



United Nations
Environment
Programme



UNEP(OCA)/MED WG.25/Inf.3
15 March 1991

Original: ENGLISH

MEDITERRANEAN ACTION PLAN

Joint Meeting of the Scientific and Technical
Committee and the Socio-Economic Committee

Athens, 6 - 10 May 1991

Progress report on the implementation
of the Mediterranean Action Plan
June 1990 - March 1991

Table of Contents

	<u>Pages</u>
<u>Introduction</u>	
A. <u>Implementation of the Barcelona Convention and the Protocol on Dumping</u>	1
1. Programme approval through decision-making meetings	1
2. Programme co-ordination	3
3. Legal component	7
4. Monitoring of marine pollution in the Mediterranean:	8
(a) Monitoring programmes and supporting activities	8
(b) Data Quality Assurance	11
(c) Research projects	12
(d) Climatic changes	14
5. Information	15
B. <u>Implementation of the Land-Based Sources Protocol (LBS)</u>	15
6. Implementation of the LBS Protocol	15
(a) Progress report on the implementation of the LBS Protocol	15
(b) Annex IV to the Protocol concerning Pollution from Land - based Sources transported by the atmosphere	18
(c) Assessment of the state of pollution in the Mediterranean Sea by organophosphorus compounds and proposed measures	19
(d) Assessment of the state of pollution in the Mediterranean Sea by persistent synthetic materials which may float, sink or remain in suspension and proposed measures	19

(e)	Assessment of the state of pollution in the Mediterranean Sea by radioactive substances and proposed measures	19
(f)	Assessment of the state of pollution in the Mediterranean Sea by pathogenic micro-organisms and proposed measures	19
(g)	Research projects directly relevant to the LBS Protocol	19
C.	<u>Implementation of the Protocol on Emergency</u>	21
7.	<u>Prevention and combating pollution from ships:</u>	21
(a)	The Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and other Harmful Substances in Cases of Emergency	21
(b)	The Regional Marine pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)	21
(c)	Port reception facilities for ballast water and other oily residues in the Mediterranean	27
D.	<u>Implementation of the Protocol on Specially Protected Areas and Historic Sites</u>	28
8.	<u>Protection of the common Mediterranean heritage:</u>	28
(a)	The Protocol concerning Mediterranean Specially Protected Areas	28
(b)	The Specially Protected Areas/Regional Activity Centre (SPA/RAC)	28
(c)	Preservation of Historic Sites	32
E.	<u>Environmentally sound management of the Mediterranean coastal zone:</u>	33
9.	<u>Environmentally sound management of the Mediterranean coastal zone:</u>	33
(a)	Prospective analysis of the relationship between environment and development	33
	The Blue Plan/Regional Activity Centre (BP/RAC)	33

	<u>Pages</u>
(b) Coastal planning and management	37
The Priority Actions Programme/Regional Activity Centre (PAP/RAC)	37
(c) Coastal Areas Management Programme (CAMP)	43
II. <u>Financial matters</u>	46
III. <u>Administrative matters</u>	47

Annexes

Annex I	:	Calendar of meetings organized in the framework of the the Mediterranean Action Plan as of 1 March 1991	1-4
Annex II	:	Status of signatures and ratifications of the Convention and its related protocols as at 1 March 1991	1
Annex III	:	MAP Technical Report Series	1-2
Annex IV	:	Resolution adopted by MEPC of IMO on measures to control potential adverse impacts associated with use of tributyl tin compounds in anti-fouling paints	1-2
Annex V	:	Status of contributions to the Mediterranean Trust Fund as at 31 December 1990	1

I. Introduction

The Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Athens, 3-6 October 1989) decided to convene every year, on the same dates, the Scientific and Technical Committee and the Socio-Economic Committee to review both separately and together the progress of the Action Plan and to prepare the decisions of the Contracting Parties. In view of the fact that the present meeting will have to discuss the programme and budget for the next biennium 1992/1993 and prepare recommendations to the forthcoming meeting of the Contracting Parties (Cairo, 8-11 October 1991), it has been decided to convene a joint meeting of the two committees this year. However, the agenda will permit a clear distinction between the subjects falling within the responsibility of each Committee, so that individual experts may attend sessions as appropriate.

The present progress report describes in summary activities that were carried out since the last meeting of the Joint Meeting of the two technical committees (Athens, 28 May - 1 June 1990). Comments and factual corrections on the progress report should be transmitted to the Secretariat at the beginning of the meeting.

A. Implementation of the Barcelona Convention and the Protocol on Dumping

1. Programme approval through decision-making meetings

- 1.1 A Consultation meeting on Non-Governmental Organizations (NGOs) was convened in Athens (2-3 May 1990). It was attended by representatives of nine non-governmental organizations. The meeting reviewed the principal activities, interests and programmes of these organizations, reviewed a document on education and environmental awareness in the Mediterranean, the ten objectives of the Genoa Declaration, in order to identify possible forms of participation and supporting action by NGOs, and reviewed the proposal to hold an open-ended Forum of NGOs, active in the protection of the Mediterranean, sometime in 1991.

During the debate, there was consensus on the usefulness of such a forum. The participants felt that it should not be open to all, considering the large number of NGOs, large and small, concerned with the Mediterranean. There could be national quotas (3 to 5 NGOs), with strong encouragement for those from the South to attend.

The advantages of such a Forum would be:

- to achieve a better exchange of information among NGOs;

- to disseminate information on the objective, mechanisms and achievements of MAP;
- to give legitimacy to NGO's efforts, that are in support of Government - approved targets.

It was also suggested that preparations for the UN 1992 Conference on Environment and Development could provide a clear focus for the Forum. This aspect would have to be co-ordinated with the secretariat of the Conference. On the practical side, the participants noted the need for a clear objective, agenda and criteria for selection of participants (e.g. those that have launched active campaigns), and to identify in advance the source and level of financing.

It is hoped that one of the Contracting Parties may organize or finance such a meeting of Mediterranean NGOs.

The report of the meeting is contained in document UNEP(OCA)/MED WG.16/3.

- 1.2 During its meeting held in Cairo (19-20 February 1990), the Bureau agreed on the usefulness of the action taken to extend the "Adriatic initiative" to Albania and Greece, through bilateral and other contacts, and invited UNEP to continue its supporting role to the initiative on the technical and scientific level and also on the organizational and financial level. During March 1990, a review meeting of the Adriatic Initiative was convened in Rome by the Undersecretary of State for Foreign Affairs, Mr. I. Butini, attended by Albania, Yugoslavia and Greece. The EEC was also represented. The meeting was informed about the work of the Italian-Yugoslav Joint Commission and of the Bureau of the Contracting Parties relevant to the Adriatic. It was agreed that a new document would be prepared for signature by the four countries and the EEC, reflecting a role of MAP, and that two Italian officials would shortly visit Tirana, Athens and Brussels to negotiate the type of document, level and place of signature. The Co-ordinator of MAP attended the review meeting.

During the Rome meeting of the Bureau (6-7 September 1990), the Bureau welcomed the progress made by the Adriatic coastal States and the EEC. The Secretariat was invited to continue to provide technical support to Adriatic member-countries with a view to co-ordinating environmental activities at sub-regional level. The vice-presidents were invited

to pursue their contacts with the other interested parties in order to finalize - as appropriate - a formal understanding for the environmental co-operation known as the "Adriatic Initiative".

- 1.3 The third meeting of Directors of the Regional Centres (REMPEC, BP/RAC, PAP/RAC, SPA/RAC, Centre for 100 historic sites) was convened in Athens on 14 and 15 January 1991. The meeting reviewed the status of MAP components during 1990-1991 and the preparation for the joint meeting of the two technical committees. The report of the meeting is contained in document UNEP(OCA)/MED WG.20/2.
- 1.4 Pursuant to the decision of the last meeting of the Bureau (Rome, September 1990), the meeting of the Working Group on the Mediterranean Report for the 1992 United Nations Conference on Environment and Development was convened in Athens from 16 to 18 January 1991. The purpose of the meeting was to review and approve and transmit to the Bureau the draft document proposed by the secretariat. The report of the meeting is contained in document UNEP(OCA)/MED WG.19/4.
- 1.5 The Calendar of Meetings organized in the framework of the Mediterranean Action Plan as of 1 March 1991 is contained in Annex I to this report.

