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Cairo, 8-11 October 1991

COASTAL AREAS MANAGEMENT PROGRAMME (CAMP)

Progress Report

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## INTRODUCTION

1. During the joint meeting of the Scientific and Technical Committee and the Socio-Economic Committee (Athens, 6-10 May 1991), and on requests from some delegations, the Secretariat informed the meeting that it would prepare a progress report on the status of the Coastal Areas Management Programme (CAMP) for submission to the Seventh Ordinary Meeting of the Contracting Parties (Cairo, 8-11 October 1991).

## RATIONALE AND OBJECTIVES OF THE COASTAL AREAS MANAGEMENT PROGRAMME (CAMP)

2. The Executive Director of UNEP presented to the Fifth Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Athens, 7-11 September 1987) a document on "Policy recommendations of the Executive Director (UNEP/IG.74/3/Add.2) explaining the new global orientation of the Mediterranean Action Plan (MAP) which has geared its activities towards the development of environmentally sound integrated management of the Mediterranean coast through, among others, the process of integrated planning. This orientation implies a harmonized involvement of all MAP components as well as relevant international bodies, for a better utilization of the limited resources of the Mediterranean region in the interest of the countries of the region and of their development, while being in accordance with sound long-term environmental management rules.

3. It was recognized that during the first decade of MAP, the bulk of MAP's activity has been focused on the monitoring of the state of the Sea and interventions aimed at improving the state of the natural system. The emerging understanding that the sources of pollution problems are mostly (80%) land-based and necessity for the harmonization of regional and global development with the receptive capacity of the environment, which calls for a permanent process of integrated planning, as well as for a rational management of the limited resources available in the region, has led to the refocusing of MAP on activities carried out in coastal zones.

4. The needs of the present, without compromising the ability of future generation to meet their own needs, i.e., sustainable development, was essential factor when undertaking the process of integrated planning of the development and management of the resources of the Mediterranean Basin.

5. However, it is understandable that a programme such as MAP per se cannot meet such an ambitious goal. That is why co-operation with local authorities, institutions, experts and general public of the Mediterranean region becomes an imperative tool for the success of this reorientation of MAP, and, the Coastal Areas Management Programme (CAMP) was indeed an efficient form of establishment of this kind of co-operation.

6. In carrying out the CAMP programme, the role of MAP and its various components (MEDPOL, REMPEC, BP, PAP, SPA and historic sites) is primarily catalytic. While keeping in mind that their financial resources are limited and hardly sufficient for an all-inclusive inauguration of the process of integrated planning and management of resources in the Mediterranean coastal areas, it should be emphasized that this programme is still capable of assisting in the creation of a solid basis for further larger intervention.

As the activities of MAP and its various components cover a whole range of diverse development-versus-environment problems which may appear in a selected CAMP programme, the experience gained during the last decade by MAP and its various components will ensure a substantive contribution to this exercise.

This catalytic role of MAP has an objective of:

- a. galvanizing interest of local as well as national authorities, institutions and experts in co-operation;
- b. transfer of international knowledge and technologies;
- c. procuring necessary support for expertise, training and minimum equipment especially for the southern countries of the Mediterranean;
- d. introducing techniques and tools for environmentally sound management;
- e. co-operating with international funding institutions;
- f. accentuating problems of a selected area by placing them in a wider national, regional and international context;
- g. promoting environmental awareness in the Mediterranean area.

7. Within CAMP programme, a number of areas were selected in interested Mediterranean countries. These areas have to be specific in terms of development problems and their impact on the state of environment, and there must be a need expressed by national and local authorities for a short- and long-term solution of these problems. At the same time, these areas have to be typical so that the experience in resolving the problems faced there could be used in the entire Mediterranean coastal zone. It is essential that the countries confirm their interest in launching a programme on their respective territories, and to allow further dissemination of crucial and typical outputs arrived at in course of the projects. Each interested country should guarantee necessary organizational and institutional conditions, primarily a pool of local and national experts capable of securing a continuity of the integrated planning and management process. Methodological basis for the implementation of this process is contained in document "Common methodological framework for integrated planning and management of the Mediterranean coastal areas (PAP-4/EM.5/2".

