management, research and monitoring program</b>					
1. National consultation process I.	☞	☞			
2. Setting up of national working team		☞	☞		
3. National consultation process II.			☞		
4. Implementation of national program				☞	
<b>III. Establishment of marine turtle protected areas</b>					
1. Selection of sites	☞	☞			
2. Issuing declaration decree for MTPA.			☞		
3. Implementing the declaration decree.			☞	☞	☞
<b>IV. Promoting education and capacity-building</b>					
1. Preparing of qualified personnel	☞	☞	☞		
2. Conducting public awareness campaign.	☞	☞	☞	☞	☞
3. Convening discussion sessions with fishery officials.	☞	☞	☞	☞	
<b>V. Strengthening regional and international cooperation</b>					
1. At regional level		☞	☞	☞	☞
2. At international level	☞	☞	☞	☞	☞

## Detailed budget:

NO.	ITEMS	ESTIMATED EXPENSES	
1.	Revision of legislation	US\$5,000	
2.	Establishment of a national management, research and monitoring program.	Convening workshops, meetings between all involved partners.	US\$10,000
		Preparation of detailed national program for conservation and sustainable management of marine turtles and their habitats.	US\$15,000
		Convening the second workshop to discuss the national program.	US\$10,000
3.	Establishment of marine turtle protected areas	Selection of sites	US\$10,000
		Expected budget for selected sites. e.g. for 5 sites (estimated annual budget)	US\$50,000
4.	Promoting education and capacity-building	Organizing training course for 10 participants	US\$8,000
		Conducting public awareness campaign	US\$20,000
		<b>Convening discussion sessions with fishery officials</b>	US\$5,000
Total		US\$ 133,000	

**Country:** Malta

**National Action Plan for the conservation of cetaceans in Maltese waters**

**Key words:** Cetacean, threatened species, conservation, stranding

**Rationale:** First, it is now well known that the presence of threats to cetaceans worldwide and in particular in the Mediterranean Sea is evident and pressing. As a consequence, a number of cetacean populations are at risk, and show alarming rates of decline. Concern about this situation is fully justified, because the pressure exerted by humans on the marine environment is increasing. If action is not taken, very likely populations of cetaceans will disappear from the region. Malta's territorial waters and the adjacent seas contain important and possibly critical habitats for Mediterranean cetaceans. This is due to the particular geographic location of the Maltese islands, and to the ecological and oceanographic characteristics of this portion of the Mediterranean. Thus an effort to conserve the rich cetacean fauna living in this area is going to make a significant contribution to marine conservation throughout the region.

**Budget:** 901 000 US\$

**Duration:** 3 year

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building **X**

Other

**Relevance to international treaties:**

CBD **X**

ACCOBAMS **X**

Bern Convention **X**

CMS **X**

Medwet

GFCM

Other:

**Objectives:** Acquire science-based knowledge on:

- a) the cetacean populations that currently inhabit Maltese waters
- b) what factors, if any, are threatening such populations;

direct actions based on the knowledge acquired under a) and b).

**Specific objectives:**

- 1- Managing human activities to mitigate negative impacts on cetaceans;
- 2- Granting special protection to areas containing critical cetacean habitats, by setting up ad hoc marine protected areas or special management areas;
- 3- Providing for timely responses to emergency situations;
- 4- Capacity building;
- 5- Promotion of education and awareness programs.

**Priorities:** Development and implementation of pilot conservation and management action in well-defined key areas containing critical habitats for populations belonging to priority species, and monitoring and control of the eventual development of commercial whale-watching or dolphin-watching operations.

**Assumptions:** Active participation of the Administration, and in particular the Environment Protection Directorate within the Malta Environment and Planning Authority; involvement of all the stakeholders; availability of scientific and technical facilities (e.g. ship time from the Malta Maritime Authority from Civil Protection's help in transportation of a cetacean specimen, and the like); funding.

**Expected results/outputs:** Protection of cetaceans populations.

**Indicator of achievement of objectives:** First, a tight time frame is incorporated in this Action Plan, to be implemented within a three-year basis. At the end of each period a thorough assessment is envisaged, in order to provide appropriate and updated re-scheduling of the next Action Plan. Second, each action must be defined (a) by specific objectives, and (b) by specific indicators and/or criteria to enable the evaluation of performance and to assess whether those objectives were met.

**Actors:** Armed forces (Maritime Squadron) and the civil protection; police; Veterinary Services Department; Fisheries Department; Administrative Law enforcement section; fishing community; local diving clubs, scuba divers, underwater photographers and pleasure craft owners and operators; local NGOs; Biology Department of the University of Malta; tourists; school teachers' community and media operators.

**Calendar of implementation:**

Action	Title	Year one				Year two				Year three			
		I	II	III	IV	I	II	III	IV	I	II	III	IV
A1	Field survey	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
A2	Study of fisheries interactions	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
A3	Stranding programme	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
B1	Fisheries conflicts	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
B2	Management areas <sup>2</sup>									☞	☞	☞	☞
B3	ACCOBAMS task force	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
B4	Whale-watching monitoring <sup>3</sup>							☞	☞	☞	☞	☞	☞
C1	Science capacity-building	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
C2	Live stranding techniques	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
D1	Education and awareness	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

**Detailed budget:**

Action	Title	Cost
A1	Field survey	160,000
A2	Study of fisheries interactions	46,000
A3	Stranding programme	135,000
B1	Fisheries conflicts	0
B2	Management areas	70,000
B3	ACCOBAMS task force	10,000
B4	Whale watching monitoring	10,000
C1	Science capacity building	300,000
C2	Live strandings techniques	50,000
D1	Education and awareness	120,000
<b>Total</b>		<b>901,000</b>

<sup>2</sup> Subject to location of suitable areas as a result of studies conducted under A1 (for this reason the beginning of this action was hypothetically placed at the beginning of year 3).

<sup>3</sup> Subject to realistic likelihood that whale watching operations will begin in Malta. Thus beginning time of B4 is here placed at the beginning of the second half of the period as an example, but should be moved as appropriate when the necessary information exist.

**Country:** Malta

**National Action Plan for the estimation of the sustainability of grouper fishing in Malta**

**Key words:** *Epinephelus spp*, fishing, diving, MPA, law, regulation, education programs

**Rationale:** The grouper is an indicator species of low anthropogenic disruption. To date there are no 'proper' marine protected areas in the Maltese Islands which can adequately protect and enhance the populations of these fish. The grouper numbers in the Maltese Islands seem to be decreasing; due to the pressure exerted by anthropogenic influence and through diseases, these species are at particular risk.

**Budget:** 797 152 US\$

**Duration:** 5 years

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection **X**  
Protection  
Interaction with fisheries **X**  
Capacity building **X**  
Other

**Relevance to**

**international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention **X**  
CMS  
Medwet  
GFCM  
Other

**Objectives:** To analyse the sustainability of diving, grouper fishing and grouper harpoon fishing (spearfishing) in Malta and formulate a basis for its management in the Maltese waters, including sensitisation to the importance of this flag species, and a valorisation of marine areas of natural heritage interest.

**Specific objectives:**

- a) Identification of the different species of grouper present in Maltese water;
- b) Survey of the dusky grouper assemblage structure;
- c) Assessment of anthropogenic impacts on groupers and the socio-economical impact of groupers in Maltese society;
- d) Legal decisions and policies update;
- e) Social sensitization and training.

**Priorities:**

- 1) Capacity-building;
- 2) Establishing and identifying the main areas which are inhabited by groupers;
- 3) Establishing the main exploiters of this resource and the main capture methods together with the other threats posed to this fish its population and its habitat;
- 4) Research on the population dynamics, including studies on genetics, behaviour, and ecology;
- 5) Awareness programmes and other educational campaigns;
- 6) Proposing ways for managing the anthropogenic activities and their impacts.

**Assumptions:** Selection of advisory and consultative committee; GEM participation; research on pre-existing data; training of 4 voluntary diver teams.

**Expected results/outputs:** Protection of the grouper and reducing of anthropogenic pressure in Malta.

**Indicator of achievement of objectives:** Monitoring with annual reports.

**Actors:** Environment Protection Directorate of the Malta Environment and Planning Authority; Fisheries and Aquaculture Department.

**Calendar of implementation:**

**Year 1:** Preliminary mission; site selection; general preparation

**Year 2:** Description of grouper sub-population structure on the selected Maltese sites; fishery surveys.

**Year 3:** Sub-population monitoring with underwater field studies and preliminary acquirement of fishing stock data.

**Year 4:** Field survey and population dynamic analysis; proposition for legal and sensitisation measures.

**Year 5:** Field survey and population dynamic analysis; Setting up of legal, practical and sensitization procedures.

**Detailed budget:**

DESIGNATION	TOTAL/DAY	TOTAL FOR THE STUDY
Foreign grouper scientist	350	\$105 000
Fisheries officer or scientist	200	\$60 000
Socio-economic scientist	200	\$60 000
Environmental officer	20	\$6000
Diving operations and laboratory assistants	80	\$24 000
Diving operations and laboratory assistants	80	\$24 000
Fisheries and inquests assistant	80	\$24 000
Total payment of the staff of the Advisory Committee for the 5 years study		\$303 000

**Human needs**

\$303 000 (see table) and \$25 000 extra for air ticket for the grouper expert - **Total of \$328 000**

**GEM Operation and collaboration:** \$10 000 a year and \$10 000 extra for genetic - **Total of \$50 000**

**Voluntary teams: Total of \$50 000**

**Activities at sea: Total of \$199 952** Year 1 (selection and visit of sites): \$50 000

Year 2 to 5 (boat; car; diving gear; underwater photo; underwater and terrestrial positioning system; scooter): \$133 952

Year 2 to 5 (tagging and genetic campaign): \$16 000

**Fisheries and socio-economic analysis:** (car rent; boat rent; fish sample buying; positioning system (GPS) and software): **Total \$82 000**

**Laboratory unit set up: Total \$50 000**

**Legal and sensitization actions**

(material; workshop; publishing and distribution of booklet): **Total \$37 200**



**Country:** Malta

**National Action Plan for micro-cartography, mapping, and surveillance of the *Posidonia oceanica* meadows in the Maltese islands**

**Key words:** *Posidonia* meadows, cartography, GIS, monitoring protocol, aerial photography, field survey

**Rationale:** This phanerogam is the keystone species of the ecosystem “*Posidonia oceanica* meadow” which constitutes one of the main tanks of biodiversity of the Mediterranean. The only Maltese marine endemic species known is the Maltese top-shell *Gibbula nivososa*, a species known only from seagrass meadows in certain Maltese bays.