2. Programme Co-ordination

- 2.1. During its Cairo meeting (19-20 February 1990), the Bureau of the Contracting Parties agreed on the usefulness of the action undertaken relative to the suggestion to extend the co-ordination of MAP activities to the Black Sea. It invited the two vice-presidents to continue exploratory contacts to determine the prospects of a closer co-operation in the environmental field at the regional and sub-regional levels. The Bureau further invited the Secretariat to provide on request information on the formal and methodological aspects that may clarify an eventual participation of the Black Sea coastal States in the Mediterranean Action Plan.

Furthermore, the Bureau at its Rome meeting (6-7 September 1990) requested the secretariat to explore the possibility of inviting the northern Black Sea countries to participate -where appropriate - as observers in the next meeting of the Contracting Parties (Cairo, October 1991). In reply to the secretariat inquiries, only two Contracting Parties had responded.

The Secretariat was also authorized to respond - when requested - to technical questions on the activities of MAP by the same countries in the framework of UNEP Regional Seas Programme. The two Vice Presidents of the Bureau were invited to pursue contacts at appropriate level with the authorities of the above-mentioned countries with a view to enhancing environmental co-operation between the Mediterranean and the Black Sea countries.

- 2.2 The development of an Action Plan for the Black Sea countries in the framework of the UNEP Regional Seas Programme was endorsed by the last session of UNEP's Governing Council as part of the supplementary programme for the 1990-1991 biennium.

As a first step in implementing this activity, UNEP has contacted officially the UNEP focal points in all four States bordering the Black Sea in order to ascertain formally their interest to participate in the development of the Action Plan. Positive answers from these States were received. A small technical meeting of representatives from the four countries concerned is planned to be convened by UNEP, in co-operation with the international organizations which may be ready to assist in the development and eventual implementation of the Action Plan. The purpose of the meeting would be to agree on the preparatory steps and activities which would have to be undertaken, on national and regional level, in order to ensure the successful formulation and adoption of the Action Plan. The meeting is tentatively planned for April/May 1991.

- 2.3 The Co-ordinator represented UNEP/MAP at the Conference on Security and Co-operation in Europe (CSCE) devoted to the Mediterranean held in Palma de Mallorca (Spain) from 24 September to 19 October 1990. During the general debate Italy, Turkey and Malta pledged to strengthen the Mediterranean Action Plan. Minister Decaux of France gave the strongest and most detailed support to MAP which he described as a well-structured multinational system to be used and supported in the CSCE framework. Austria, Canada, the Federal Republic of Germany and Sweden described their bilateral activities for the protection of the Mediterranean environment. The Netherlands quoted the Genoa Declaration and invited the CSCE countries to support the Mediterranean countries within the framework of the Barcelona Convention in order to reach the targets set in their Action Plan.

- 2.4 The Head of the USSR Delegation to the Conference informed the Conference that the Soviet Union was prepared to consider acceding to the Barcelona Convention as well as to the 1976 Protocol on Dumping and the 1976 Protocol on Combating oil pollution in cases of emergency.

The Romanian Foreign Minister declared that his government is considering steps to adhere to various instruments governing international activities for the protection of the environment as well as any other fields in the Mediterranean region.

The Head of the Bulgarian delegation stated that Bulgaria, as a neighboring country, is directly interested to the solution of the ecological problems of the Mediterranean.

- 2.5 The report of the Conference, largely based on a document submitted by the EEC, contains several calls for strengthening the Mediterranean Action Plan and increased funds for the protection of the Mediterranean.
- 2.6 During the period from 26 to 28 April 1990, a meeting was held in Nicosia (Cyprus) of the Ministers responsible for the environment of the Mediterranean States, and the member of the Commission of the European Communities responsible for the environment. A Charter on Euro-Mediterranean co-operation, concerning the environment in the Mediterranean Basin, "Nicosia Charter", was approved by the participants in which they reaffirmed the commitment to the objectives of the Barcelona Convention, to the Mediterranean Action Plan and to the Genoa Declaration. The Charter specifies a number of priority actions and contains a specific calendar and relevant economic provisions. During this meeting the EEC offered to "prepare, in consultation with the Mediterranean Action Plan, a draft long-term strategy and specific actions to achieve the fundamental objectives of an environment compatible with sustainable development, for subsequent discussion with all Mediterranean States".
- 2.7 During the Rome meeting of the Bureau (September 1990), the representative of the EEC invited Mr. Manos to visit Brussels in order to discuss the implementation of the Nicosia Charter and the utilization of the EEC Voluntary Contribution. In response to this invitation, the Co-ordinator paid a visit to Brussels on 22-23 November 1990, during which a draft EEC project on the implementation of the Nicosia Charter was reviewed and it was decided that MAP will be invited to the first meeting of experts prior to the launching of the project.

The modalities of using the EEC Voluntary Contribution to MTF was agreed upon. Also in accordance with the Nicosia Charter concerning the global evaluation of the environmental management in the Mediterranean, two proposals for assistance were submitted in October 1990 by the Co-ordinating Unit to Israel and Cyprus with a view to conduct two surveys on environmental management in these two countries.

- 2.8 Further to the developments concerning the World Bank Environmental Programme for the Mediterranean (EPM), a Memorandum of Understanding between MAP and the Bank was signed on 5 November 1990. It concerns the Bank assisted programme for the enhancement of institutional capabilities in the Mediterranean coastal States within the MED POL programme. Under the provisions of this agreement, the Bank will provide for the period 1990-1991 the amount of US \$ 517,000 for the services and facilities for the implementation of the activities in Arab countries (Algeria, Egypt, Morocco, Tunisia) and US \$ 321,500 for the services and facilities provided for the implementation of the activities in European countries (Cyprus, Turkey and Yugoslavia). A grant of US\$ 330,000, by the World Bank was approved for the Coastal Area Management Programme for the Kastela Bay project.

More contacts are being conducted with the World Bank and the European Investment Bank (EIB) concerning the financing of some activities within the framework of the Coastal Areas Management Programme (CAMP).

- 2.9 In response to invitation received from OCA/PAC, the Co-ordinator attended the Seventh Inter-Agency Consultation on Oceans and coastal Areas (Paris, 17-20 December 1990). A presentation on recent developments concerning the Mediterranean Action Plan was made. He also briefed the meeting on the preparation of the Mediterranean paper for the 1992 Conference on Environment and Development requested by the Contracting Parties.
- 2.10 The Co-ordinator addressed the 8th Conference on the Sea and Coastal Areas organized by the Italian Naval League and received the trophy attributed to Dr. Tolba as a "Man of the Sea" for 1990. The ceremony took place on the ship "Ausonia" that was continuing on a cruise to Malta and Tunis with 600 members of the League on board.

3. Legal Component

- 3.1 In accordance with the decision of the meeting of the Bureau (Rome, September 1990), a second meeting of the Working Group on Offshore Protocol was convened in Athens from 8 to 11 January 1991. The meeting reviewed the draft offshore protocol approved by the first meeting of the Working Group (Athens, May 1990) on the basis of the newly received comments from the Contracting parties. Controversial provisions were placed within brackets for further negotiation by the Conference of Plenipotentiaries. The report of the meeting is contained in document (UNEP(OCA)/MED WG.18/4). Due to the long process of preparation and reviewing of the draft offshore protocol (started in 1985), the secretariat considers that no other meeting of the working group or further comments from the Contracting Parties are necessary. The secretariat proposed that the forthcoming meeting of the Bureau examine the report of the meeting and authorize the Executive Director of UNEP to convene at a time to be decided by the Bureau, a Conference of Plenipotentiaries to review and approve the draft Protocol.
- 3.2 In accordance with the decisions of the Contracting parties concerning assistance to coastal States in compiling their environmental legislations relevant to the implementation of the Barcelona Convention and its related protocols, Egypt, Israel and Yugoslavia were offered to be assisted in this matter. Two studies were received recently. The study on Yugoslavia is under preparation. It is planned to undertake the same exercise in two more countries in 1991.
- 3.3 Morocco has ratified the SPA Protocol on 22 June 1990, Albania has ratified the Convention and its related protocols on 30 May 1990 and Israel has ratified the LBS Protocol on 21 February 1991.
- 3.4 The Secretariat prepared the document "Progress report on the implementation of the Dumping Protocol" (UNEP(OCA)/MED WG.25/Inf.8) which gives an overview on the status of implementation of the protocol.