8. Simultaneously, the thinkings regarding the adaptation of prospective methods for small coastal areas have continued, based on the Blue Plan experience from the elaboration of the Mediterranean scenarios ("Report on the technical workshop on the methodology and the findings of the Blue Plan scenarios, May 22-26, 1989"; "A study of the methodology for the formulation of regional or local scenarios based on the Blue Plan experience, September 1990").

9. The Sixth Ordinary Meeting of the Contracting Parties (Athens, 3-6 October 1989) was informed by the Secretariat on the procedures for the implementation of CAMP projects:

- a. proposal from a Contracting Party; evaluation by the secretariat to ensure that the proposed area is representative of Mediterranean coastal situations and does not duplicate another pilot project already underway, has the support of the central and local authorities, and will be open to other countries (experimental, pilot nature, as opposed to national technical assistance projects);
- b. identification of counterpart team; setting up of data base; on-site missions; graphic presentation;
- c. presentation of project outline to Bureau of Contracting Parties for approval; project to contain time-frame and budget to be financed by the MED Trust Fund of UNEP;
- d. recommendations, in a frame of an agreement, to the government for action required; after government clearance, distribution of the recommendations to all Contracting Parties and potential sources of financing.

10. During 1988-1989 biennium, PAP carried out four country pilot projects (CPP): The Coastal Region of Syria, Bay of Izmir, Island of Rhodes and the Bay of Kastela,

11. During the Sixth Ordinary Meeting of the Contracting Parties (October 1989) four countries proposed and the meeting accepted to continue work on the following four on-going MAP pilot projects, renamed as Coastal Areas Management Programme (CAMP): Coastal Region of Syria; Bay of Izmir; Island of Rhodes and the Bay of Kastela.

Moreover, the meeting decided:

- to assist Mediterranean States to identify and formulate environmental protection and integrated development projects in coastal zones; to make use of significant national and international financing;
- attention will be focused on projects that are the most viable from the point of view of the Mediterranean environment and financing organizations;

- up to ten projects could be studied, to deal simultaneously with up to three programmes in the preliminary phase and four in the executive phase, unless appropriate external support would be found for specific programmes;
- prepare detailed proposals for new programmes including obligations of each participating party, signed by competent national authorities. Such proposals would be evaluated by the secretariat and presented to Contracting Parties for adoption;
- present to meetings of the Socio-Economic Committee information on on-going projects;
- secure participation of UNEP and other UN bodies dealing with industrial, toxic and hazardous wastes;
- assist in drawing up, implementing and disseminating model thematic projects likely to be of interest to Mediterranean countries because of their innovations and degree of integration;
- invite UNEP and the other international organizations (e.g. the World Bank) to provide financial support to cooperative and pilot projects;
- invite the national authorities concerned and the relevant bilateral and multilateral programmes to support the four on-going pilot projects as practical demonstration areas for the protection of the Mediterranean.

12. As regards the duration of a project, it had been envisaged as four years period, divided in three essential phases, namely:

- a preliminary phase including fact finding, collection of essential data, training and building of local and national capacities, definition of options and formulation of a programme proposal;
- an executive phase including activities related to understanding the ecosystem, specific activities related to pollution prevention and/or control as to resources management, introduction of integrated planning, preparation of feasibility studies and project proposals;
- a follow-up phase.

#### **DEVELOPMENT CONCERNING COASTAL AREAS MANAGEMENT PROGRAMME DURING THE 1990-1991 BIENNIUM**

13. The Sixth Ordinary Meeting of the Contracting Parties (Athens, 3-6 October 1989) allocated the sum of US \$ 670,000 for the on-going coastal zone MAP projects (Coastal Region of Syria, Bay of Izmir, Island of Rhodes and the Bay of Kastela), for the 1990-1991 biennium. It was expected that funds provided by MTF would be matched in local currency by the country concerned.