**Budget:** US\$85 650

**Duration:** 6 years

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection **X**  
Protection  
Interaction with fisheries  
Capacity building Other  
**Cartography**

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention **X**  
CMS  
Medwet  
GFCM  
Other: Directive habitats

**Objectives:**

- a) To identify the various types of meadow around Malta;
- b) To install a monitoring protocol;
- c) To identify the pressure exerted on meadows (sewage outfall, anchoring ...)

**Specific objectives:**

- a) Aerial photography;
- b) *in situ* micro-cartography and mapping of meadows;
- c) GIS implementation;
- d) Setting up an adapted beaconing system.

**Priorities:** To know as accurately as possible the distribution of the *P. oceanica* beds around the Maltese islands.

**Assumptions:**

- a) To know with precision the availability of scientific and diving material;
- b) To evaluate possible cooperation with local actors (diving clubs, fishermen).

**Expected results/outputs:** GIS system.

**Indicator of achievement of objectives:** None.

**Actors:** Services of the state; universities; local actors (fishermen, diving clubs ...).

**Calendar of implementation:**

Number of days	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Data record (14 sites)	5					
Buying specific material	3			2		
Organization/meeting/contacts	3			1		1
Aerial mapping (air plane)	1		1		1	
Photo interpretation (starting ½ day each site)	7		3		3	
Field survey						
Preliminary mission (15 sites)	14					
Micro-cartography/transect/rope = starting 3 days/7 sites	21		7			7
Micro-cartography.inf.lim.=day/7 sites	7		7			7
Monitoring and maintenance						
Density measurements	15	15	15	15	15	15
Beaconing/quadrat	15	15	15	15	15	15
Laboratory measurements						
Lepidochronology	2	2	2	2	2	2
Reports						
Intermediary report/preliminary mission	3					
Intermediary report			5			
Annual report	5	5	5	5	5	5
Final report						5
National seminary ?						
Awareness documents ?						

**Detailed budget:**

	ITEM	Number of days	Unit rated (euros)	Total (euros)
Data record	National expert ∅ 1	5	250	1250
Buying material	National expert ∅ 1	3	250	750
	Specific materials	1	1000	1000
Organization/ 2 meetings		5	250	1250
				0
Field survey				0
Preliminary mission	National expert ∅ 2 ∅ 15 sites	28	250	7000
	Nat, technical assistant (pilot boat ∅ 1)	15	150	2250
	Transfers to 15 sites	1		0
	Renting boats	15		0
Aerial mapping (air plane)	National expert ∅ 1	1	250	250
Photo interpretation (starting ½ day each site)	National expert ∅ 1 ∅ 15 sites	15	250	3750
	National expert cartography ∅ 1	7	250	1750
Microcartography/transect/rope	National expert ∅ 2 ∅ 7 sites ∅ 3 days	42	250	10500
	Nat, technical assistant (pilot boat ∅ 1)	42	150	6300
Microcartography.inf.lim.=day/7 sites	National expert ∅ 2 ∅ 7 sites ∅ 2 j	42	250	10500
	Nat, technical assistant (pilot boat ∅ 1)	42	150	6300
Monitoring and maintenance	National expert ∅ 2 ∅ 15 sites ∅ 1 day	30	250	7500
	Nat, technical assistant (pilot boat) ∅ 1	30	150	4500
	Transfers to 15 sites (inside Gozo)			0
Laboratory measurements				0
Lepidochronology	National expert laboratory ∅ 1	12	250	3000
Assistance to field survey	International expert ∅ 1	15	550	8250
Attending 2 meetings	International expert ∅ 1	2	550	1100
	Travel expenses ∅ 1	1	700	700
Reports				0
Intermediary reports	National expert ∅ 1 ∅ 5 days ∅ 3 years	15	250	3750
Annual report	National expert ∅ 1 ∅ 1j ∅ 6 years	6	250	1500
Final report mid/end program	National expert ∅ 1 ∅ 2 ∅ 5 days	10	250	2500
National seminary?				0
Awareness documents?	See Appendix 4			0
			<b>Total euros</b>	<b>85650</b>

**Country:** Malta

**National Action Plan for the conservation of shark, ray, and skate in the Maltese waters**

**Key words:** Shark, ray, skate, fishery, protection

**Rationale:** Most sharks, rays and skate (SRS) species are endangered. This is mainly due to their biology and ecology. Being top predators, they are not very abundant and thus respond slowly to increased mortality. They have not evolved to be preyed upon intensively. Sharks' and rays' slow recruitment rate makes them more vulnerable to population pressure. They are k-strategists, which means that they invest a large amount of energy in small litters that have a better chance of survival than r-strategist species. This requires a long gestation period (up to two years in some species), sometimes even requiring up to a year before they can mate once more, and small litters compared to other species of fish. Juveniles have a mortality rate of about 50% under normal environmental conditions. These species are seriously threatened by non-selective fishing and the status of their population is almost unknown.

**Budget:** 259 268 US \$  
**Duration:** 3 years  
**Geographic scope:**  
 Local  
 National **X**  
 International **X**  
**Type of project:**  
 Data collection **X**  
 Protection **X**  
 Interaction with fisheries **X**  
 Capacity building **X**  
 Other  
**Relevance to international treaties:**  
 CBD **X**  
 ACCOBAMS  
 Bern Convention **X**  
 CMS **X**  
 Medwet  
 GFCM  
 Other:

**Objectives:** Promote research on sharks, rays and skate and the Maltese fisheries with regard to sharks and rays.

**Specific objectives:** 1- promote: the assessment and sustainable management of SRS in Maltese waters and pinpoint (categorically) the species at risk; 2- research on local populations of SRS leading to sustainable legislation; 3- research on feeding and breeding grounds of SRS; 4- sustainable management of Maltese fisheries with regard to SRS; 5- fishing methods that reduce SRS capture as by-catch of major commercial species; 6- protection of endangered SRS species; 7- research on the location of SRS feeding and breeding grounds, and the development of sustainable management to protect these grounds. Educate fishers and the AFM Maritime Squadron, as well as the laymen, on the ecology and behavior of sharks and promote awareness of misguided concepts about their threat to human beings and fish catch.

**Priorities:**

- (a) Train personnel in the collection of relevant scientific data on shark, skate and ray populations in Maltese waters;
  - (b) Acquire scientific data on the said local populations of these fish;
- direction of actions based on the knowledge collected under (b).

**Assumptions:** External help from foreign scientists. Need for trained personnel able to identify fish. Collaboration of the Department of Fisheries.

**Expected results/outputs:** Protects SRS populations.

**Indicator of achievement of objectives:** Reports.

**Actors:** Department of Fisheries; Armed Forces of Malta (Maritime Squadron) and the Civil Protection Department; local NGOs; local councils and diving clubs such as Calypso Malta and Atlam; Education Department.

## Calendar of implementation

	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
YEAR 1					Training of fisheries personnel in stock assessment procedures		Appointment of advisory board	Stock assessment pilot project				
YEAR 1						Training of personal on identification of species						
YEAR 1												
YEAR 2	Appointing the education and awareness committee		Stock assessment, data collection		Stock assessment report	Stock assessment ,data collection		Stock assessment, report	Stock assessment, data collection		Stock assessment ,report	
YEAR 2					Advisory board meeting			Advisory board meeting			Advisory board meeting	
YEAR 2					Seminar N°1 by the education and awareness committee		TAGGING, GIS AND TELEMETRY EXPEDITION					
YEAR 3	Proceeding of seminar N° 1	Start work on TV and radio	Stock assessment, data collection		Stock assessment, report	Stock assessment, data collection		Stock assessment, report	Stock assessment, data collection		Stock assessment, report	
YEAR 3	Posters, books, pamphlets		Report on tagging, GIS and telemetry		Advisory board meeting			Advisory board meeting			Advisory board meeting	
YEAR 3					Seminar N°2 by the education and awareness committee	Radio programmes	TAGGING, GIS AND TELEMETRY EXPEDITION				School visits	
Engoing	TV programme		Stock assessment, data collection		Stock assessment, report	Stock assessment, data collection		Stock assessment, report	Stock assessment, data collection		Stock assessment, report	
Engoing	TV spots and adverts		Report on tagging, GIS and telemetry		Advisory board meeting			Advisory board meeting			Advisory board meeting	

## Detailed budget:

Action Proposed	2003	2004/5	Ongoing
<b>1. Policy and legislation</b>			
1.1 Pressing for listing of additional species on App II of CITES	0.0	0.0	0.0
1.2 Investigating legislative changes on European directives	0.0	0.0	0.0
1.3 Pressing for changes in fisheries legislation	0.0	0.0	0.0
1.4 Establishing regulatory orders through fisheries committees	1.6	3.2	1.6
<b>2. Site safeguarding and management</b>			
2.1 Establishing of MCAs	0.0	0.0	0.0
2.2 Implementation of sea fisheries legislation	0.0	0.0	0.0
<b>3. Species management and protection</b>			
3.1 Training of fisheries personnel	1.4	0.0	0.5
3.2 Extending protection over additional species	0.0	0.0	0.0
<b>4. Advisory</b>			
4.1 Establishing of Advisory Board representatives	2.4	9.6	4.8
4.2 Advisory Board meetings	0.3	2.0	1.0
4.3 Developing and disseminating code of conduct and other materials to fishers to raise awareness of good practice	0.0	1.0	0.2
<b>5. Surveying</b>	0.0	0.0	0.0
<b>6. Research</b>			
6.1 Professional scientists	0.0	50.0	5.0
6.2 EIAs	0.0	0.0	0.0
<b>7. Monitoring</b>			
7.1 Stock assessments	0.7	4.0	2.0
<b>8. Publicity and Awareness</b>			
8.1 Setting up the Awareness and Publicity Committee	0.0	2.0	1.0
8.2 Raising awareness through articles and publications	0.0	2.0	0.2
8.3 Raising awareness through public meetings	0.0	2.8	0.00
8.4 Raising awareness through broadcasting (TV/radio)	0.0	6.0	1.00
<b>TOTAL</b>	<b>6.4</b>	<b>82.6</b>	<b>17.3</b>

**Pays :** Maroc

**Plan d'Action National de recherche sur la Biodiversité méditerranéenne du Maroc**

**Mots-clés :** Ressources biologiques, paysages, collections de référence, inventaires, bases de données, plan de gestion

**Justification :** La recherche scientifique constitue dans le domaine de la conservation et l'utilisation durable de la biodiversité marine une priorité des priorités au Maroc dans la mesure où: (i) le Maroc dispose d'un espace maritime considérable qu'il lui faudrait gérer de façon rationnelle et durable; (ii) cet espace est très riche en ressources biologiques et paysagers, que le Maroc devrait également utiliser de façon rationnelle; et (iii) il existe très peu de spécialistes en matière de biodiversité marine et côtière dans le pays.