3.5 The Status of Signatures and Ratifications of the Convention and its related protocols as at 1 March 1991 appears in Annex II to this report.

4. Monitoring of Marine Pollution in the Mediterranean

(a) Monitoring Programmes and supporting activities

1. By the end of January 1991, national Monitoring Programmes relative to the year 1990 had been finalized with Albania, Cyprus, Egypt, Israel, Malta, Syria, Tunisia and Yugoslavia. Pollution data relative to the implementation of the monitoring activities in 1989 were sent by Algeria, Cyprus, Israel, Italy, Malta, Morocco, Spain, Syria and Yugoslavia.
2. During 1990 the Secretariat, directly or indirectly through the Cooperating Agencies, provided assistance either in cash or in equipment and material to the countries who had finalized the monitoring agreements. The assistance was distributed as follows: Albania: US\$ 25,000, Cyprus: US\$ 30,000, Egypt: US\$ 60,000, Israel: US\$ 55,000, Malta: US\$ 25,000, Syria: US\$ 30,000, Tunisia: US\$ 35,000 and Yugoslavia: US\$ 60,000. However, the above figures represent only funds committed, which may bring minor changes when final invoices are paid.
3. As to the activities related to the monitoring of transport of pollutants through the atmosphere, during 1990 three countries (Cyprus, Israel and Yugoslavia) started this type of monitoring as part of the national monitoring agreements. As a result, part of the overall monitoring assistance for Israel (12,000 US\$) was used for purchasing chemicals, spare parts and other material and part of the overall monitoring assistance for Yugoslavia (10,000 US\$) was used to purchase laboratory equipment.
4. The Second Workshop on Airborne Pollution of the Mediterranean Sea is being held in Monaco from 8 to 12 April 1991 to evaluate the on-going research, monitoring and modelling activities and to elaborate recommendations for future actions. The report of the workshop will be published in autumn 1991.
5. The X ICSEM/IOC/UNEP Workshop on Pollution of the Mediterranean Sea (Perpignan, 18-19 October 1990) was held in the framework of the Congress-General Assembly of ICSEM (15-20 October 1990). Only two topics were selected for presentation and discussion: a) pollution problems and research priorities and b) monitoring strategies of

marine pollution. The subjects were introduced by two key-note speakers and an extensive discussion at which 140 scientists were present followed the presentations. The results and the conclusions of the discussion will be used in the presentation of the new phase of MED POL due in 1995.

6. An agreement was signed between the World Bank and UNEP according to which a sum of US\$ 838,500 was granted by the Bank to MAP for MED POL supporting activities and in particular for the purchase of equipment and organization of training and the enhancement of the Data Quality Assurance Programme.

MED POL Data Processing

1. Computerized MED POL Monitoring Agreements and Data Reports have been transferred into PC/ORACLE relational database management system. Data entry has continued and the overall system has been extensively reviewed. Efforts were continued to establish a standard for the computerized database structure for distribution to the region for acquiring data in magnetic media.
2. The format of the MED POL Monitoring Agreements is being updated to increase readability and facilitate data entry to the computerized database. An attachment guide that explains the new format is also in preparation. The 1992 agreements may be prepared in the new format.
3. Two computerized bibliographic databases were compiled with financial assistance of OCA/PAC through surveying the world scientific literature (manual and computerized literature searches): Aquatic Pollution by Organophosphorus Compounds, published as MAP Technical Series No. 44 (with 870 references), and Marine Litter (currently in final draft form) which has been circulated among scientists for comments.
4. Consultation and assistance have been given to the Centre for Marine Research, "Rudjer Boskovic" Institute, Zagreb in the compilation with financial assistance of OCA/PAC of a computerized Adriatic Bibliography (ADRIA) that is currently in its final stage.
5. Preparations by the Co-ordinating Unit of a comprehensive computerized "Directory of Mediterranean Marine Environment Institutions" is under way with financial assistance of OCA/PAC.

Maintenance

The MED POL/UNEP maintenance engineer (based in Monaco) carried out visits to 17 institutions in 8 countries during 1990. Apart from his duties in equipment installation and service, he carried out a detailed survey of instrument manufacturers for re-equipping the MED POL monitoring network (and assuring continued supplies of spare parts and accessories in the future).

Training and Fellowships

As in the past, during 1990 assistance was provided to MED POL participants in the form of individual group training, visit of experts to less experienced laboratories, support for participation at MED POL meetings (workshops, intercalibration exercises and quality assurance meetings) and travel grants for attendance at meetings related to the MED POL programme.

A total of 117 scientists from 18 countries benefitted from this support programme for a total expenditure of
US\$ 157,314.

The third training course and intercalibration exercise in microbiological methods for marine pollution monitoring was convened by WHO and UNEP in Malta from 3 to 8 September 1990, in collaboration with the Council of Europe's EURO-Mediterranean Centre for Marine Contamination Hazards. It was attended by 22 participants from Cyprus, Egypt, Greece, Israel, Libya, Malta, Syria, Turkey and Yugoslavia. The local organizers contributed by financing two participants and two lecturers.

The third training workshop on the statistical treatment and interpretation of marine community data was convened by FAO, IOC and UNEP in Split (Yugoslavia) from 26 June to 6 July 1990, in collaboration with the Institute of Oceanography and Fisheries, Split. It was attended by 20 participants.

Preparations were made to hold the fourth course and intercalibration exercise in microbiological methods during the last quarter of 1991 at the Institut National d'Hygiène, Rabat, Morocco, for French-speaking participants.

A training workshop on Oceanographic Data and Time Series Analysis was held in Athens, 11-15 December 1991. The aim of the workshop was to train participants in oceanographic time series analysis and particularly in the use of a specially prepared PC software package.

(b) Data Quality Assurance

The data quality assurance programme, implemented by the Marine Environmental Studies Laboratory of IAEA in Monaco, continued and developed throughout 1990. The work included 2-3 week practical training courses on chlorinated hydrocarbons (participants from Tunisia (1), Egypt (2), Yugoslavia (2)), petroleum hydrocarbons (Egypt (2), Yugoslavia (2)) and trace metals (Egypt (3), Morocco (3), Libya (1)). Experts from the Monaco Laboratory carried out five extended technical missions to Tunisia (trace metals and trace organics), Egypt (trace organics), Yugoslavia (trace organics), and Albania (preparatory mission). In these missions additional training was given as well as practical support for setting-up National data quality assurance programmes. Additionally, close contact was maintained with all laboratories previously participating in this scheme.

Several other activities were developed within the scope of the quality assurance programme. These included organization of the participation of MED POL laboratories from EEC countries in the EEC workshop on quality assurance for marine monitoring in Noordwijkerhout, Netherlands (21-23 May). Two new intercalibration exercises (trace metals and trace organics) were started using a contaminated Mediterranean Coastal Sediment. The reference materials and standards bank in Monaco was further expanded (more than 600 standards available). An arrangement was made between IAEA, the US National Institute of Standards and Technology (NIST) and the Canadian National Research Council (NRC) to produce a series of international reference materials (within the framework of the UNEP/IOC/IAEA Group of Experts in Standards and Reference Materials - GESREM) which will be available free of charge to all monitoring laboratories for quality control purposes. The first of these standards GESREM-I (a mussel from the Mediterranean coast of France) will be available by mid-1991.

The Monaco Laboratory continued to develop, test and edit the UNEP Reference Methods for Marine Pollution Studies series including both methods and guidelines covering a wide range of contaminants. A full catalogue of the methods is available. Many of these methods are developed on the basis of the workshops and Seminars hosted by WHO, FAO, IAEA, WMO and IOC on behalf of MED POL.