14. Four agreements concerning the four CAMP projects were signed by UNEP/MAP and the respective governments and were distributed to all MAP focal points for information:

- The Agreement concerning the Syrian coast (Syria) was signed on 18 June 1990;
- The Agreement concerning the Bay of Izmir (Turkey) was signed on 20 June 1990;
- The Agreement concerning the island of Rhodes (Greece) was signed on 12 December 1990;
- The Agreement concerning the Bay of Kastela (Yugoslavia) was signed on 24 December 1990.

15. In the whole framework of the CAMP, it has become evident that the methodology used for the Mediterranean scenarios was not fully suitable for scenarios making on small geographical areas. So during the biennium 90-91 and in consultations with many Mediterranean experts, Blue Plan developed a more appropriate methodological approach in order to provide innovative and operational tools for long-term planification and policy makers at the local level ("A methodological approach to 'littoral scenarios'", March 1991). For the last three months of 1991, an Egyptian expert will join the Blue Plan team to improve the environmental aspects of the local scenarios.

#### I. CAMP PROJECTS UNDER IMPLEMENTATION

##### A. Coastal Area Management Programme for the Coastal Region of Syria

16. An integrated planning study prepared by PAP/RAC in 1989 was presented to the Government of Syria together with a set of recommendations for immediate action. PAP missions were organized in 1990 and 1991 to assess the possibilities, develop detailed programmes and lay the ground for the preparation of the Coastal Resources Management Plan (CRMP), training on Geographic Information System (GIS) on the pcARC/INFO, and an EIA for a tourist complex.

17. The first and second phases of GIS training and CRMP were completed in the first half of 1991. Groups of national experts were formed in both actions and are working in co-operation with PAP consultants. The basic EIA document was prepared for the tourist complex of Amrit. It is envisaged that by the end of 1991 the training on GIS will be completed, as well as the CRMP, and the basic document for the EIA of the tourist complex of Amrit.

18. The National monitoring programme of Syria, prepared under the MEDPOL programme and which has been implemented since 1989 is an integral part of the CAMP on the Coastal Region of Syria.

19. A Task Team on the implications of expected climatic changes on the Coastal Region of Syria is being established.

20. A PAP mission to Syria took place during April/May 1991, during which review of the programme was undertaken and follow-up activities were agreed upon (PAP-SY/CRMBR4).

21. Regarding the prospective studies (i.e. scenarios), contacts were established in 1990 between Blue Plan and a Syrian expert who has participated at a methodological workshop (Sophia Antipolis, April 1991) and received relevant documentation. The Syrian team who will prepare scenarios for coastal region of Syria has been nominated, and Blue Plan was informed in August 1991. By the end of the year 1991, a Blue Plan mission should take place.

22. Summary of the Coastal Region of Syria programme is contained in Annex I to this report.

B. Coastal Area Management Programme for the Bay of Izmir

23. Two expert meetings were organized, a synthesis of available data completed, contracts for additional data collection signed. A PAP mission was organized to define the necessary conditions, and the programmes of activities related to the Integrated Planning Study and training on GIS were developed. The Turkish side organized a programme of additional monitoring.

24. An expert meeting was organized (Split, June 1991) to evaluate the available data and to agree on the start of the activities on "Assimilative Capacity", "EIA of Submarine Outfall" and "Recovery of the Inner Bay".

25. A Consultative meeting of Turkish experts and representatives of UNEP/MEDU and PAP/RAC was held in Athens in July 1990 on the definition of the monitoring programme of the Bay of Izmir (UNEP(OCA)/MED WG.17/1).

26. The first and second phases of the training course on GIS were completed (Izmir, June 1991), as well as the preparations for the work on the integrated planning study.