**Budget:** 225 000 US\$

**Durée :** 5 années

**Portée Géographique :**

Locale **X**  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données **X**  
Protection  
Interaction Pêche  
Capacity building  
Autres **Cartographie**

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM  
Autre :

**Objectifs :** 1) Former des scientifiques spécialisés susceptibles de contribuer à la conservation et à une utilisation durable de la biodiversité nationale; 2) disposer d'informations scientifiques actualisées et fiables pour mettre en place des stratégies nationales ou sectorielles permettant une conservation durable de la biodiversité nationale; 3) avoir un inventaire aussi complet que possible des ressources biologiques marines; 4) constituer une collection scientifique de référence.

**Objectifs spécifiques :**

- a) Faire un inventaire aussi exhaustif que possible des espèces marines et côtières;
- b) Identifier les espèces vulnérables;
- c) Réaliser des études diagnostiques le long de la côte;
- d) Elaborer des plans de gestions pour ces zones sensibles.

**Priorités:**

- 1) Un inventaire détaillé de toutes les données disponibles aussi bien sur les espèces que les espaces (habitats, écosystèmes);
- 2) Une cartographie des habitats méditerranéens de la côte marocaine en particulier à la recherche des posidonies et d'autres biocénoses et communautés menacées;
- 3) Élaborer des études sur les certaines espèces et espaces sensibles du Maroc.

**Pré requis :**

- a) Disposer de photos aériennes pour l'identification fine de la côte;
- b) Disposer de moyens financiers.

**Résultats attendus :** Base de données relative à la biodiversité marine et côtière.

**Indicateurs de réussite :**

- a) Nombre de publications ou de thèses soutenus;
- b) Qualité des infrastructures de recherche.

**Responsables et Participants:** Département de l'Environnement; Département des Pêches maritimes.

**Calendrier d'exécution :**

**1ere année:**

- inventaire complet et informatisé des éléments de la biodiversité marine et côtière du Maroc;
- inventaire complet et informatisé de la bibliographie relative à la biodiversité marine et côtière du Maroc;
- constitution d'une équipe pluridisciplinaire;
- conception d'une base de données adaptée aux besoins nationaux;
- conception d'un SIG sur la biodiversité nationale;
- effectuer des campagnes visant l'identification de diverses composantes de la biodiversité, les lacunes, l'élaboration d'un programme d'études concernant des sites pilotes, de préférence des Sites d'Intérêt écologique et Biologique,
- achat des cartes, photos aériennes, etc. nécessaires pour la cartographie ainsi que du matériel nécessaire pour les sorties;

**2eme année:** Organisation de campagnes de prélèvements et de cartographie, analyses des échantillons et constitution d'une collection;

**3eme année:** suite de campagnes de prélèvements et de cartographie, analyses des échantillons et constitution d'une collection;

**4eme année:** Analyse des échantillons et des premières données

**5eme année:** Analyse des données et rédactions

**Budget détaillé :**

Sorties de prospection : **10 000 \$**

Inventaire (bibliographie et collecte d'échantillons) : **20 000 \$**

Étude diagnostique pour des fins de gestion : **60 000 \$**

Élaboration des plan de gestion : **15 000 \$**

Collections de référence : **60 000 \$**

Base de données relative à la biodiversité marine et côtière : **60 000 \$**

**Pays :** Maroc

**Plan d'Action National pour la cartographie de la côte méditerranéenne marocaine**

**Mots-clés :** Cartographie, habitats, SIG

**Budget:** 103 000 US\$

**Durée :** 2 années

**Portée Géographique:**

Locale **X**  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données **X**  
Protection **X**  
Interaction Pêche  
Capacity building  
Autres **Cartographie**

**Pertinents internationaux**

CBD  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM  
Autre :

**Justification :** L'insuffisance et parfois l'absence pour des fins de gestion, d'études et d'informations sur la biodiversité marine et côtière est en grande partie due à l'absence d'assise cartographique. L'approche intégrée de la conservation et de l'utilisation durable de la biodiversité, devrait avoir comme base de départ, une carte des habitats de la zone côtière pour pouvoir y appliquer des plans de gestion.

**Objectifs :** 1) Disposer, sur des supports visuels, de diverses composantes de la biodiversité méditerranéenne du Maroc. 2) disposer de cartes sur les menaces qui pèsent sur cette biodiversité. 3) disposer d'un outil vital pour l'orientation de la recherche scientifique relative à la biodiversité marine et côtière du Maroc. 4) disposer d'un SIG regroupant les résultats de ces investigations.

**Objectifs spécifiques :**

- a) Sorties de prospections tout au long de la côte (terrain et plongées sous marine);
- b) Préparation (digitalisation et photo-interprétation) des photos aériennes pour l'élaboration de fonds de cartes sur lesquels seront portés les divers habitats.

**Priorités:** Disposer des photographies aériennes pour l'élaboration de fonds cartographiques.

**Pré requis :**

- a) Acquisition de photographies aériennes;
- b) Acquisition d e matériel de terrain pour accéder à la côte accidentée.

**Résultats attendus :** Etablissement d'un SIG.

**Indicateurs de réussite :** Publications, thèses soutenues, infrastructures des recherches, formateurs.

**Responsables et Participants:** Ministère de la Recherche scientifique; Ministère de la Pêche.

**Calendrier d'exécution :**

**Neuf mois:** a) Analyses bibliographiques relatives les études réalisées dans la région sur les espèces et les espaces vulnérables, sur les caractéristiques du milieu, etc.; b) Achats du matériel scientifiques et de terrain; c) Acquisition des photos aériennes; d) Contacts avec divers départements et organismes concernés par le projet; e) Un stage de formation pour s'informer sur les approches adoptées à l'échelle régionale ou internationale et pour la maîtrise de logiciels appropriés.

**Six mois:** a) Une prospection de terrain tout au long de la côte marocaine; b) Identifier les critères du choix de zones pilotes; c) Traitements des photographies aériennes, digitalisation et préparation des fonds de cartes; d) Préparation des campagnes de terrain pour la cartographie (par secteurs et par transects).

**Six mois:** a) Terrain (cartographies des zones côtières, des zones humides et des fonds côtiers par plongée); b) Une deuxième mission à l'étranger pour discussion et compléments de formation.

**Six mois:** a) Terrain-suite (cartographie des zones côtières, des zones humides et des fonds côtiers par plongée); b) Préparation de cartes provisoirement définitives; c) Une troisième mission à l'étranger pour discussion des résultats; d) Vérification des résultats finaux; e) Rédaction du rapport final.

**Budget détaillé :**

Prospections préliminaires de terrain (zone côtière et fonds côtiers): **15 000 USD**

Acquisition, digitalisation et photo-interprétation des photos aériennes: **68 000 USD**  
dont 60 000 USD consacrés la réalisation, de photographies  
aériennes de toute la côte méditerranéenne du Maroc,  
à leur assemblage, restitution etc.

Réalisation des cartes: **20 000 USD**



**Pays :** Maroc

**Plan d'Action National pour l'élaboration de programmes éducatifs/sensibilisation et de projets incitatifs et alternatifs**

**Mots-clés :** Sensibilisation, éducation, projets alternatifs, conservation

**Justification :** La côte méditerranéenne du Maroc ne comporte pas les immenses richesses halieutiques de la façade atlantique; cependant elle recèle d'immenses potentialités écologiques, socio-économiques, écotouristiques, scientifiques etc. qui peuvent jouer un rôle capital dans le développement durable de cette façade. Face à la diminution régulière de ces ressources, la sensibilisation reste un outil clé pour toute mesure de gestion ou de conservation.

**Budget:** 510 000 US\$

**Durée :** 2 années

**Portée Géographique:**

Locale **X**

Nationale **X**

Internationale

**Type de projets :**

Collecte de données

Protection

Interaction Pêche

Capacity building

Autres **Sensibilisation**

**Pertinents**

**internationaux**

CBD

ACCOBAMS

Convention de Bern

CMS

Medwet

GFCM

Autre :

**Objectifs :** Il s'agit d'élaborer des programmes de sensibilisation/éducation compatibles avec les préoccupations des populations concernées et, aussi, ses capacités d'assimilation des discours informatifs et de sensibilisation (dépliants ou ateliers, documentaires, tables rondes, documents, etc.). Pour les populations ayant des intérêts en relation avec cette biodiversité, en particulier pour des raisons de subsistance, il importe que soient adoptées des approches participatives et que les moyens de conservation soient accompagnées de mesures alternatives et incitatives encourageant ces populations à contribuer efficacement aux efforts de cette conservation.

**Objectifs spécifiques :** a) Aider les populations cibles à prendre conscience de l'importance vitale de la biodiversité aussi bien sur les plans écologique que socio-économique; b) aider ces populations à prendre part et à participer activement aux efforts de conservation et d'utilisation durable de la biodiversité; c) atteindre les objectifs de conservation en s'appuyant sur le soutien des populations locales dans diverses étapes du processus.

**Priorités:** Réalisation d'une étude socio-économique pour identifier les besoins des populations et les pressions exercées sur les espèces et espaces.

**Pré requis :** Une analyse détaillée de diverses composantes socio-économiques pour orienter les programmes de sensibilisation et d'Éducation.

**Résultats attendus :** Participation active des populations à la conservation et l'utilisation durable des ressources.

**Indicateurs de réussite :**

- a) Le nombre de groupements associatifs;
- b) Le taux de satisfaction des populations cibles des programmes de sensibilisation.

**Responsables et Participants:** Département de l'Environnement.

**Calendrier d'exécution :**

Étude socio-économique: 4 mois;

Élaboration des programmes de sensibilisation et des documentaires audio-visuels: 12 mois;

Élaboration de projets alternatifs: 6 mois.

**Budget détaillé :**

- Étude socio-économique : **10 000 USD**
- Programmes de sensibilisation/Éducation spécifiques : **100 000 USD**
- Documentaires audio-visuels : **50 000 USD**
- Conception de mesures alternatifs (projets incitatifs) : **350 000 USD**

**Pays :** Maroc

**Budget:** 12 000 US\$

**Durée :** 0.5 années

**Plan d'Action National pour l'amélioration de la législation nationale**

**Mots-clés :** Textes de loi, création de nouveaux textes, harmonisation des textes existants, renforcement des lois existantes.

**Portée Géographique:**

Locale **X**  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données  
Protection  
Interaction Pêche  
Capacity building  
Autres **Législation**

**Justification :** L'une des principales raisons de la dégradation de la biodiversité nationale, méditerranéenne en particulier, est l'inadaptation (inadéquation, insuffisance, absence) des textes législatifs aux nouvelles données d'évolution, d'exploitation et d'utilisation de l'espace maritime national.

**Pertinents**

**internationaux**

CBD  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM  
Autre :

**Objectifs :** Analyse de l'arsenal juridique national, en matière de biodiversité marine et suggestion de modifications qui s'imposent pour en améliorer l'efficacité.