The results of the improved quality assurance programme will be reviewed in 1991 but are already encouraging. It must be stressed however, that a continuous data quality assurance programme will be necessary in order to validate the data obtained. The full support of MED POL National Coordinators will be necessary to ensure that laboratories participate in the intercomparison programme which is a key element in this work.

(c) Research projects

During 1990, a total of 116 projects were on-going and 43 were completed with a total expenditure of US\$ 232,500. Under this chapter, only the research activities more directly linked to the monitoring programme are considered. Other research activities are described in chapter 6 g).

Activity A

Projects completed in 1990:	3
Projects ongoing on 31 December 1990:	20
Total 1990 contribution:	US\$ 42,000

Microbiological projects either continued to be linked with the revision of existing reference methods, or dealt with relationships between different bacterial concentrations in order to eventually establish indicator organisms for viruses and other pathogens.

Activity F

Projects completed in 1990:	4
Projects ongoing on 31 December 1990:	6
Total 1990 contribution:	US\$ 6,000

On-going projects dealt with modelling of circulation, modelling of vertical and non-stationary transport of pollutants and the study of climatic changes in the Mediterranean based on historic data.

Activity H

Projects completed in 1990:	1
Projects ongoing on 31 December 1990:	13
Total 1990 contribution:	US\$ 36,100

Research projects, under this activity, normally study the composition of the plankton communities in eutrophied areas or the presence of toxic species. Recently, a number of projects have been initiated attempting to interpret long-term series of eutrophication data. The MAP Technical Report Series No.37 and 40 including final reports of research projects implemented under activity H were published.

Activity I

Projects completed in 1990:	2
Projects ongoing on 31 December 1990:	8
Total 1990 contribution:	US\$ 18,000

Research projects, under this activity, normally study the effects of pollution on the structure of planktonic or benthic communities and the data are being treated statistically using computer software for better interpretation. The FAO/IOC/UNEP Training Workshop on the statistical treatment and interpretation of marine community data will be organized (Alexandria, 3-13 June 1991) for the scientists who were not able to benefit from it yet.

The MAP Technical Report Series No.40 also includes final reports implemented under this activity.

Activity J

Projects completed in 1990:	1
Projects ongoing on 31 December 1990:	0
Total 1990 contribution:	US\$ 0

This activity has been given low priority and only 3 projects have so far been implemented studying the effects of thermal discharges on marine communities in Algeria, Cyprus and Italy.

Activity K

Projects completed in 1990:	7
Projects ongoing on 31 December 1990:	13
Total 1990 contribution:	US\$ 26,500

In this activity, the emphasis has so far been on mercury and cadmium biogeochemical cycles. An effort is now made to divert research to other chemical elements listed in the annexes of the LBS protocol and two new proposals are now dealing with chromium.

A consultation meeting on the accumulation and transformation of chemical contaminants by biotic and abiotic processes in the marine environment was convened by FAO, UNEP and IAEA (La Spezia, Italy, 24-28 September 1990) and was attended by 32 participants.

Activity L

Projects completed in 1990:	6
Projects ongoing on 31 December 1990:	15
Total 1990 contribution:	US\$ 16,000

The on-going projects deal with studying, modelling and estimating atmospheric transport and deposition of heavy metals, nutrients and mineral aerosol into the various regions of the Mediterranean Sea from land-based sources, as well as with comparing the atmospheric and riverine inputs of these substances.

On-going projects deal with the study of biogeochemical cycles of CO₂ in the Mediterranean, research in the transport of pollutants by sedimentation and the study on the applicability of remote sensing for the survey of water quality parameters.

(d) Climatic changes

Under this subject (agenda item 5.3. d) a separate document "Progress report on the activity concerning implications of climatic changes in the Mediterranean region" reviewing projects and actions by national and international bodies, as well as by the Mediterranean Co-ordinating Unit was prepared as document UNEP(OCA)/MED WG. 25/Inf.9.

Coordination

As in the past, the monitoring activities of MED POL were coordinated by the MAP Coordinating Unit through contacts with the MED POL National Coordinators and with the full participation of the relevant Cooperating Agencies (FAO, UNESCO, WHO, WMO, IAEA, IOC).

As to the coordination of the research activities of MED POL, as in the past, the relevant Cooperating Agencies were directly responsible for the technical implementation of the various research projects through direct contacts with the national research centres.

The active participation of the Cooperation Agencies remained an important factor contributing very significantly to the implementation of MED POL. In addition to the regular and frequent contacts between UNEP and the Cooperating Agencies, the following meeting of the Inter-Agency Advisory Committee (IAAC) for MED POL took place in 1990, in order to ensure the harmonious cooperation and implementation of the MED POL activities during 1991:

- XXIV Meeting of IAAC (Athens, 3-7 December 1990); it reviewed the 1990-1991 programme and prepared a workplan and budget for the 1992-1993 MED POL activities (UNEP(OCA)/MED WG.24/1). In particular, the meeting discussed the monitoring programme, the research component in view of a new approach proposed (see document UNEP(OCA)/MED WG.25/4), the meetings and the documents to be prepared.

5. Information

- The first issue of the new MAP Bulletin (MEDWAVES) agreed upon by the last meeting of the Contracting Parties to incorporate all existing information bulletins published by MED Unit and the regional centres was published at the end of April 1990 in two languages, English and French. The Arabic version followed in August 1990.
- MEDWAVES No. 20 (Autumn 1990) was published in French in December 1990, in English in January 1991 and in Arabic in March 1991.
- MAP Technical Reports Series Nos. 36 to 47 were issued and distributed. The list appears in Annex III.

B. Implementation of the Land-Based Sources Protocol (LBS)

6. Implementation of the LBS Protocol

(a) Progress report on the implementation of the LBS Protocol

1. The Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources was ratified by Yugoslavia on 16 April 1990, by Albania on 30 May 1990 and by Israel on 21 February 1991, bringing to seventeen the total number of Contracting Parties who have ratified, acceded or approved the Protocol.

2. No answers were received from Contracting Parties to a letter sent by the Med Unit to all MED POL National Co-ordinators in July 1990 asking for implementation on on-going legislation or new legislation related to the Environmental Quality Criteria adopted by the Contracting Parties since 1985. The letter was accompanied by the MAP Technical Report Series No.38, in four languages, with all eight Environmental Quality Criteria adopted since 1985.
3. Assistance is still offered by the Secretariat to Contracting Parties who may need it, towards the application of the Environmental Quality Criteria or Emission Standards adopted.

Implementation of LBS workplan activities

1. Very few responses were received to the questionnaires for the survey of pollutants from land-based sources. Expert assistance was provided in 1990 to Cyprus, Greece (Rhodes) and Yugoslavia (Kastela Bay), and arrangements made for similar assistance to Algeria, Morocco and Tunisia to be effected in early 1991.
2. Work was completed on a document on guidelines for submarine outfall structures for small and medium-sized Mediterranean communities. This documents will now be merged with (a) already-existing documentation and (b) other aspects of the activity scheduled for 1991, to produce comprehensive guidelines, as planned, by late 1991 or early 1992.
3. Preparation of the part of the guidelines for effluents requiring separate treatment dealing with Annex I substances were completed in 1990, and the other part, dealing with Annex II substances, is scheduled for completion by mid-1991. The final comprehensive version of the guidelines will be completed by late 1991 or early 1992.
4. To meet the needs caused by recent developments regarding pollution by pathogenic organisms and the related one on environmental quality criteria for bathing waters, a small expert consultation on health risks from bathing in marine waters is being convened by WHO and UNEP in Athens from 15 to 18 May 1991 to review the situation on the basis of results of past studies and make appropriate recommendations.