27. A PAP mission to Turkey (June 1991) has concluded that there is a reliable information base for the preparation of the integrated planning study for the Bay of Izmir, which was originally planned for March 1991 and was postponed to September 1991 due to Gulf crisis. The character of the Study was defined and agreed upon during this mission. A PAP/Turkish team was selected, as well as the areas (topics) to be covered by each member of the team (co-ordination, regional development, environmental problems). An office was provided for the team with all its necessary equipment.

28. Full implementation of all PAP related activities is envisaged to start in September 1991. The completion of those activities, however, is directly dependent on a timely provision of the financial support of the World Bank and collection of data necessary for the assessment of the assimilative capacity of the bay.



29. Regarding the prospective studies in Turkey, Blue Plan team and Turkish experts have worked (from February 1990) on national level which will be used both for Bay of Izmir and Iskenderun region. The study was slowed down due to the Gulf crisis.

30. Summary of the Bay of Izmir Programme is contained in Annex II to this report.

C. Coastal Area Management Programme for the Island of Rhodes

31. Since the agreement for this particular programme was signed at the end of 1990, only preparatory activities were completed in that year. In the beginning of 1991, a consultation meeting with the Greek authorities was held during which conditions were defined for starting the activities. By the end of September 1991, the first and second phases of work on the planning study will be completed, as well as the first phase of the training course on GIS. However, as the financial support by the European Investment Bank has not yet been obtained and the implementation started with a considerable delay, a part of the programme will be completed in the first half of 1992.

32. A Task Team on implications of expected climatic changes on the Island of Rhodes was established and held two meetings in December 1990 (UNEP(OCA)/MED WG.22/1) and in June 1991 (UNEP(OCA)/MED WG.29/1). At the first meeting objectives, assumptions, outputs, outline of report and detailed calendar of activities were agreed upon. At the second meeting progress in the implementation of the programme was reviewed.

33. Two meetings were held with Greek experts on the monitoring programme for the Island of Rhodes which is being developed.

34. Survey of land-based sources of pollution for the Island of Rhodes is under way and it should be completed by September 1991.

35. As regards the Blue Plan scenario for the Island of Rhodes, the Greek Team was established (October 1990) and the contents and timetable of the prospective study were agreed upon with Blue Plan. The first phase study started in November 1990. The Greek team leader attended two methodological workshops in Sophia Antipolis (January and April 1991) which enabled the definition of innovative tools to be used in the study. A joint mission Blue Plan - Greek team to the Island of Rhodes took place in June 1991 during which the results of the 1st phase were discussed and the details and timetable for the next phases were agreed upon. The scenarios study for Island of Rhodes is envisaged to be completed in June 1991. The "Phase 1 Report" (July 1991) is available as well as a socio-economic data base.

36. Summary of contents of the Island of Rhodes programme is contained in Annex III to this report.

D. Coastal Area Management programme for the Bay of Kastela

37. Documents presenting the model of wind-driven exchange of sea water, mechanism of red tide phenomena, assessment of pollution by mercury, pilot application of GIS, and definition of criteria for waste water disposal in the Bay were completed and submitted to local authorities concerned, as well as to the management of the national project. Terms of reference for all PAP-related activities scheduled for 1991-92 were prepared and commitments of local teams regulated by contracts. The full implementation of all activities started at the end of December 1990.

38. By the end of September 1991, the following activities will be completed:

- development-environment scenarios covering the period until the Year 2025 (prepared together with the Blue Plan);
- survey of water resources of the western part of the area; survey of water resources of the islands of Veliki and Mali Drvenik;

39. For a training course on Geographical Information System (GIS) and for its application in coastal planning and management, preparatory activities have been completed, equipment and software provided, participants in the training course nominated and the course programme defined. The training course started in August 1991 and the activity, including the pilot application, will be completed by the end of the year.