**Objectifs spécifiques :**

- 1) Augmenter l'efficacité de l'arsenal juridique nationale en matière de conservation de la biodiversité;
- 2) Renforcer cet arsenal par de nouveaux textes;
- 2) Renforcer les conditions de contrôle;
- 4) Améliorer les conditions institutionnelles.

**Priorités:**

- a) Sortir la loi sur les aires protégées;
- b) Sortir la loi sur le littoral;
- c) Sortir la loi sur les études d'impact.

**Pré requis :** Disposer de l'ensemble des textes régissant l'exploitation des ressources marines et côtières aussi bien inertes que vivantes.

**Résultats attendus :** Création et renforcement des textes de loi pour la conservation de la biodiversité.

**Indicateurs de réussite :** Augmentation de la taille des populations animales ou végétales soumises au braconnage.

**Responsables et Participants:** Ministère de l'Environnement; Département de l'Équipement; Département des Pêches maritimes; Département des Eaux et Forêts; Ministère du Tourisme; Ministère des Affaires culturelles.

**Calendrier d'exécution et budget :**

6 moi pour l'analyse détaillée des textes existants et la préparation de nouveaux textes: **12 000 USD**

**Pays :** Maroc

**Plan d'Action National pour la Valorisation de la Biodiversité marine méditerranéenne du Maroc**

**Mots-clés :** Ecosystèmes, paysages, valorisation économique, protection, gestion rationnelle, utilisation durable

**Justification :** La grande biodiversité (en espèces et en paysages) des côtes marocaines méditerranéennes) doivent être considérés comme un investissement qui à court, moyen et long termes, pourraient constituer des sources de revenus non négligeables. C'est, en effet un potentiel considérable pour un tourisme de plus en plus écologique dans le monde et plus particulièrement en Méditerranée. La valorisation de ces ressources pourrait, d'une part, contribuer à leur conservation, leur gestion rationnelle et leur utilisation durable et, d'autre part, contribuer au développement socio-économique local, régional ou même national.

**Budget:** 10 000 US\$

**Durée :** 8 mois

**Portée Géographique:**

Locale

Nationale **X**

Internationale **X**

**Type de projets :**

Collecte de données

Protection

Interaction Pêche

Capacity building

Autres **Étude de faisabilité**

**Pertinents internationaux**

CBD **X**

ACCOBAMS

Convention de Bern

CMS

Medwet

GFCM

Autre :

**Objectifs :** Etude de faisabilité consistant à identifier :

- (i) les éléments de la biodiversité nationale devant être valorisés,
- (ii) les potentialités à développer pour chacune,
- (iii) les modalités et moyens à mettre en œuvre pour optimiser leur utilisation.

**Objectifs spécifiques :**

- 1) Disposer d'une liste d'espèces ayant des potentialités à développer autres que leurs valeurs brutes;
- 2) Diminuer la pression sur certaines ressources biologiques marines classiques.

**Priorités:** Élaboration d'une liste exhaustive de toutes les ressources marines et côtières pouvant être valorisées .

**Pré requis :** Le préalable à la mise en œuvre de cette action réside essentiellement dans la disponibilité d'une liste de toutes les espèces, habitats, écosystèmes et paysages intéressants de la côte marocaine.

**Résultats attendus :** Ajouter une "plus-value" pour mieux protéger et mieux vendre le produit national.

**Indicateurs de réussite :** Recettes des produits transformés, taux de demande sur les nouveaux produits, taux de satisfaction des populations des usagers.

**Responsables et Participants:** Département des Eaux et Forêts et Département des Pêches maritimes.

**Calendrier d'exécution :**

La réalisation de ce projet nécessite un minimum de Huit mois pour:

- L'élaboration d'une liste de toutes les espèces et paysages de la côte marocaine méditerranéenne pouvant être valorisés;
- L'élaboration de fiches par ressource;
- Deux missions visant l'élaboration d'une liste aussi complète que possible des espèces disposant de potentialités à optimiser pour des utilisation durable; mais aussi pour s'acquérir de l'expérience en matière de valorisation des produits de la mer.

**Budget détaillé :**

Préparation de toutes es informations nécessaires pour l'élaboration de projets de valorisation de diverses composantes de la biodiversité nationale: **10 000 USD**

**Country:** Slovenia

**Action Plan on habitat cartography supported by the geographic information system with special emphasis on seagrass meadows**

**Key words:** *Posidonia* meadows, Adriatic sea, protection, monitoring, cartography, GIS

**Rationale:** Seagrass meadows are very important habitat types and are considered to be rich biological communities with high rates of primary production. Seagrass meadows serve as a host to a wide variety of epibionts (epiphytes and epizoids), which use their leaves as a substrate for attachment. They stabilize sediment and reduce wave action. On the other hand, seagrass meadows provide a good shelter and nursery for fish species. Nowadays seagrass meadows face devastation in many parts of the world.

The *Posidonia oceanica* seabeds are especially important since they are considered to be one of the most characteristic and important littoral communities in the Mediterranean. Due to the fact that seagrass meadows are endangered (and thus protected) in the Slovenian coastal sea and in the whole Mediterranean area, an effort should be made to do a topographical survey of all seagrass meadows found in Slovenia. This cartographic material will provide a good basis for the monitoring and surveillance of seagrass meadows in Slovenia.

**Budget:** US\$155 500

**Duration:** 7 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building

Others

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention **X**

CMS

Medwet

GFCM

Other: Directive habitats

**Objectives:** Establish a cartographic survey of seagrass meadows supported by GIS in Slovenian coastal sea and implement such a methodology for other endangered and relevant habitat sites (photophilous algae biocoenosis), occurring in Slovenia's coastal sea.

**Specific objectives:**

- 1- Aerial photography of seagrasses ;
- 2- Visual transect verification of aerial photography data;
- 3- Research - Visual transect censuses of important features and diversity assessment using different imagery methods;
- 4- GIS supported cartography;
- 5- Training of researchers involved in habitat cartography;
- 6- Setting up of the long-term monitoring programme

**Priorities:** Priority should be given to an aerial photographic survey, underwater survey and sampling and training. Both mentioned techniques will provide a data base for subsequent GIS implementation.

**Assumptions:** 1- Establishing of an expert working group for the seagrass meadows, other vegetation type cartography and other important habitat types, preferably within the existing research institute dealing with marine biodiversity; 2- required specific equipment and tools for the production of habitat cartography with special emphasis on seagrass meadows with GIS operational tools, 3- training for use of GIS supporting tools.

**Expected results/outputs:** Mapping of seagrass meadow and of other submarine habitats.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Ministry for the Environment, Ministry of Science and Education, Institute of RS for Nature Protection, Marine Biology Station, National Institute of Biology, NGO's, fishermen and divers.

**Calendar of implementation:**

Action	Deadline
<b>Field work</b>	
Low altitude aerial topography	1 year
Visual transects	3 years
Research - visual transect censuses of important features	5 years
<b>Maps</b>	
Training programmes	1 year
GIS-supported cartography for seagrass meadows	4 years
GIS-supported cartography for other specific habitat types	7 years
<b>Monitoring</b>	
Establishing a long-term monitoring programme	1 year

**Detailed budget :**

Actions	Budget
<b>Field work</b>	
Low altitude aerial topography	15.000 ?
Visual transects	25.000 ?
Research - visual transect censuses of important features	12.500 ?
<b>Maps</b>	
Training programmes	5.000 ?
GIS-supported cartography for seagrass meadows	17.000 ?
GIS-supported cartography for other specific habitat types	50.000 ?
<b>Monitoring</b>	
Establishing of the long-term monitoring programme	6.000 ?
<b>Equipment and tools</b>	
Software/hardware for GIS support	23.000 ?
DGPS and other minor tools	2.000 ?
<b>Total</b>	<b>155.000 ?</b>



**Country:** Slovenia

**National Action Plan on biological invasions and possible effects on biodiversity**

**Key words:** Biological invasion, alien species, Adriatic Sea, regular survey, monitoring, international cooperation

**Rationale:** The invasion of alien species in the Mediterranean Sea is nowadays considered to be a serious problem, which may cause some unexpected consequences for native flora and fauna and their environment. In some cases introduction of the non-indigenous species has provoked huge damage to biodiversity and to the environment in general. Every efforts should be made to prevent or at least to monitor the invasion of alien species in the area.

**Budget:** 30 000 US\$

**Duration:** 5 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection

Interaction with fisheries

Capacity building Other

**Relevance to international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other:

**Objectives:** Establish an inventory database of alien species occurring in the Slovenian part of the Gulf of Trieste and in the broader northern Adriatic area. Collect data on the occurrence, abundance and spreading of alien species. Assess the impact of alien species on biodiversity.

**Specific objectives:**

- 1- Organize a regularly survey and monitoring of the area, aimed at discovering the presence of alien species;
- 2- Assess the impacts that alien species (may) have on biodiversity and look for possible mitigation strategies;
- 3- Ship hull monitoring;
- 4- Mariculture – monitoring of accidentally introduced species,
- 5- Monitoring of unintentional (natural) invasion,
- 6- Improve international cooperation.

**Priorities:** Data inventory of alien species and localization of the source of introduction in the Slovenian part of the Adriatic Sea.

**Assumptions:** Establishing of an expert working group to gather all possible data on alien species in the studied area and in the broader northern Adriatic Sea; cooperation and commitment by the involved enterprises (Port of Koper) regarding ship hull monitoring and especially the monitoring of ballast water and sediment.

**Expected results/outputs:** Updated knowledge on alien species in the area; creation of a network on both a national and international scale for monitoring the invasion and its effects on biodiversity.

**Indicator of achievement of objectives:** None.

**Actors:** Ministry for the Environment; Ministry of Science and Education; Institute of the RS for Nature Protection; NGOs; fishermen; divers.