5. The preliminary draft version of the document on assessment of the state of pollution of the Mediterranean Sea by carcinogenic/mutagenic/teratogenic substances was completed on schedule by the end of 1990. However, it was not possible to have the draft reviewed and finalized in Athens by February 1991 as originally planned for reasons beyond control. It is now planned to have the review in June 1991, which review will also take into account recent GESAMP work on the subject, and submit the document to the Joint Committees in 1992.
6. A small expert consultation on guidelines for monitoring land-based sources of marine pollution was convened by WHO and UNEP in Istanbul from 27 to 29 September 1990. The meeting agreed on new material to be incorporated in the final version of the guidelines, work on which is ongoing and scheduled for completion by mid-1991.
7. Preparation of the pollution assessment document on eutrophication and plankton blooms was initiated. The first draft of the document is expected to be ready by the end of 1991.
8. The assessment of the state of pollution in the Mediterranean Sea by organotin compounds and relevant proposed measures were first discussed at the First Meeting of the Scientific and Technical Committee (Athens, 23-27 May 1988). One of the decisions of the Committee was that the Secretariat, in cooperation with IMO, should study the feasibility of a complete ban on the application of free association TBT paints for all vessels (including sea-going vessels) and report to the Committee (para. 36 of document UNEP(OCA)/MED WG.1/12). It was agreed with IMO that the matter should be brought up at the Marine Environment Protection Committee of IMO. A resolution was adopted which appears as Annex IV. The resolution includes the elimination of antifouling paints containing TBT which have an average release rate of more than $4 \mu\text{g}/\text{cm}^2/\text{day}$ for use on all vessels and leaves the door open for total prohibition of TBT paints.
9. Questionnaires were sent to the National Co-ordinators asking them to provide information useful for the preparation of the assessment documents on organophosphorus compounds, lead, arsenic, chromium and nickel. The responses were limited.
10. A circular letter was sent to the National Co-ordinators in March 1991 requesting them to provide information on dumping sites for TiO_2 and fly ash and relevant reports and studies.

11. The Assessment of the State of Pollution in the Mediterranean Sea by organohalogen compounds was published as MAP Technical Reports Series No.39.

Pilot monitoring survey

1. The pilot project on monitoring of carcinogenic, teratogenic and mutagenic marine pollutants in selected "hot spot" localities in Italy, Spain and Yugoslavia was completed, and results incorporated into the relative draft assessment document.
 2. Preparations for the launching of the pilot project on monitoring non-biodegradable detergents were completed in 1990. The actual monitoring itself is expected to start in mid-1991.
 3. Following the recommendation of the IAEA/FAO/UNEP MEDPOL Workshop on the assessment of pollution by herbicides and fungicides (Monaco, 30 October - 1 November 1990), a pilot survey was initiated to establish the levels of herbicides in hot-spot areas. The survey is primarily conducted in the mouths (estuaries) of major rivers (e.g. Po, Rhône, Ebro) and includes water and sediment samples.
 4. The FAO/UNEP/IAEA Consultation meeting on the assessment of pollution by the chemical elements listed in Item 1 of Annex II to the LBS protocol which took place in Athens, from 13 to 15 February 1991 (document FIR/MEDPOL/LBS/3) recommended that further monitoring work was necessary especially in hot-spot areas. The dumping sites for titanium dioxide were considered as hot-spot areas for titanium while fly-ash dumping grounds were considered as hot-spot areas for beryllium, cobalt, thallium, silver, antimony, molybdenum, uranium and vanadium. Before initiating this pilot survey, an effort is made to collect information on such dumping sites in the Mediterranean and elsewhere.
- (b) Annex IV to the Protocol concerning Pollution from Land-Based Sources transported by the atmosphere

A draft text for Annex IV to the LBS Protocol was presented to the Joint Committee meeting by the secretariat in May 1990 as document UNEP(OCA)/MED WG.12/5. Having discussed the document, the meeting agreed that a revised text of Annex IV with due regard for comments received from Contracting Parties should be prepared for the Joint Committee meeting in 1991 so that it could then be submitted to the Contracting Parties' meeting for adoption. The revised

draft which was prepared by WHO, WMO and UNEP, taking into account comments of Contracting Parties, is submitted to the present meeting as document UNEP(OCA)/MED WG.25/3 to be discussed under Agenda item 5.2 b).

(c) Assessment of the state of pollution in the Mediterranean Sea by Organophosphorus compounds and proposed measures

Under this subject, a separate document is submitted to the Meeting as document UNEP(OCA)/MED WG.25/Inf.4, to be discussed under Agenda item 5.2. c). Relevant proposed measures are included in document UNEP(OCA)/MED WG.25/4.

(d) Assessment of the state of pollution in the Mediterranean Sea by persistent synthetic materials which may float, sink or remain in suspension and proposed measures

Under this subject, a separate document is submitted to the Meeting as document UNEP(OCA)/MED WG.25/Inf. 5, to be discussed under Agenda item 5.2. d). Relevant proposed measures are included in document UNEP(OCA)/MED WG. 25/4.

(e) Assessment of the state of pollution in the Mediterranean Sea by radioactive substances and proposed measures

Under this subject, a separate document is submitted to the Meeting as document UNEP(OCA) WG. 25/Inf. 6, to be discussed under Agenda item 5.2. e). Relevant proposed measures are included in document UNEP(OCA)/MED WG. 25/4.

(f) Assessment of the state of pollution in the Mediterranean Sea by pathogenic micro-organisms and proposed measures

Under this subject, a separate document is submitted to the Meeting as document UNEP(OCA) WG. 25/Inf. 7, to be discussed under Agenda item 5.2. f). Relevant proposed measures are included in document UNEP(OCA)/MED WG. 25/4.

(g) Research projects directly relevant to the LBS Protocol

During 1990, a total of 116 projects were on-going and 43 were completed with a total expenditure of US\$ 232,500. Under this chapter, only the research activities more directly linked to the implementation of the LBS Protocol are considered. Other research activities are described in chapter 4.c).

Activity B

Projects completed in 1990:	0
Projects ongoing on 31 December 1990:	0
Total 1990 contribution:	US\$ 0

Activity C

Projects completed in 1990:	3
Projects ongoing on 31 December 1990:	1
Total 1990 contribution:	US\$ 0

Projects in this field dealt with various aspects of pathogen identification and pathogen/indicator relationships with the object of verifying the validity of the relevant quality criteria.

Activity D

Projects completed in 1990:	4
Projects ongoing on 31 December 1990:	13
Total 1990 contribution:	US\$ 23,000

Projects dealt with two distinct fields: (a) health effects associated with microbiologically-contaminated coastal seawater or shellfish, and (b) health effects associated with chemically-contaminated seafood. A number of projects under this activity were also supported by considerable grants from local and regional authorities (following recommendations by WHO) in addition to the catalytic MED POL assistance.

The report on jellyfish blooms in the Mediterranean was published as MAP Technical Reports Series No.47 and the final report on project on relationship between microbial quality of coastal sea-water and rotavirus-induced gastroenteritis among bathers was published as MAP Technical Report Series no.46.

Activity E

Projects completed in 1990:	2
Projects ongoing on 31 December 1990:	2
Total 1990 contribution:	US\$ 3,000

The two completed projects dealt with submarine outfall design, used lubricating oils in effluents and health-related environmental impact assessment of selected developmental projects. The ongoing one, scheduled for completion in 1991, deals with coastal pollution by solid wastes.

Activity G

Projects completed in 1990:	10
Projects ongoing on 31 December 1990:	25
Total 1990 contribution:	US\$ 61,900

The on-going projects cover a fairly wide range of topics in the following fields: (a) the relationship between levels and effects of selected substances vis-a-vis man and marine biota, (b) environmental factors affecting carcinogenicity/mutagenicity of selected substances, (c) study of toxicity effects of copper, zinc, lead, chromium, cadmium and selenium on various marine organisms, (d) study of bioprotection mechanisms in organisms, (e) bioaccumulation of organotins, cadmium, mercury, cadmium and organophosphorus compounds in marine organisms, (f) in situ toxicity of oil dispersants, (g) effect of carbonate and organophosphorus pesticides on marine invertebrates and (h) metallothioneins.