40. Environmental Impact Assessment study of the submarine outfall will be completed by the end of 1991.

41. Preparation of alternative solutions, preliminary designs, environmental consideration for the Trogir-Kastela sewerage system have been completed.

42. Study on the solid waste disposal has been completed.

43. Task Team on implications of expected climatic changes on the Kastela Bay coastal area was established and held its first meeting at Split, April 1991 at which objectives, assumptions, outputs, outline of the report and detailed calendar of activities were agreed upon (UNEP(OCA)/MED WG.26/2).

44. Monitoring programme for the Kastela Bay is being developed in the framework of MEDPOL.

45. Survey of land-based sources of pollution in the Bay of Kastela coastal area is being prepared.

46. The World Bank Environment Programme for the Mediterranean (EPM) and its Mediterranean Technical Assistance Programme (METAP), have paved the way for fruitful co-operation and co-ordination in relation to the Mediterranean. As far as the Kastela Bay project is concerned, the Bank provided a grant of US \$ 330,000 for the project. Activities described in points from 35 to 41 are being implemented with the partial funding from this grant.

47. As regards the Development/Environment scenarios for the Bay of Kastela, Blue Plan team had several consultations (Sept. 90 and Feb. 91 in Sophia Antipolis) with Yugoslav experts in order to discuss methods and tools for scenarios making. In October 1990, in Split, a Blue Plan team met with the Yugoslav team, which presented a study project envisaging to adapt a regional model to the area of Kastela. Blue Plan has provided financial support to this project which started in December 1990 under a joint BP/PAP contract. The final report is expected to be ready in September 1991 for examination and evaluation.

48. Summary of the Kastela Bay programme is contained in Annex IV to this report.

## II. CAMP PROJECTS IN PRELIMINARY PHASE

### A. Fuka - Marsa Matruh Area (Egypt)

49. The area in question is very promising, for it is of great natural beauty and endowed with ample water supplies from aquifers. It would be suitable for certain forms of market gardening (cultivation in greenhouses) and for the settlement of nomadic population groups. Preparatory activities were completed for Fuka (one MAP/PAP mission and another mission of one PAP expert, collection and synthesis of available data). Two reports were prepared, one on integrated planning and management of Fuka Area and another on existing documents of the Fuka and Siwa Areas.

50. A Blue Plan Egyptian expert's study (Oct.-Dec. 1991) will emphasize the environmental aspects for scenarios on Fuka and Sfax areas. First results are expected early 1992.

### B. Sfax Area (Tunisia)

51. A proposal for preliminary activities and training of national and local experts on GIS were completed and a PAP/MEDPOL preparatory mission was also carried out in November 1989.

## III. PROPOSED CAMP PROJECT (ALBANIA)

52. During the last joint meeting of the Scientific and Technical Committee and the Socio-Economic Committee (Athens, 6-10 May 1991), the Co-ordinator of MAP informed the meeting that a message had been received from the Minister of Foreign Affairs of Albania expressing

support for a new coastal management project for that country. The representative of Albania to the meeting stated that since the time when his country had become a contracting party to the Barcelona Convention and its related protocols, it had received a good deal of assistance from MAP and PAP/RAC in studying and evaluating the environmental situation in Albania's coastal regions. This help was greatly appreciated. The challenge in these regions was how to reconcile the interest of economic and industrial development with those of protection and improvement of the environment. The matters needing attention include the water resources management, the disposal of urban waste, the erosion of land, protection of ports against pollution, etc. He proposed, and the meeting approved, the start of preparation for a new Coastal Area Management Programme for Albania during the 1992-1993 biennium.

53. It is expected that the Seventh Ordinary Meeting of the Contracting parties (Cairo, 8-11 October 1991) will review and take a decision on this recommendation.