**Calendar of implementation:**

Action	Deadline
<b>Target 1: <u>Inventory database</u></b>	
Inventory database for known introduced species	1 year
Inventory database for expected introduced species	1 year
Establishing of informants network	3 years
International cooperation	3 years
<b>Target 2: <u>Monitoring</u></b>	
Ballast water and sediment monitoring	5 years
Ship hull monitoring	5 years
Mariculture – monitoring of organisms introduced accidentally with target species	3 years
Monitoring of unintentional (natural) invasion	5 years
<b>Target 3: <u>The impact of alien species on biodiversity</u></b>	
Database with information regarding impacts of alien species on biodiversity – foreign (Mediterranean) experience	3 years

**Detailed budget:**

Action	Budget
<b>Target 1: <u>Inventory database</u></b>	
Inventory database for known introduced species	7.000 ?
Inventory database for expected introduced species	3.500 ?
Establishing of informant network	2.000 ?.
International cooperation	3.500 ?
<b>Target 2: <u>Monitoring</u></b>	
Ballast water and sediment monitoring (programme preparation)	3.500 ?
Ship hull monitoring (programme preparation)	3.500 ?
Mariculture – monitoring of organisms introduced accidentally with target species	2.500 ?
Monitoring of unintentional (natural) invasion	2.000 ?
<b>Target 3: <u>The impact of alien species on biodiversity</u></b>	
Database with information regarding impacts of alien species on biodiversity – foreign (Mediterranean) experience	2.500 ?
	<b>30.000 ?</b>

**Country:** Slovenia

**National Action Plan on Slovene commercial fishery by-catch**

**Key words:** Biodiversity, fisheries, non commercial species, by-catch, Adriatic Sea, data collection

**Rationale:** In Slovenia's sea, fishing is managed through a system of time and space restrictions and through regulation of the mesh size of nets. On the basis of observations of commercial fishing, interviews with fishermen and monitoring of fishery resources it has become evident that by-catch does exist. The composition of the Slovene commercial by-catch varies from benthic invertebrates to marine mammals, from non-commercial to highly commercial species, and from endangered and protected species to those without any status. To date, no data based on systematic sampling exists for the country on this topic.

**Budget:** US\$47 513,78

**Duration:** 1 year

**Geographic scope:**

Local  
National **X**  
International **X**

**Type of project:**

Data collection **X**  
Protection  
Interaction with fisheries **X**  
Capacity building Other

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM **X**  
Other:

**Objectives:** Produce the first Slovenian evaluation on the impact on biodiversity of different types of fishing gear and their by-catch. Provide data collection and quantification of the extent of by-catch.

**Specific objectives:**

- 1- Collection of existing data;
- 2- Improvement of by-catch monitoring and fishery data collection;
- 3- Cataloguing of fishing gear;
- 4- Assessment of the interactions between fishing gears and by-catch species and of commercial species discard;
- 5- Increase fishing gear selectivity and fishermen's awareness.

**Priorities:**

- 1- Increase knowledge on by-catch and discard;
- 2- Reduce the capture of by-catch species;
- 3- Reduce the level of discard of by-catch species;
- 4- Improve catch data collection;
- 5- Increase awareness on various levels (from fishermen to fisheries managers).

**Assumptions:** Cooperation between research institutions and fishermen and collaboration with specialists for the identification of macrozoobenthic species. Cooperation with a foreign institution dealing with fishing gear research and design in order to find appropriate solutions and modifications for fishing gear in use in order to reduce by-catch.

**Expected results/outputs:** Reduction of by catch detrimental effects on marine flora and fauna and increasing people's awareness of this topic.

**Indicator of achievement of objectives:** Monitoring, collecting data before and after the action.

**Actors:** Fishermen, National Institute of Biology (NIB) with the Marine Biological Station of Piran and Inspectorate for Agriculture, Forestry, Hunting and Fisheries.

**Calendar of implementation:**

Activity	1st month	2nd month	3rd month	4th month	5th month	6th month	7th month	8th month	9th month	10th month	11th month	12th month
Collection of publications												
Building lists of species (protected, commercial, non-commercial etc.)												
Collection of available by-catch data												
Collection of fishing gear data												
Building a by-catch database												
Analysis of catch data collection												
Sampling of by-catch												
Optimisation of by-catch sampling techniques												
Analysis of possibilities for use of more selective gear												
Analysis of possibilities for increasing the awareness												
Elaboration of data												

**Detailed budget:**

	cost (USD)
<b>Material</b>	
Equipment	8738,57
Dsposable	2184,64
Lterature	873,86
<b>Total:</b>	<b>11797,07</b>
<b>Experts</b>	<b>15379,88</b>
<b>Activities at sea</b>	
vessel	5243,14
personal	12583,54
travel	1592,6
DSA	917,55
<b>Total:</b>	<b>20336,83</b>
<b>Grand total:</b>	<b>47513,78</b>

**Country:** Slovenia

**National Action Plan on impact of alien populations used in mariculture on genome of wild populations of same species**

**Key words:** Genetic diversity, mariculture, Adriatic Sea, protection, collect data, collaboration

**Rationale:** The world fisheries crisis accelerated the development of marine aquaculture which, in turn, became a source of pollution, including genetic pollution. Gilthead sea bream and sea bass are important species in fisheries as in aquaculture around the Mediterranean, including Slovenia. The increasing development of marine aquaculture will make it necessary to evaluate the genetic impact of escapees entering the natural environment. Better knowledge of the genetic structure and variability level of wild and domesticated sea bass and gilthead sea bream stocks is needed for appropriate fisheries management and to evaluate the impact of human activities on the maintenance of local genetic diversity.

**Budget:** US\$32 700

**Duration:** 1 year

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection

Interaction with fisheries **X**

Capacity building

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM **X**

Other:

**Objectives:** Fill in the gap in knowledge of genetic diversity in wild and cultured populations of sea bass and gilthead sea bream in the Slovenian part of the Adriatic and assess the genetic flow between reared and wild populations.

**Specific objectives:** 1- Conserve the genetic diversity and maintain the integrity of aquatic communities and ecosystems by appropriate management; 2- conduct scientific research on the present genetic diversity of wild and reared sea bass and gilthead sea bream populations; 3- minimize the harmful effects of introducing non-native populations or genetically altered stocks used for aquaculture; 4- regulate transfer of populations of sea bass and gilthead sea bream from distant geographic regions into the Adriatic Sea; 5- promote steps to minimize the effects of escaped farmed fish on wild populations; 6- promote the use of local populations as a founding stock in the aquaculture.

**Priorities:** Collect data on the genetic diversity of wild and reared populations of sea bass and gilthead sea bream in the Slovenian part of the Adriatic Sea.

**Assumptions:** Collaboration with laboratories active in the same field around the Adriatic basin. Mariculture farm owners should be aware of the impact caused by aquaculture on the natural genetic resources in the marine environment. Government involvement.

**Expected results/outputs:** Protection of genetic diversity of marine native population of sea bass and gilthead sea bream in the area; increase in people's awareness on this topic.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Fishermen, Ministry of Agriculture, Forestry and Food.

**Calendar of implementation:**

ACTIVITY	1 <sup>st</sup> month	2 <sup>nd</sup> month	3 <sup>rd</sup> month	4 <sup>th</sup> month	5 <sup>th</sup> month	6 <sup>th</sup> month	7 <sup>th</sup> month	8 <sup>th</sup> month	9 <sup>th</sup> month	10 <sup>th</sup> month	11 <sup>th</sup> month	12 <sup>th</sup> month
Collection of available scientific data	■											
Sampling of wild populations		■	■									
Sampling of populations from aquaculture				■								
Optimisation of techniques		■	■	■								
Analysis of genetic diversity in wild populations					■	■	■	■				
Analysis of genetic diversity in populations from aquaculture									■	■	■	
Elaboration of data												■

**Detailed budget:**

CONSUMABLE COSTS	PRICE (USD)
Molecular biology reagents	6800
DISPOSABLE (PLASTICS, GLASSWARE)	900
literature	500
Travel subsistence costs	
Local travel	500
Field sampling	
Vessel	2000
Personnel cost (full time)	22.000
<b>TOTAL</b>	<b>32.700</b>

**Country:** Slovenia

**National Action Plan on sensitive ecosystems – *Posidonia oceanica* meadow (ecological conditions, cartography and monitoring based on the GIS Posidonie methodology)**

**Key words:** *Posidonia* meadows, Adriatic Sea, protection, monitoring, cartography, GIS

**Rationale:** *Posidonia oceanica* is, together with *Cymodocea nodosa*, the most common seagrass in the Mediterranean. *Posidonia oceanica* was quite common in the Gulf of Trieste until 1938 (north Adriatic). After that, it faced a drastic decrease in the northernmost part of the Adriatic and it is very likely that at present there is only one (very small) *Posidonia oceanica* meadow in the Gulf of Trieste, deserving protection.

**Budget:** 78 500 US\$

**Duration:** 4 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention **X**

CMS

Medwet

GFCM

Other: Directive habitats

**Objectives:** Ensuring the legal protection of *Posidonia oceanica* in the area and proposing a protected area that would include the meadow.

**Specific objectives:**

- 1- Adopt suitable legislative measures;
- 2- Collect ecological data in the area;
- 3- Produce an accurate cartography;
- 4- Start on monitoring and awareness campaigns aimed at safeguarding the meadow;
- 5- Increase knowledge on the extension of the area covered by the meadow, based on accurate cartography.

**Priorities:** The legal protection of the meadow, which includes establishing a protected area, and accurate cartography.

**Assumptions:** Legal protection of the meadow.

**Expected results/outputs:** Protection of the last *Posidonia oceanica* meadow present in the northern Adriatic Sea.

**Indicator of achievement of objectives:** Checking the achievement of single activities according to the implementation calendar proposed within the Action Plan. Reports on the results of the activities (maps, studies etc.).

**Actors:** Ministry of the Environment, Physical Planning and Energy; Institute of the Republic of Slovenia for Nature Protection; Ministry of Science, Sport and Education; Ministry for Agriculture, Forestry and Food; local communities; fishermen; NGOs.

**Calendar of implementation:**

Activity	Quarters of a year							
Elaboration of a draft proposal for the legal protection of the meadow	■							
Elaboration of the protection decree		■						
Adoption of the decree by the government			■	■				
Aerial photography		■	■					
Checking the results of aerial photography by scuba-diving				■	■	■	■	
Making of a map of the meadow using the Geographical Information System							■	■
Study of the main ecological parameters in the meadow		■		■		■		■
Setting up a monitoring programme							■	■
Marking the lower limit of the meadow						■	■	
Installing signposts			■					
Marking the outer limit of the protected area					■			
Making a map of the meadow for the wider public								■
"A closer look at <i>Posidonia oceanica</i> "			■				■	

**Detailed budget:**

ACTIVITY	ESTIMATED COST IN US \$
Aerial photography	2.500,00
Checking the results of aerial photography by scuba-diving	2.000,00
Making of a map of the meadow using the Geographical Information System	2.500,00
Study of the main ecological parameters in the meadow	30.000,00
Setting up a monitoring programme	2.500,00
Installing signposts	5.000,00
Marking the outer limit of the protected area	15.000,00
Marking the lower limit of the meadow	7.500,00
Making and printing a map of the meadow for the wider public	1.500,00
Organising "A closer look at <i>Posidonia oceanica</i> "	10.000,00
<b>TOTAL</b>	<b>78.500,00</b>



**Pays :** Tunisie

**Plan d'Action National l'étude et la protection des bancs et des fonds coralligènes**

**Mots-clés :** Biocénose coralligène, diversité, Inventaires faunistiques floristiques, base de données SIG, suivi régulier

**Justification :** La biocénose coralligène constitue un réservoir de diversité important à l'échelle méditerranéenne. Cette biocénose, représentée par différents faciès, est encore très mal connue en Tunisie. Sa protection et sa gestion (vis à vis de la pêche en particulier) ne pourront être proposées que sur des connaissances scientifiques complètes et actualisées.