On-going projects also deal with the development of criteria for distinguishing Land-Based from Marine-Based coastal litter and the development of analytical techniques for the determination of surface active substances and detergents in sea-water. In this activity, the emphasis has been diverted from acute toxicity testing to sublethal techniques which are now becoming important in marine pollution assessment work. New projects include studies on blood chemistry, peptides and proteins, cytochrome P-450, AChE as well as physiological responses.

In addition, in the framework of this activity, a FAO/IOC/UNEP Workshop on the biological effects of pollutants on marine organisms is being organized (Malta, 10-14 September 1991) which will concentrate on the techniques studying the sublethal toxic effects at the level of the individual organism or below. One of the aims of the workshop is to discuss the applicability of the techniques in field studies on a routine basis and their significance and interpretation vis-à-vis marine pollution risk assessment.

C. Implementation of the Protocol on Emergencies

7. Prevention and Combating Pollution from Ships

- (a) The Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency
- (b) The Regional Marine pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)

Status of the implementation of the activities:

Studies and surveys:

1. A consultant was hired from 26 October to 4 November 1990 to assist the Centre in the establishment of a partially computerized data base on hazardous substances.

Prior to his departure the consultant submitted a report containing proposals and recommendations.

2. Following the decision of the Sixth Ordinary Meeting of the Contracting Parties, the Centre undertook the initial step for the establishment on a voluntary basis of a regional manual for collecting data on maritime transport of harmful substances.

Substantial contributions from Mediterranean coastal States are still expected.

Meetings, Seminars, Workshops, Study Tours, Training Courses, Fellowships undertaken or under preparation:

1. A regional Seminar on financial questions, liability and compensation for consequences of accidents causing pollution by oil and other substances was organized by the Centre:
 - to provide the participants with an overall view of financial questions, liability and compensation for consequences of accidents causing pollution by oil and other harmful substances;
 - to discuss and to approve conclusions and to propose recommendations concerning legal, administrative and financial aspects of mutual assistance;
 - to examine and to approve draft principles and guidelines concerning co-operation and mutual assistance in case of emergency.

The Seminar took place in Malta from 8 to 12 October 1990. The final report of the Seminar was distributed by the Centre on 16 October 1990 to REMPEC Focal Points and to the participants in the Seminar (REMPEC/WG.2/5).

2. A meeting of a drafting group on Principles and Guidelines concerning co-operation and mutual assistance in case of emergency will be held in Malta 21-22 March 1991 - the Centre is currently preparing this meeting the aim of which will be to finalize Principles and Guidelines concerning co-operation and mutual assistance for their submission to the May meeting of the socio-economic committee.

3. Training courses

The Centre is currently in the process of preparing the organization of the following training courses:

- On equipment and products for oil pollution response (tentative date April)
- On crisis management (tentative date June)
- On harmful substances (tentative date October)

4. The training course on Marine Pollution Prevention, Control and Response initially scheduled to be held in Alexandria, Egypt between the 10 and 19 February 1991 with the technical assistance of REMPEC has been postponed.

5. The Technical Expert delivered a series of lectures at a training course organized by the European Institute of Maritime Studies in Gijon, Spain on 26 June 1990.

6. The Technical Expert delivered a series of lectures at a Workshop on risk assessment on major marine accidents (Malta, 22-26 October 1990).

7. The Director attended the Conference on International Co-operation on Oil Pollution Preparedness and Response held in London at the Headquarters of the International Maritime Organization from 19 to 30 November 1990 - the Conference adopted an International Convention on Oil Pollution Preparedness Response and Co-operation (OPRC.90) as well as a set of Resolutions.

8. The Director attended:
 - the meeting of group of experts on the Offshore Protocol, Athens, 08-11 January 1991.
 - The RAC Directors meeting held in Athens, 14-15 January 1991.
 - the Review Meeting for adoption of the final version of Mediterranean Report to the 1992 Conference, Athens, 16-18 January 1991.
9. In co-operation between UNEP and IMO, the Director took part in a UNEP/IMO mission in Saudi Arabia in connection with the pollution related with the Gulf War, 3-15 February 1991.
10. The Chemical Expert presented a lecture on the role and function of REMPEC at the Institute of Petroleum, Malta Branch, Malta, 6 February 1991.

Status of Documents, Reports, Manuals, Guidelines being prepared:

1. "The proceedings of the workshop on combating accidental pollution of the Mediterranean Sea by harmful substances" English version has been published and distributed in June 1990. The French version is under preparation.
2. A set of seven proposed Principles and Guidelines concerning co-operation and mutual assistance that should be incorporated in Part A: "Basic documents, Recommendations, Principles and Guidelines concerning accidental marine pollution preparedness response and mutual assistance" of the Regional Information System have been prepared by the Centre. Three of them have already been approved by the Seminar on Liability and Compensation. The remaining four will be elaborated further by a small drafting group which will meet in March 1991. The full set of proposed Principles and Guidelines will be submitted to the joint meeting of the Technical Committees in May 1991 (see Annex VI of the report of the Seminar on liability and compensation - REMPEC/WG.2/5).

3. Regional information system

The Centre published and distributed:

- Part A: The preliminary version "Basic documents, Recommendations Principles and Guidelines concerning accidental Marine pollution preparedness response and mutual assistance" January 1991.
- Part B: List of Inventories - Section 1 - "Directory of competent national authorities in charge of accidental marine pollution preparedness, response and mutual assistance and other relevant information" January 1991.
- Part C: Databank, forecasting models and decision support system. Section 4 - "List of alerts and accidents in the Mediterranean" - January 1991.
- Part D: Cooperational Guides and technical Documents. Section 4 - "The signification of a National Safety data sheet" - March 1991.

Status of implementation of other activities:

1. Facilitation in obtaining assistance and co-ordination of international assistance

Assistance in the form of information exchange/transmission, giving technical advice and providing requested information was given to authorities of various Mediterranean coastal States during several accidents which occurred within and outside the Region during the period covered.

- SEA SPIRIT/HESPERUS: permanent contact, follow-up, providing information, transmitting messages to Morocco, Spain, France, Algeria and Tunisia between 7 August and 17 September 1990. A brief report will be prepared soon.
- NEW PROSPERITY: permanently informed by Spanish authorities of the case and follow up of the evolution of the situation from the 28 October 1990.
- MT "BISOTON" (12.01.1991, Omisalj, Yugoslavia): a minor spillage during offloading operation. Report on accident received from competent Yugoslav authorities.

- M CHEM TANK "ALESSANDRO PRIMO" (01.02.1991), off Molfetta, Italy): the vessel carried acrylonitrile on board. The Centre immediately contacted Italian authorities and offered assistance. Permanent contact maintained with them. Information on chemicals involved transmitted to Yugoslav Institute for Oceanography and Fisheries.
- O/B/O MV "PHAROS" (16.02.1991, Santa Panagia Bay, Italy): explosion on board while vessel berthed at refinery. Competent Italian authorities confirmed that there was no pollution.
- RO-RO MV "CONTIHAMMONIA" (17.02.1991, Livorno, Italy): the vessel struck the pier and due to the resulting damage spilled more than 10 tons of lubricating oil. Oil recovered by a local clean-up company. Report received from Italian authorities.
- MT "SEA TIGER" (20.02.1991, off Pozzallo, Italy): the tanker with 20500 tons of heavy fuel oil on board grounded in stormy weather, spilling a part of her cargo. Information on owners and operators provided to Italian authorities upon their request. Permanent contact with them kept during the crisis. Information on the situation also provided to ITOPF.

2. Assistance in contingency planning

Following a request from the Turkish national authorities, for the participation of REMPEC in the preparatory work of the national contingency plan, the Director paid a short visit to Turkey on 17-18 September 1990.

3. Change in Personnel

Mrs. Josephine Bonavia has been recruited as Secretary to Head of Office/Administrative Assistant in replacement of Mrs. Lucia Burgess who terminated her employment on 5 May 1990 after expiration of a three month probation period. Mrs. Lucia Burgess was replacing Miss Anna Micallef Trigona who resigned her post as from 31 December 1989. Mrs. Josephine Bonavia started working at the Centre from 12 June 1990.