#### IV. ASSESSMENT OF PROGRESS IN THE IMPLEMENTATION OF CAMP PROJECTS

54. Due to the delays in signing the agreements relative to the four on-going CAMP projects and to the latest political development in the region as well as the delays in the payment of contributions to the Mediterranean Trust Fund, the actual implementation of the four projects started only at the end of 1990. Other problems encountered were the need for a stronger and more intensive co-operation between all MAP components in implementation of CAMP projects, delays in securing financial support of the World Bank and the European Investment Bank and need for strengthening national and local structures implementing the CAMP.

55. Nevertheless, and taking into account the pace of implementation during the first half of 1991, one can assume that the progress achieved so far is tangible. The full co-operation and contribution of the countries concerned is a prerequisite for the success of the CAMP exercise.

## ANNEX I

### Summary of the Coastal Region of Syria project

The Coastal Area Management Programme for the Coastal Region of Syria will be implemented within the Mediterranean Action Plan, in accordance with the conclusions of the Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention held in October 1989 in Athens (UNEP(OCA)/MED IG.1/5), in close co-operation with the authorities of Syria.

The programme evolved from the PAP pilot project started in 1988. The programme proposal for 1990-91 has been conceived in response to the priorities expressed by the national authorities. Conceptually, it is based on the document "Refocusing of the Mediterranean Action Plan on Environmentally Sound Integrated Planning and Management of the Mediterranean Basin" (UNEP(OCA)/MED IG.1/Inf.4) by the Executive Director of UNEP, and the methodology adopted by the Sixth Ordinary Meeting and elaborated by the Meeting of the Co-ordinating Unit and RAC Directors in January 1990 (UNEP(OCA)/MED WG.13/2).

All MAP components are included in the implementation of the programme, along with UNEP, the Syrian Ministry of State for the Environment, and other relevant national, regional, and local authorities.

The programme is oriented at the creation and promotion of the process of integrated planning and management through 10 individual activities, as follows:

#### I. IMPLEMENTATION OF LEGAL INSTRUMENTS

1. Land Based Sources and Dumping Protocols
2. Emergency Protocol (Contingency Plan) and MARPOL Convention (Port Reception Facilities)
3. Monitoring of the Marine Environment

#### II. RESOURCES

4. Implications of Expected Climatic Changes on the Coastal Region of Syria

#### III. ACTIVITIES

5. Protection and Management Plan for Historic Monuments

#### IV. PLANNING AND MANAGEMENT

6. Training Programme on GIS and its Application in the Coastal Resources Management Plan
7. Environmental Impact Assessment (EIA) of an Area Selected for Tourism Development

8. Development/Environment Scenarios
9. Coastal Resources Management Plan
10. Specially Protected Areas

It is envisaged that the required funds will amount to US\$ 787,000, out of which (in '000 US\$):

	Cash	Kind	Total
- MAP	191	-	191
- UNEP	26	20	46
- Syrian counterpart	-	550	550

ANNEX II

Summary of the Bay of Izmir project

The Coastal Area Management Programme for Izmir Bay will be implemented within the Mediterranean Action Plan, in accordance with the conclusions of the Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention held in Athens in October 1989 (UNEP(OCA)/MED IG.1/5), and in close cooperation with the authorities in Turkey.

The programme has evolved from a PAP pilot project launched in 1987. The programme proposal for 1990-1991 has been developed in response to the priorities defined by the national and local authorities and institutions. Conceptually, it is based on the document of the Executive Director of UNEP "Refocusing of the Mediterranean Action Plan on Environmentally Sound Integrated Planning and Management of the Mediterranean Basin" (UNEP(OCA)/MED IG.1/Inf.4), and the methodology adopted by Sixth Ordinary Meeting and elaborated at the meeting of the Coordinating Unit and RAC Directors in January 1990 (UNEP(OCA)/MED WG.13/2).

All MAP components are included in the implementation of the programme along with UNEP, Turkish Prime Ministry Under Secretariat of Environment, Metropolitan Municipality of Izmir, and other relevant national and local authorities, and the World Bank.