**Budget:** 430 000 US\$

**Durée :** 4 années

**Portée Géographique:**

Locale  
Nationale **X**  
Internationale **X**

**Type de projets :**

Collecte de données **X**  
Protection  
Interaction Pêche **X**  
Capacity building  
Autres

**Pertinents**

**internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern **X**  
CMS  
Medwet  
GFCM  
Autre :

**Objectifs :** 1) Développement d'une base de données sur les principaux bancs rocheux et les gisements coralligènes; 2) Mise en place de suivis réguliers de contrôle de l'état de cette biocénose; 3) Contribuer à la mise en place d'une stratégie à long terme de gestion rationnelle du coralligène tunisien.

**Objectifs spécifiques :**

- 1) Réalisation d'inventaires des communautés et des espèces les plus importantes de la biocénose coralligène;
- 2) Développement d'un SIG;
- 3) Renforcer la collection de référence nationale d'organismes marins;
- 4) Production d'outils de vulgarisation, sensibilisation et valorisation.

**Priorités:** Le développement de la base de données est prioritaire, aussi bien au niveau national que pour la biocénose coralligène en particulier.

**Pré requis :** 1) Une bonne coordination entre les nombreux intervenants; 2) la mise en place d'accord de coopération avec des universités étrangères; 3) disponibilité en navire et personnels scientifique et technique.

**Résultats attendus :** Une meilleure connaissance de cette très riche biocénose afin de proposer des mesures concrètes de gestion.

**Indicateurs de réussite :** Développement de la base de données et formation des scientifiques tunisiens.

**Responsables et Participants:** Instituts universitaires tunisiens (INSTM, INAT, FS Sfax, FS Tunis, FS Bizerte).

**Calendrier d'exécution :****Première année**

Etude bibliographique; Contacts avec les divers intervenants; Réunions de coordination, de planification et de répartition des tâches, des rôles et des responsabilités et mise en place d'un échéancier; Deux campagnes marines (NRO Hannibal) et plusieurs missions de terrain avec embarcation légère

**Deuxième année**

Deux campagnes marines (NRO Hannibal) et plusieurs missions de terrain avec embarcation légère; Début des inventaires de la biodiversité du mégabenthos; Enquêtes socio-économiques; Démarrage des campagnes de sensibilisation; Réunions de coordination et évaluation mi-parcours de la bonne marche du plan national et rectification éventuelle.

**Troisième année**

Deux campagnes marines (NRO Hannibal) et plusieurs missions de terrains avec embarcation légère; pêches expérimentales; suivi des campagnes de sensibilisation; enquêtes socio-économiques; poursuite des inventaires; début de la constitution des bases de données; réflexion sur les produits multimédia à développer; définition et caractérisation des différentes entités bio-sédimentaires; réunions de coordination entre les différents intervenants et seconde évaluation mi-parcours; proposition d'un document préliminaire sur la stratégie à long terme pour la gestion durable du coralligène en Tunisie.

**Quatrième année**

Deux campagnes (NRO Hannibal) et plusieurs missions de terrain avec embarcation légère; bases de données sur la biodiversité marine; réalisation d'un SIG; traitement statistique des données; production d'outils de vulgarisation, sensibilisation, d'outils didactiques et de valorisation; rédaction d'une stratégie à long terme pour la gestion et l'aménagement de la biocénose coralligène en Tunisie.

**Budget détaillée :**

<b>Rubriques</b>	<b>An 1</b>	<b>An 2</b>	<b>An 3</b>	<b>An 4</b>
1. Equipements : Collecte, gestion et suivi	36 000	65 000	18 000	0
2. Stages et missions (Tunisie et étrangers)	11 000	11 000	9 000	16 000
3. Vacations, contractuels et sous traitance	7 000	14 000	14 000	15 000
4. Consommable	5 000	5 000	6 000	7 000
5. Collecte données et constitution base de données	36 000	40 000	47 000	45 000
6. Documentation et frais d'accès aux banques de données	3 000	2 000	3 000	3 000
7. Divers et frais de maintenance	3 000	2 000	3 000	4 000
<b>Totaux par année</b>	101 000	139 000	100 000	90 000
<b>Total</b>	<b>430 000</b>			

**Pays :** Tunisie

**Plan d'Action National pour l'étude des espèces invasives**

**Mots-clés :** Espèces exotiques, migration lessepsienne, eaux de ballast, espèces indigènes, surveillance, sensibilisation, textes législatifs

**Justification :** Les côtes tunisiennes et particulièrement la région du golfe de Gabès subissent les conséquences de toutes les perturbations et des modifications floristiques et faunistiques apparues en Méditerranée. Plusieurs espèces animales et végétales d'origine atlantique ou indo-pacifique ont été observées en Tunisie : certaines se sont bien acclimatées et sont exploitées à l'échelle commerciale, d'autres pourraient occuper la niche écologique d'espèces autochtones à valeur commerciale.

**Budget:** 140 000 US\$

**Durée :** 3 années

**Portée Géographique:**

Locale

Nationale **X**

Internationale **X**

**Type de projets :**

Collecte de données **X**

Protection

Interaction Pêche **X**

Capacity building

Autres **Législation**

**Pertinents**

**internationaux**

CBD **X**

ACCOBAMS

Convention de Bern

CMS

Medwet

GFCM

Autre :

**Objectifs :** 1) Monitoring pour suivre l'invasion et inventorier les espèces exotiques, aussi bien en mer que dans les eaux de ballast; 2) recherche scientifique pour étudier la biologie et l'écologie des espèces exotiques et apprécier leur impact sur les espèces indigènes et la diversité biologique; 3) la conservation par d'éventuelles éradications d'espèces invasives et par une action de sensibilisation.

**Objectifs spécifiques :**

- 1) Campagnes de pêche, de dragage, d'analyse des eaux de ballast;
- 2) Surveillance des points de débarquement des produits de la mer;
- 3) Surveillance des sites de mouillage et de sports;
- 4) Elaboration de textes législatifs.

**Priorités :** L'inventaire et la connaissance du statut de chaque espèce exotique sont prioritaires. De même la participation aux actions concertées au niveau régional et surtout avec les pays voisins doit avoir un caractère prioritaire.

**Pré requis :** Aucun.

**Résultats attendus :** Inventaires exhaustifs et réactualisés régulièrement.

**Indicateurs de réussite :** Sensibilisation des professionnels de la mer et mise en place de textes législatifs.

**Responsables et Participants:** Ministère de l'Enseignement Supérieur et de la Recherche Scientifique et de la Technologie; Institut National des Sciences et Technologies de la Mer (INSTM).

**Calendrier d'exécution :**

Pas de calendrier précis pour la période des 3 années.

**Budget détaillé :**

Rubriques	Montant (D.T.)	Montant (\$ US)
Equipements scientifiques	5000	4 000
Bateau	50000	36 000
Matériel informatique	6000	5 000
Moyens terrestres	30000	22 000
Matériel biologique	4000	3 000
Déplacement et Hébergement en Tunisie et à l'étranger	10000	7 500
Organisation d'un séminaire et édition (livre, CD)	25000	18 000
Documentation et accès réseaux	4000	3 000
Contrats et vacations	55200	40 000
Divers	2600	2 000
<b>Total</b>	<b>191800</b>	<b>140 500</b>

**Pays :** Tunisie

**Plan d'Action National :** coordination/formation et aspects législatifs et institutionnels

**Mots-clés :** Conventions internationales, lois nationales, coordination, formation, outils d'aide à la décision, préservation de la biodiversité

**Justification :** Les conventions internationales demandent aux états de fournir une protection adéquate aux habitats, à la diversité biologique, d'identifier et d'inventorier les listes des espèces végétales et animales menacées ou en danger, de coordonner la gestion, la conservation, l'exploration et l'exploitation des ressources vivantes de la mer. La Tunisie doit donc disposer d'un document de référence synthétisant ses actions.

**Budget:** 277 500 US\$

**Durée :** 3 années

**Portée Géographique:**

Locale

Nationale **X**

Internationale

**Type de projets :**

Collecte de données

Protection

Interaction Pêche

Capacity building

Autres **Législation**

**Pertinents**

**internationaux**

CBD

ACCOBAMS

Convention de Bern

CMS

Medwet

GFCM

Autre :

**Objectifs :** 1) au niveau administratif - identifier un mécanisme institutionnel fédérateur; mettre en place un outil d'évaluation environnementale; identifier un corps de fonctionnaires à former; renforcer et promouvoir la création d'AMP. 2) au niveau réglementaire - préparer un document de référence sur la réglementation visant à la préservation de la biodiversité; améliorer l'efficacité de l'arsenal juridique en place. 3) au niveau scientifique - synthétiser les données bibliographiques relatives aux espèces visées par les conventions internationales; établir une carte de sensibilité des milieux marins et littoraux.

**Objectifs spécifiques :**

- 1) Formations législatives et administratives;
- 2) Formations techniques pour les gestionnaires d'espaces protégés;
- 3) Formations techniques et scientifiques.

**Priorités:**

- 1) Mise en place d'une base de donnée nationale actualisée en matière de réglementation des milieux et des espèces marines;
- 2) Elaboration d'un outil d'aide à la décision sous forme d'une carte de sensibilité des milieux

**Pré requis :** Mise en place d'atelier national de planification au démarrage, au cours duquel les moyens logistiques et les ressources humaines et les besoins en programme de formation seront établis.

**Résultats attendus :** Formation des fonctionnaires en charge de la réglementation (terrain et administrations).

**Indicateurs de réussite :** A évaluer par le comité scientifique et le comité de pilotage mis en place.

**Responsables et Participants :** L'ensemble des organismes et Institutions Nationales.

**Calendrier d'exécution**

**Première année :**

Montage et mise en œuvre du système de formation  
Organisation de 6 sessions de formation thématique.

**Deuxième année :**

Organisation de 3 sessions de formation sur sites  
Organisation de 6 sessions de formation thématique.

**Troisième année :**

Lancement et mise en œuvre d'une unité (centre) de formation continue  
Organisation de 6 sessions de formation thématique.