Mrs. Joanna Pace, clerk, resigned her post as from 30 June 1990. She has been replaced by Mrs. Mary Ann Bonett who commenced work on the 25 September 1990.

IMO carried out a Salary Survey for Malta from 23 of March to 6 April 1990 and, as a consequence of this survey, a new salary scale for the General Service Category in Malta has recently been approved by ICSC New York. The new salary scale will be effective as from 1 January 1990.

Dr. Stefan Micallef took up his post at the Centre as Chemical Expert on 16 July 1990.

Summary of the problems encountered:

1. The change of personnel and the fact that the post of Chemical Expert has been filled only in July 1990 created delay in the implementation of the planned activities.
 2. The accident of the Khark 5 revealed the difficulties for the Centre to communicate efficiently using the means available at present. Following a decision of the Bureau Meeting on that matter, a Consultant visited the Centre from 12 to 15 June 1990 to evaluate the communications facilities of REMPEC and propose solutions to improve the existing situation. The report of the consultant has been submitted to MEDU at the end of June 1990. The proposed solutions are currently being examined by IMO and REMPEC.
 3. The Wang OIS 50 operated by the Centre for work processing is obsolete, the Wang printing machine is quite often out of order and the proper maintenance service for this type of equipment cannot be found in Malta. The situation has become very critical due to the fact that for financial reasons the three work stations of the Wang OIS 50 used for word processing cannot be replaced in one go.
- (c) Port reception facilities for ballast water and other oily residues in the Mediterranean
1. The Nicosia Charter on Euro-Mediterranean Co-operation concerning the Environment in the Mediterranean Basin stipulates that EEC would finance projects relative to port reception facilities in the Mediterranean region.

This new initiative, combined with the World Bank Programme would be a significant step to assist the Mediterranean coastal States to establish port reception facilities in their ports in conformity with the Barcelona Convention, the Genoa Declaration and the MARPOL Convention.

2. During the Rome meeting of the Bureau (Sept.1990), the representative of Egypt proposed that the secretariat convene a working group on port reception facilities taking into account the commitment contained in the Nicosia Charter. The Co-ordinating Unit has received letters from Syria and Turkey expressing their interest in the matter. The Secretariat will propose to the Brussels meeting of the Bureau (April 1991) that a Working Group should be convened during the first half of 1991 in Egypt in co-operation with the Egyptian Government, REMPEC and the EEC. Furthermore, the REMPEC Centre in Malta is taking necessary arrangements in order to organize a training course on port reception facilities during 1991.

D. Implementation of the Protocol on Specially Protected Areas and Historic Sites

8. Protection of the Common Mediterranean Heritage

(a) The Protocol concerning Mediterranean Specially Protected Areas

Morocco has ratified the SPA Protocol on 22 June 1990 and Albania has ratified the SPA Protocol on 30 May 1990.

(b) The Specially Protected Areas/Regional Activity Centre (SPA/RAC)

1. In accordance with decisions of the Sixth Ordinary Meeting of the Contracting Parties, the Co-ordinating Unit conducted intensive contacts with the Tunisian authorities and the Director of the SPA Centre with a view of finalizing the agreement between UNEP and the host country on their mutual obligations regarding the Tunis Centre.

The draft agreement was handed to the Tunisian delegation to the Sixth Ordinary Meeting (Athens, October 1989). The response of the Tunisian authorities was received on 28 May 1990.

A meeting was held in August 1990 in Nairobi, during the Governing Council meeting, between the Director of the Tunisian National Agency for Environment and the Co-ordinator of MAP. The draft agreement and the comments of Tunisia were reviewed. A final text was prepared which still requires the clearance of the Tunisian Government. In reply to a request for clarification from the Tunisian authorities, the Unit again restated on 7 January 1991, the UNEP position on each article of the text. Furthermore, UNEP agreed to cover the expenditures incurred by the Centre in 1990 in spite of the fact that no sub-contract had been signed between UNEP and the Centre since January 1990 pending the approval of the Agreement.

In order to implement the minimum activities approved by the Contracting Parties for the years 1990/1991, a Memorandum of Understanding was signed between MAP and IUCN every three months to implement essential activities. Meanwhile, the Centre's expert was stationed at the MED Unit in Athens for this purpose. The Memorandum was extended for another three months until the end of March 1991.

2. Assistance to countries in their endeavour to promote activities relevant to the identification, protection, and management of marine and coastal protected sites of Mediterranean interest.
 - a. Implementation of a workshop on the management of protected areas, with the view of creating a network of Mediterranean SPA.

The meeting was held in Monaco, on 5 and 6 October 1990 and was attended by 31 participants. Following agreements with different organizations, the meeting was co-sponsored and co-organized between UNEP/MEDU/SPA, IUCN, World Bank, Monaco Scientific Centre and Port Cros National Park (France).

- b. A meeting took place in Sophia Antipolis from 16 to 19 July 1990 with Blue Plan and World Bank in order to define possible co-operation for the management of protected areas in the Mediterranean, taking into account the future problems to which the Mediterranean countries will have to face.

- c. Support to a field study in Algeria in order to define the marine boundaries of El Kala National Park. A field study mission has been realized in November 1990 in order to visit in Algeria El Kala National Park, to evaluate the quality of the marine environment and define the suitable limits for the marine part of the Park. A visit of the SPA expert took place from 14 to 20 December 1990 in cooperation with World Bank (METAP), in order to discuss the actual and possible further developments of the management of the National Park, in a regional context.
 - d. Visit to Mallorca (S'Albufera, SPA for the management and monitoring programme (SPA-IUCN-Earthwatch collaboration) took place on 8-10 October 1990.
 - e. A Meeting took place on 23-26 July 1990 in Madrid with the national Focal Point for SPA in order to review the Spanish list of existing protected areas.
 - f. A field study in Libya was carried out from 15-22 June 1990 in co-operation with Libyan experts and international experts covering the area from the Syrte Gulf to the Libyan-Egyptian boundary. Recommendations have been made for the protection of some areas.
3. Assistance to the countries to develop their activities for the protection of endangered species and ecosystems (monk seal, marine turtle, marine vegetation).
- a. Meeting in Turkey on the national strategy for the conservation of Mediterranean monk seal. A preparatory meeting for the national strategy has been realized (21-24 October 1990). A contract has been prepared between IUCN and the Undersecretariat for Environment in order to assist in the evaluation of the monk seal population along the Turkish coast. A national meeting for the adoption of a strategy is scheduled for the beginning of 1991.
 - b. Field study in Turkey on the problems of marine turtles nesting loss. Following the previous meeting, a field study has been realized from 25 to 30 October 1990 on the south seashore of Turkey, between Antalya and Adana.

- c. Preparation with Algerian authorities and assistance in the realization of a general survey of the status of the monk seal along the Algerian coast. Following the visit of the expert (March 1990), a contract has been given to Port Cros National Park in order to realize in association with the Research Centre of Bou Ismail (Algeria) a general survey of the status of Mediterranean Monk Seal along the Algerian coast.
- d. Training in the Port Cros National Park Monk Seal Rescue Centre: two participants from Mediterranean coastal States will be selected and sponsored. A Turkish and a Greek representative will be selected and sponsored. Due to some delay in the designation of the participants, the training will take place in 1991.
- e. Training in July-August 1990 in Cyprus on Mediterranean marine turtles conservation techniques and management of turtle nesting beaches. This was undertaken by the Fisheries Department for the second year. Of the four candidates nominated by the countries, three participated in this course (Algeria, Yugoslavia and Israel). This course will be repeated in 1991.
- f. In accordance with the decision of the Joint Meeting of the Contracting parties (Athens, 28 May - 1 June 1990) and in co-operation with the Secretariats of the Bern and Bonn Conventions and with the support of Greenpeace International, documents and meetings have been realized for the protection of Mediterranean small cetaceans. A meeting organized by the Bern Convention for the review of the draft agreement was held in Palma de Mallorca on 25-26 February 1991. The SPA expert participated in the meeting. A draft agreement on possible co-operation between the Secretariats of Bern, Bonn and Barcelona Conventions was reviewed. A draft action plan for the conservation of small cetaceans in the Mediterranean was prepared by Greenpeace International. It will be reviewed at a later stage.
- g. Documents have been prepared and published as MAP Technical Reports Series No. 42: "Red data book on Mediterranean endangered marine flora" (species, associations and landscapes, in French only) and No. 43: "Status of Mediterranean Marine Turtles" (English and French).