The programme is oriented towards the creation and promotion of the process of integrated planning and management of coastal resources, through the following 11 activities:

I IMPLEMENTATION OF LEGAL INSTRUMENTS

1. Land-based sources and dumping protocol
2. Emergency protocol (Contingency plan) and MARPOL Convention
3. Modified oceanographic monitoring programme
4. Study of the assimilative capacity of the Izmir Bay
5. Study of the recovery of the Inner Bay of Izmir

II RESOURCES

6. Implications of expected climatic changes

III PLANNING AND MANAGEMENT

7. Training programme on Geographical Information System (GIS)
8. Environmental Impact Assessment (EIA) of submarine outfalls
9. Development-environment scenarios
10. Integrated planning study for the area of Izmir
11. Study on protection criteria and measures for the Tuzla migratory birds nesting area

It is envisaged that the required funds will amount to US\$ 952,000 out of which (in '000 US\$):

	Cash	Kind	Total
- MAP	216	-	216
- UNEP/GRID	7	-	7
- Turkish counterpart	143	261	404
- World Bank	325	-	325

The sum indicated for the World Bank will have to be negotiated directly between the Government of Turkey and the World Bank.



ANNEX III

Summary of the Islands of Rhodes project

The Coastal Area Management Programme for the island of Rhodes (Greece) will be implemented within the Mediterranean Action Plan, in accordance with the conclusions of the Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention held in October 1989 in Athens (UNEP(OCA)/MED IG.1/5), in close co-operation with the authorities of Greece.

The programme evolved from the PAP pilot project started in 1988. The programme proposal for 1990-91 has been conceived in response to the priorities expressed by the national and local authorities and institutions. Conceptually, it is based on the document "Refocusing of the Mediterranean Action Plan on Environmentally Sound Integrated Planning and Management of the Mediterranean Basin" (UNEP(OCA)/MED IG.1/Inf.4) by the Executive Director of UNEP, and the methodology adopted by the Sixth Ordinary Meeting and elaborated by the Meeting of the Co-ordinating Unit and RAC Directors in January 1990 (UNEP(OCA)/MED WG.13/2).

All MAP components are included in the implementation of the programme, along with UNEP, the Greek Ministry of the Environment, Physical Planning and Public Works, other relevant national, regional and local authorities, and the European Investment Bank.

The programme is oriented at the creation and promotion of the process of integrated planning and management through 14 individual activities, as follows:

I. IMPLEMENTATION OF LEGAL INSTRUMENTS

1. Land based sources and dumping protocols
2. Liquid waste management
3. Emergency protocol (Contingency plan) and MARPOL Convention
4. Monitoring of the marine environment

II. RESOURCES

5. General water resources master plan
6. Implications of climatic changes

III. ACTIVITIES

7. Programme of environmentally sound energy planning
8. Programme of protection of historic settlements

IV. PLANNING AND MANAGEMENT

9. Training programme on Geographical Information System (GIS)
10. Environmental Impact Assessment (EIA) of wastewater treatment plant of the city of Rhodes
11. Development-environment scenarios

12. Training programme on integrated planning
13. Integrated planning study of the island of Rhodes
14. Specially protected areas and endangered species.

It is envisaged that the required funds will amount to US\$ 1,601,000, out of which (in '000 of US\$):

	Cash	Kind	Total
- MAP	228	5	233
- UNEP	28	7	35
- Greek counterpart	-	883.5	883.5
- EIB	435	-	435
- Others	-	14.5	14.5

The amount shown for EIB will have to be negotiated directly between the Government of Greece and EIB.

ANNEX IV

Summary of the Bay of Kastela project

The Coastal Area Management Programme for the area of the Kastela Bay (Yugoslavia) will be implemented within the Mediterranean Action Plan, in accordance with the conclusions of the Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention held in October 1989 in Athens (UNEP(OCA)/MED IG.1/5), in close co-operation with the authorities of Yugoslavia.