**Budget détaillé :**

Rubriques	1ème année	2ème année	3ème année
1-Equipements	110 000	45 000	0
2- Séjours (stages et missions)	8 000	8 000	8 000
3- Vacation contractuels et sous-traitance	5 000	5 000	5 000
4- consommable et petits matériels	4 000	2 500	2 500
5- Déplacements et hébergements en Tunisie	15 000	15 000	15 000
6- Documentations et frais d'accès aux banques de données	9 000	8 000	5 000
7- Divers frais de maintenance	2 500	2 500	2 500
<b>TOTAL PAR ANNEE</b>	<b>153 500</b>	<b>86 000</b>	<b>38 000</b>
<b>TOTAL</b>	<b>277 500</b>		

**Pays :** Tunisie

**Plan d'Action National pour la réduction de l'impact de la pêche sur la biodiversité littorale des côtes tunisiennes**

**Mots-clés :** Pêche professionnelle, méthodes destructrices, récifs artificiels, législation, aires marines protégées

**Justification :** Sur les côtes tunisiennes, les derniers travaux de recherche ont montré un certain déséquilibre dans l'exploitation des ressources halieutiques particulièrement les ressources benthiques. Ce déséquilibre est constaté aussi bien selon les espèces exploitées que selon les régions ou les zones fréquentées. Une diminution de l'impact de la pêche professionnelle est donc indispensable.

**Budget:** 510 000 US\$

**Durée :** 5 années

**Portée Géographique:**

Locale  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données  
Protection  
Interaction Pêche **X**  
Capacity building  
Autres

**Pertinents internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern  
CMS  
Medwet  
GFCM **X**  
Autre :

**Objectifs :**

- 1) Protection des zones les plus sensibles;
- 2) Alléger ou déplacer l'effort de pêche;
- 3) Mieux faire respecter la réglementation en vigueur;
- 4) Démontre l'impact négatif des techniques employées.

**Objectifs spécifiques :**

- 1) Analyser l'impact du Kiss (mini-chalut), de la seine tournante et d'autres techniques;
- 2) Immersion de récifs artificiels; 3) campagne de sensibilisation et d'information des pêcheurs.

**Priorités:**

- 1) Mieux faire respecter la législation en vigueur;
- 2) Diminuer les impacts négatifs de la pêche professionnelle;
- 3) Protéger les zones les plus sensibles.

**Pré requis :**

- 1) Obtention des autorisations d'expérimentation avec des techniques réglementée (e.g.: kiss);
- 2) Obtention de moyens à la mer.

**Résultats attendus :** Diminution des impacts négatifs; meilleure prise en compte de la réglementation en vigueur.

**Indicateurs de réussite :** Prise en compte par les autorités et les pêcheurs des recommandations.

**Responsables et Participants:** Institut National des Sciences et Technologies de la Mer (INSTM); Institut National Agronomique de Tunisie (INAT); Direction Générale à la Pêche et à l'Aquaculture (DGPA).

**Calendrier d'exécution :****Première année**

- Préparation des équipes de recherche qui seront impliquées dans l'étude
- Synthèse bibliographique des plus importants travaux de recherche effectués sur le sujet
- Réalisation des travaux de prospection pour la pêche au Kiss et à la senne tournante (période estivale)
- Dépouillement et traitement des données issues de ces travaux de prospection

**Deuxième année**

- Réalisation des travaux de prospection pour la pêche au Kiss et à la senne tournante (période printanière)
- Dépouillement et traitement des données issues de ces travaux de prospections expérimentales
- Étude de l'impact de certains engins de pêche (kiss, senne tournante, ...) sur la biodiversité littorale
- Préparation des récifs artificiels
- Choix d'éventuels sites pour la pose des récifs
- Étude de l'impact de la pêche particulièrement certains engins destructeurs sur les écosystèmes et les habitats côtiers
- Campagne de sensibilisation des pêcheurs et des intervenants dans l'activité de pêche sur les dangers de la pêche anarchique

**Troisième année**

- Réalisation d'une campagne de prospection à bord du N/O Hannibal pour étudier l'impact du chalutage sur la biodiversité marine et les ressources vivantes
- Estimation des rejets de petits poissons issus des opérations de chalutage
- Réalisation des opérations de prospection des zones de pose des récifs
- Traitement et analyse des données issues de ces travaux de prospection

**Quatrième et Cinquième année**

- Rédaction du rapport final et des articles scientifiques
- Constitution d'une base des différentes données obtenues sur le sujet
- Suivi des peuplements benthiques dans la zone de pose des récifs
- Continuation des campagnes de sensibilisation

**Budget détaillé :**

<b>Rubriques</b>	<b>Montant (D.T.)</b>	<b>Montant (\$ US)</b>
Equipements scientifiques	14000	10 000
Modules de Récifs artificiels	350000	255 000
Matériel informatique	13000	10 000
Moyens terrestres	75000	55 000
Moyens de navigation	45000	35 000
Déplacement et Hébergement en Tunisie	12000	10 000
Organisation de séminaires	10000	8 000
Edition de posters et dépliants	10000	8 000
Documentation et accès réseaux	6000	5 000
Contrats et vacations	140000	103 000
Consommable	15000	11 000
<b>Total</b>	<b>690000</b>	<b>510 000</b>



**Pays :** Tunisie

**Plan d'Action National pour le suivi pilote des herbiers de posidonie sur le littoral tunisien**

**Mots-clés :** Herbier de posidonie, réseau de surveillance, monitoring, cartography, formation, protection, transfert de connaissance

**Justification :** La posidonie représente un puissant intégrateur de la qualité globale des eaux, non perturbé par des paramètres extérieurs, aléatoires, au moment de l'échantillonnage. Ils constituent donc des indicateurs biologiques performants de la qualité des eaux littorales. Leur surveillance représente donc un apport indispensable aux contrôles de la qualité physico-chimique et bactériologique de l'eau de mer. Cette surveillance a fait ses preuves et a amené des résultats concrets comme le montre la réussite du Réseau de Surveillance Posidonies de la Région Provence Alpes Cotes d'Azur.

**Budget:** 371 000 US\$

**Durée :** 6 années

**Portée Géographique:**

Locale **X**  
Nationale **X**  
Internationale

**Type de projets :**

Collecte de données  
Protection **X**  
Interaction Pêche  
Capacity building  
Autres **Réseau de surveillance**

**Pertinents internationaux**

CBD **X**  
ACCOBAMS  
Convention de Bern **X**  
CMS  
Medwet  
GFCM  
Autre : Directive habitats

**Objectifs :**

- 1) Mise en place d'un réseau pilote sur 9 sites;
- 2) Opérations de réhabilitation d'un site pilote.

**Objectifs spécifiques :**

- 1) Stage de formation aux techniques récentes du Réseau de Surveillance Posidonies (RSP) et aux critères de sélection et d'évaluation des sites;
- 2) Mise en place du balisage de 9 sites pilotes;
- 3) Entretien annuel des sites et suivi scientifique;
- 4) Formation des représentants des entités territoriales intéressées aux techniques de RSP;
- 5) Formation à l'étranger de scientifiques locaux aux techniques de réhabilitation et de réimplantation.

**Priorités:** La mise en œuvre de cartographies, d'un suivi en réseau organisé, d'une protection et d'une réhabilitation d'herbiers de posidonie apparaissent comme des objectifs prioritaires, notamment dans les secteurs soumis à une forte pression urbanistique.

**Pré requis :** Autorisation et moyens (plongeurs en particulier) pour le travail en mer.

**Résultats attendus :** Mise en place d'un réseau de surveillance des Posidonies.

**Indicateurs de réussite :** Extension du RSP des 9 sites pilotes vers d'autres sites.

**Responsables et Participants:** Institut National des Sciences et Technologies de la Mer (INSTM); Agence de Protection et d'Aménagement du Littoral (APAL).

**Calendrier d'exécution :**

Actions		Juin An 0	Juin An 1	Juin An 2	Juin An 3	Juin An 4	Juin An 5
<b>1<sup>ère</sup> période</b>	Stage de formation GIS Posidonies	21 j					
	Sélection des 9 sites pilotes, des 2 équipes et préparation du balisage	6 m					
	Balisage des 9 sites pilotes et démarrage du suivi		4 m				
	Analyse des échantillons rédaction du rapport			4 m			
<b>2<sup>ème</sup> période</b>	Entretien		1 m	1 m		1 m	1 m
	Entretien et suivi scientifique				3 m		3m
	Analyse et rédaction				4 m		4m
<b>3<sup>ème</sup> période</b>	Préparation de la conférence						5m
	Conférence de démonstration, film et exposition						1 j
	Préparation de l'atelier de formation						4 m
	Atelier de formation						15j
<b>4<sup>ème</sup> période</b>	Formation à la réhabilitation						15 j

**Budget détaillé :**

Action	D.T.	\$ US
Frais généraux pour l'ensemble du projet	301 960	220 000
Stage de formation aux techniques RSP	13 700	10 000
Mission de terrain pour la sélection, la mise en place des balises et l'état zéro	41 304	30 000
Entretien et retour sur terrain (échantillonnage)	77 760	56 000
Bilan, Exposition, conférence	15 100	11 000
Atelier formation RSP en Tunisie	20 000	14 000
Opération de réhabilitation	41 000	30 000
<b>Total</b>	<b>510 824</b>	<b>371 000</b>

**Country:** Turkey

**National Action Plan for the conservation of cetacean species in the Turkish waters of the Aegean and Mediterranean Seas**

**Key words:** Cetaceans, biology, ecology, threats, network, habitat protection

**Rationale:** Lack of basic information on their population size, distribution, and ecology in the Turkish Aegean and Mediterranean Seas. Illegal fisheries, over-fishing and by-catch in the swordfish drift-nets are threat to some cetacean species. Loss of habitats due to coastal construction and human activities (pollution included) are another threat. Public awareness is not sufficient.

**Budget:** 645 000 US\$

**Duration:** 2 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building

Other

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS **X**

Bern Convention **X**

CMS **X**

Medwet

GFCM

Other:

**Objectives:**

- a) Protect and conserve cetacean habitats including feeding, breeding and calving grounds, without however, being restricted to these aspects;
- b) Protect, conserve and recover the cetacean populations in the Turkish waters in the Mediterranean Sea.

**Specific objectives:**

- a) Survey on distribution of cetaceans;
- b) Monitoring of cetacean by-catch;
- c) Setting up a cetacean stranding network;
- d) Educational programs;
- e) Establishing specially protected areas for cetaceans.

**Priorities:**

- a) Elucidating the current status of cetaceans, that is, monitoring, research and data collection and dissemination with regard to biology, ecology, and habitats of cetaceans;
- b) Elimination of incidental catches in fishing gear;
- c) Protection of feeding, breeding, and calving grounds if identified;
- d) Prevention of over-exploitation and illegal catch of fishery resources;
- e) Educational activities aimed at the public and fishermen. f) Prevention and elimination of pollution.

**Assumptions:**

- a) Testing appropriate survey methods before monitoring;
- b) Basic information on by-catch should be distributed to stakeholders.