The programme evolved from the pilot project carried out through 1988 and 1989 by Priority Actions Programme Regional Activity Centre in Split in cooperation with national, regional and local authorities and institutions. This project has been harmonized and linked with the project "Management of the Natural Resources of Kastela Bay" and with an infrastructure development project (Split-Solin-Kastela Integrated Ecological Project). The former is being implemented by the University of Split and the Yugoslav Academy of Sciences and Arts, and the latter by the Municipalities concerned.

Conceptually, the 1990-1991 MAP Coastal Area Management Programme is based on the document "Refocusing of the Mediterranean Action Plan on Environmentally Sound Integrated Planning and Management of the Mediterranean Basin" (UNEP(OCA)/MED IG.1/Inf.4) by the Executive Director of UNEP, and the methodology adopted by the Sixth Ordinary Meeting and elaborated by the Meeting of the Co-ordinating Unit and RAC Directors in January 1990 (UNEP(OCA)/MED WG.13/2).

All MAP components are included in the implementation of the programme (MEDPOL, PAP/RAC, BP/RAC, SPA/RAC, REMPEC, as well as WHO and FAO Offices operating within MAP), along with the World Bank through its Mediterranean programme (EPM). The share of the World Bank in all MAP Coastal Area Management Programmes has been agreed with MAP-UNEP, whereas its participation on the "Kastela Bay" Programme has been negotiated and agreed between the World Bank, MAP, and relevant national and local authorities.

In addition to the representatives of national and local authorities, local institutions and experts, international institutions and experts, international institutions participating in the section of the Programme carried out by PAP/RAC will be UNEP-GRID (UNEP-Global Resource Information Database) in Nairobi, UNITAR (United Nations Institute for Training and Research) in Geneva, IAEA (International Atomic Energy Agency) in Vienna, UNEP-IEO (UNEP- Industry and Environment Office) in Paris, Ministry of Housing, Physical Planning and Environment of the Netherlands, Environmental Control Agency Rijnmond (The Netherlands), and Safety and Reliability Directorate in Warrington (England).

The programme is oriented towards the creation and promotion of the process of integrated planning and management of coastal resources, through 12 activities.

The objectives of the programme are the following:

- (a) Using international expertise and approved funds and in co-operation with local authorities, institutions and experts, to contribute to the improvement of the state of pollution in the Kastela Bay area, and provide or supplement data, technical and scientific knowledge essential for design making and implementation of the infrastructure project;
- (b) to introduce and verify in practice the modern tools and techniques of integrated planning and management under local conditions.

In addition to these long-term objectives, each of the 12 activities have their own immediate objectives addressed to and conformed with the needs and requirements of end-users which are, in this particular case, the Municipalities of Split, Solin, Kastela and Trogir, and the two projects (the infrastructure project and the project "Management of the Natural Resources of Kastela Bay").

These activities are:

1. Survey of land-based sources of pollution
2. Assessment of risk from pollution by oil and other harmful substances, and the preparation of a contingency plan
3. Collection of missing ecological and other relevant data on the Kastela Bay aquatorium for the construction of infrastructure systems and the implementation of other proposed activities (monitoring programme)
4. Implications of expected climatic changes
5. Application of the Geographical Information System (GIS)
6. Hazard assessment and management of environmental risks from energy, industries, transport and other activities (HARM)
7. Development-environment scenarios covering the period until the year 2025
8. Environmental Impact Assessment of the submarine outfall
9. Study to determine the optimum treatment level for municipal waste waters
10. Evaluation of Pantan, the area of special natural and historic value, and a proposal for the protection and management of the area

11. Survey of water resources of the western part of the area
12. Survey of water resources of the island of Drvenik Veli

For the implementation of this programme US \$ 190,000 will be secured by MAP, and US\$ 108,000 by the World Bank. Funds expected from other international sources will amount to US\$ 35,000. The counterpart contribution (local authorities and structures) will be mostly in kind, and will amount to US\$ 252,000.