**Expected results/outputs:** Protection of the cetacean population and reduction of fishing impact in Turkish water.

**Indicator of achievement of objectives:** None.

**Actors:** Ministry of the Environment, NGO, TUBITAK, working group, local MPA committee.

**Calendar of implementation:**

**Survey on distribution of cetaceans:** 2 years; 8 cruises (4/year)

**Monitoring cetacean by-catch:** 2 years; years 1 and 2 – by-catch data collection and observation of specimens by specialists; year 2 - implementation of mitigation measures

**Setting up a cetacean stranding network:** 6 months with a 2 day workshop in month 5

**Educational programs:** 2 years; year 1 - preparation of educational materials (3 months); photo competition (2 months); exhibits for tourists (3 months); seminars for fishermen, etc. (4 months); year 2 - seminars for fishermen, etc. all year round and exhibits for tourists (3 months in summer);

**Establishing specially protected areas for cetaceans:** 2 years; year 1 - selection of a pilot areas (3 months); official announcement and establishing research and educational centres (1 month); monitoring (8 months); year 2 - monitoring (12 months)

	<b>Activity</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
<b>A</b>	Survey on distribution of cetaceans				
<b>B</b>	Monitoring cetacean by-catch				
<b>C</b>	Setting up cetacean stranding network				
<b>D</b>	Educational programs				
<b>E</b>	Establishing Specially Protected Areas for cetaceans				

**Detailed budget:**

	<b>Activity</b>	<b>Duration</b>	<b>Budget (US\$)</b>
A	Survey on distribution of cetaceans	2 years	250,000
B	Monitoring cetacean by-catch	2 years	85,000
C	Setting up cetacean stranding network	6 months	60,000
D	Educational programs	2 years	50,000
E	Establishing Specially Protected Areas for cetaceans <sup>4</sup>	2 years	200,000

<sup>4</sup> Activity E (establishing specially protected areas for cetaceans) could be linked to the Strategic Action Plan dealing with "Creation of marine protected areas along the Turkish coasts".

**Country:** Turkey

**National Action Plan for reducing the negative impacts of detrimental fishing practices (trawl, purse seine, spear fishing, use of explosives) on sensitive ecosystems and on vulnerable species**

**Key words:** Fishing, lobbying, protection, legislation, regulation

**Rationale:** The fisheries regulations cover a list of endangered and/or threatened marine species. Use of fishing devices proven to be detrimental to critical ecosystems is also prohibited, or restricted to offshore waters. However, these regulations are not well harmonised and integrated to attain even the main goal of maximising the yield. A complete understanding of fisheries on sensitive ecosystems is still missing.

**Budget:** 183 000 US\$

**Duration:** 2 years

**Geographic scope:**

Local  
National **X**  
International

**Type of project:**

Data collection **X**  
Protection  
Interaction with fisheries  
Capacity building  
Other **Legislation**

**Relevance to international treaties:**

CBD **X**  
ACCOBAMS  
Bern Convention  
CMS  
Medwet  
GFCM **X**  
Other:

**Objectives:** To secure the preparation and application of accurate and sound fisheries regulations, planned not only for achieving maximum yield but also for the conservation of sensitive habitats/species. To examine the existing sensitive biota such as marine turtle wintering and spawning grounds, Posidonia meadows, coralligenous areas, etc. and identify those amongst them which are critically impacted by fishing.

**Specific objectives:**

- (i) Identify gaps in the regulations;
- (ii) Identify areas which, despite being fully protected by law, are still affected critically by fishing due to ineffective enforcement;
- (iii) Evaluate the structure of the fishery targeting these sensitive ecosystems from biological and socio-economic point of view;
- (iv) Revise and complete the fisheries regulations;
- (v) Organise a workshop to reach a consensus amongst the stakeholders - increase awareness on issues.

**Assumptions:** Overall support, cooperation and participation from the stakeholders.

**Expected results/outputs:**

- (i) Review of fishery legislation;
- (ii) Reform of the fishery circular;
- (iii) Public awareness and education.

**Indicator of achievement of objectives:** None.

**Actors:** Ministry of the Environment, NGO, TUBITAK, working group, Ministry of Agriculture and Rural Affairs.

**Calendar of implementation and detailed budget:**

<b>Activity / Period (3 months each)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>Budget US\$</b>
Organization of ad hoc working groups to review fisheries regulations	X								2 500
Reviewing fisheries regulations	X								9 000
									1 000
Interviews with local stakeholders and research on legislation to elicit the weaknesses of fisheries regulations.		X	X	X	X				100 000
Reforming fisheries circular and reporting				X	X				6 000
Commentary Workshop/Conference for improving national fisheries regulations in accord with the views of all the stakeholders					X				53 000
									5 000
Lobbying MARA and other decision-makers					X				2 500
Public awareness and education					x	x	x	x	4 000

**Country:** Turkey

**National Action Plan for the creation of Marine Protected Areas along the Turkish coast for the conservation of critical habitats and endangered species**

**Key words:** Marine Protected Areas, lobbying, protection, criteria of selection, implementation of MPA law, regulation, management plan

**Rationale:** As a hopeful solution for the national economic crisis, coastal tourism and related constructions, fish farming in the near coastal waters and fishery is encouraged by the Turkish government. Subsequently, pressure on available coastal sites is increasing. The most widely applied method throughout the world, i.e. the creation of Marine Protected Areas (MPA), should then be applied.

**Budget:** 275 000 US\$

**Duration:** 2 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries

Capacity building

Other

**Relevance to international treaties:**

CBD **X**

ACCOBAMS

Bern Convention

CMS

Medwet

GFCM

Other:

**Objectives:** 1) To review and set the appropriate ecological as well as socio-economic criteria that will be sought in an area to be designated a MPA; 2) analysis of the Turkish coast for the site selection; 3) preparation of site specific management plans; 4) Creation of an unified authority for the management of Turkish MPA's.

**Specific objectives:**

- 1) Review past studies for description of habitat types;
- 2) Expert meeting;
- 3) Develop new research topic about description of habitat;
- 4) Preparation of management plans

**Priorities:** To reform the conservation strategy in the country and to introduce a new tool for safeguarding and recovering the last remaining ecologically critical coastal and marine habitats as well as biodiversity.

**Assumptions:** Reforming of existing laws to create MPA status, in which the managers, their authorisation and the implementation tools are clearly defined.

**Expected results/outputs:** (i) A bibliographical review of existing data; (ii) development of new research to fill in gaps in knowledge; (iii) selection of new appropriate sites to protect; (iv) implementation of a new MPA law.

**Indicator of achievement of objectives:** Monitoring.

**Actors:** Ministry of the Environment, NGO, TUBITAK, working group, local MPA committee.

**Calendar of implementation and detailed budget :**

Activity / Period (3 months each)	1	2	3	4	5	6	7	8	Budget US\$
Review of past studies for description of habitat types and identification of critical species - analysis of gaps in the relevant knowledge	X	X							5 000
Organizing a meeting of experts to point out gaps in knowledge		X							25 000
Research to fill in the gaps in knowledge <sup>5</sup>		X	X	X	X				5 000
Organizing a national workshop to describe the ecological characteristics of the Aegean and the Mediterranean coast of Turkey and setting out the criteria for selecting areas of special conservation interest					X				25 000
Analyzing coastal development plans to determine unplanned fragments for protection in order to minimize possible future cross-sectoral conflict.		X	X						5 000
									7 500

<sup>5</sup> Research topics needed should be determined during the experts meeting and research costs should be estimated accordingly.



**Country:** Turkey

**National Action Plan for the conservation of sea turtles in Turkey**

**Key words:** Sea turtles, nesting population, habitat protection, rescue center, education programs

**Budget:** US\$2 450 000

**Duration:** 10 years

**Geographic scope:**

Local

National **X**

International **X**

**Type of project:**

Data collection **X**

Protection **X**

Interaction with fisheries **X**

Capacity building

Other **Education**

**Relevance to**

**international treaties:**

CBD **X**

ACCOBAMS

Bern Convention **X**

CMS **X**

Medwet

GFCM

Other:

**Rationale:** All sea turtles are recognised as globally threatened species; the loggerhead is ranked "Vulnerable", the remainder "Endangered". Two of the marine turtles nest on Turkish beaches: the loggerhead turtle *Caretta caretta* and the green turtle *Chelonia mydas*. Both species are protected under the Bern Convention and the CITES Convention. This Action Plan is necessary to protect these species in Turkey

**Objectives:**

- a) Protection of the nesting beaches and marine habitats for both species of sea turtles, especially in the eastern Mediterranean for green turtles.
- b) Protection of the nests, hatchlings, juveniles and adults in their habitats.
- c) Improving of the scientific knowledge by research and monitoring.

**Specific objectives:** a) Protection and monitoring of 17 known nesting and not well-known feeding areas; b) beach restoration project; c) public awareness; d) fishermen's education and training fishermen in techniques for the correct hauling, handling and releasing of incidentally caught turtles; e) setting up first-aid and rescue centres to treat injured or sick turtles; f) identification of feeding and over-wintering areas and migration routes; g) more knowledge on sea turtle biology and sex ratio; h) establishment of the nesting population by molecular studies.

**Priorities:** The standardisation of fieldwork and establishing of long-term monitoring are the main priority in this Action Plan. The education program for decision-makers and the fishermen in order to reduce mortality at sea are the next priority.

**Assumptions:** The active participation of the administration at different levels, mainly at local level, and the fishery and tourist sector are essential to the success of the plan.

**Expected results/outputs:** Conservation of sea turtle nesting areas in Turkey.

**Indicator of achievement of objectives:** Monitoring, awareness of fishermen, enquiries.

**Actors:** Scientific institution; coast guards; Ministry of the Environment; Ministry of Education; Ministry of Agriculture and Rural Affairs.

**Calendar of implementation:**

Activity	Ongoing	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year	...10 <sup>th</sup> year
Beach monitoring							
Buying of tags and other scientific studies							
Enacting conservation laws							
Education programmes							
Setting up Rescue Center(s)							
Satellite tracking							
Determining of sex ratio							
Genetic studies							

**Detailed budget:**

Priority actions	Implementation and timing	Budget \$USD
Nest monitoring, tagging, protection of the nests (relocation, design of hatchery sites, screening and caging)	Ongoing but medium (5 years) timing for all the beaches will be monitored with the same methodology	500.000
Fishermen's education and designation of Marine Protected Areas. Tagging of turtles at sea.	Ongoing, short (1-3 years) for designation of the Marine Protected Areas.	100.000
Rescue Centre	In 1-2 year's time there will be at least one rescue centre	200.000
Genetic studies	Some studies have already started but need more time to complete the whole picture (long-10 years)	400.000
Pollution control, beach cleaning	Short (1-3 years)	250.000
Global warming	Ongoing but needs more complete picture for all the beaches. Long (1-10years)	300.000
Satellite tracking	Medium (3-5 years)	500.000
Scientific meetings, symposium	Short (2 years)	200.000