4. Meetings

- a. The SPA expert participated in the IMO meeting held in Malmoe from 25 to 28 September 1990 on "Sensitive Sea Areas" with a presentation of the Mediterranean SPA Programme.

5. Mediterranean legislation for Specially Protected Areas

- a. Third draft of the Directory of the environmental Mediterranean legislation. The second draft has been prepared, partly in French, partly in English. Before distribution to NFP, a third version in English only with new additions is under preparation and will be available soon.
- b. Second draft of the Directory on submarine archaeology Mediterranean legislation. This draft has been prepared and will be reviewed by experts. A third draft is scheduled for the end of the year and will be sent for correction to the NFP of the Mediterranean coastal States and the EEC.

(c) Preservation of Historic Sites

1. A Memorandum of Understanding was signed in September 1990 between MAP and the Association Méditerranéenne des Patrimoines Historiques Internationaux (A.M.P.H.I.) of Marseille concerning MAP activity "Measures for protection of common Mediterranean Heritage". The agreement covers the period from June to December 1990. The Association was provided with US \$ 50,000 to cover expenses for the implementation of the agreed workplan. The Association is to provide a counterpart contribution equivalent to US \$ 50,000 for the same period under consideration. The agreement specified the workplan and timetable for the implementation of activities approved by the Contracting Parties relative to the promotion of co-operation on the 100 historic sites and development of a work programme.
2. In the year 1990, the activities of the Marseille Centre responsible for the implementation of the "100 historic sites" focused on the promotion of the co-operation regarding the historic sites and a work programme on the development of the co-operation programme in three areas: stone degradation, the protection of underwater archaeological sites and assistance and training courses concerning the protection of historic sites.

3. During 1991, activities will be carried out on the same basis as before, in conformity with the objectives defined at the Contracting Parties meeting (3-6 October 1989).
4. Co-operation with UNESCO has been constant, especially through the Mediterranean sites which are already on the list of World Heritage or proposed for inclusion.
5. The International Council on Monuments and Sites (ICOMOS) has been informed on the progress achieved.
6. Missions carried out to the sites made it possible to evaluate the specific reports concerning the co-operation programme in the area of stone degradation and the protection of underwater archaeological sites, including shipwrecks.

The main points examined during the visits carried out by an archaeologist and an architect are the following:

- The need for material for sketching and measuring;
- the absence of a topographical plan for the sites on an adequate scale;
- the existing urban plans only partially take account of the historic sites;
- the existence of a large number of studies which are often adopted but not applied.

The above points could be developed within the framework of the biennial programme 1992-1993.

E. Environmentally sound management of the Mediterranean coastal zone

9. Environmentally sound management of the Mediterranean coastal zone

(a) Prospective analysis of the relationship between environment and development

The Blue Plan/Regional Activity Centre (BP/RAC)

In 1990-1991, the activities of BP were focused on the following:

1. Preparation of studies at Mediterranean Basin scale

The EEC (DG XVI) and the French Délégation à l'Aménagement du Territoire have asked the Blue Plan to contribute through its expert capacity and its data base in prospective activities concerning the

Mediterranean Basin. At the same time, certain countries (Libya, Turkey) through a re-evaluation of their national scenarios contribute toward such large scale studies.

2. Contribution of prospective studies to the management of coastal ecosystems and of sites and landscapes of cultural/historic interest

It appears from the experience of the other centres (PAP,SPA, Atelier du Patrimoine, REMPEC) that prospective thinking sheds light on their own activities and proposals. Thus, RAC/BP is drafting a specific prospective study to help in decision making and contribute to the work of the other centres. In the first phase, RAC/BP will study more specifically coastal ecosystems, the management of which can change from exploitation and intensive occupation to protection, but whose socio-economic and ecological functions must be analyzed first while looking into long-term trends.

3. Upgrading of data base

- . Analysis of the current state of the data base
- . Drafting of a note to be sent with a cover letter to the National Focal Points concerning a more appropriate definition of the Mediterranean regions of the Blue Plan.
- . Continuation of the updating of the data base with the help of statistics tables mainly of international organisations and those countries that use statistics systems.
- . A meeting of the working group Blue Plan - University of Genoa - Genoa Ricerche at Genoa on 6 September 1990 made possible the elaboration of the form of cooperation. To date no follow-up has been received from Genoa.

4. Iskenderun region

A contract on the analysis of the industrial system implemented in the Iskenderun region and its current problems, the prospectives of endogenous and exogenous development of the industry in the area on the basis of national and international orientations, the impact of existing industry and of that planned for the short and medium term and

contribution to the prospective systems approach used in the region through participation in missions and expert meetings.

Consultant's contract for the elaboration, within the Iskenderun project framework of a socio-economic framework project which could link the Iskenderun region indicators with those of Turkey as a basis for the elaboration of scenarios. The study involves the collection of data and the drafting of the appropriate documents in collaboration especially with the Turkish authorities; furthermore the participation in a mission to Turkey in November 1990 and in a coordination meeting of Blue Plan participants and experts as well as other experts at Sophia Antipolis and the detailed preparation of the programme.

5. Libya

Consultant's contract to contribute to the elaboration of Libyan scenarios, to prepare sectoral inputs on the demography, energy, economic activities and natural resources, as well as to prepare synthesis documents.

6. Côte d'Azur

Consultant's contract within the framework of the Cannes-Grasse-Antibes area to carry out an analysis of the regulation procedure used for the elaboration of the Master Plan, its chronology and its current problems; also to evaluate the impact of the physical and urban development objectives on the environment in terms of preserving natural resources and of effort expended; finally to elaborate a prospective systems approach adapted to the sector.

7. Documents

- Dissemination of the Main Report in English (Oxford University Press)
- Printing of the Summary in Serbo-Croatian (300 copies).
- Reprinting of the Executive Summary in French (1000 copies).
- Preparation of specialized booklets:
 - . Booklets in "Fishing" and "Forest" published (Editions Economica) and being distributed.
 - . Other booklets: Preparation of 4 booklets "Nature Conservation", "Islands", "Water" and "Industry" expected to be published in the first semester of 1991.

8. Other activities

During the second semester 1990, the Blue Plan had close contacts with the World Bank and the European Investment Bank, with DATAR and the EEC to contribute to the specific activities of these bodies concerning the Mediterranean prospective.

Difficulties encountered in project implementation

On the basis of the activities carried out in the second semester 1990, one may report on certain problems or difficulties encountered, which may impact upon the effectiveness of the Centre on the quality of its image.

- the difficult adaptation of the prospective tool to a smaller geographical area which brought with it longer delays than were anticipated.
- a certain "deactivation" of the network of experts and focal points, through inadequate mobilization and dissemination of information by the Blue Plan.
- the small number of personnel and insufficient operational means which limit the availability of the permanent team of the Blue Plan.
- the lack of conviction on the part of certain partners for prospective activities given the recent geopolitical upheavals.

Solutions adopted or needed

In the year 1991, the Blue Plan activities should be clarified, especially through the elaboration of its programme 1992-1993. This programme will be based both on the relatively light potential of the RAC/BP structure and on the need to bring a value added through the selection and synthesis of several studies and expert work. While the science of prospective studies is being developed in the various countries and in international institutions (and the EEC), the Blue Plan will get involved in:

- methodological innovation;
- the operation of the prospective "observatoire" of the Mediterranean Environment;
- training through active teaching methods used in several countries;
- the drafting of a practical guide on the prospective systems approach adapted to the Mediterranean coast;

- the upgrading of communications with Mediterranean decision makers on the results and tools of prospective studies;
- the strengthening of the permanent team to improve the secretariat functions, the expert capacity and the mobility of staff to bring about a stronger contribution to studies in progress.

(b) Coastal planning and management

The Priority Actions Programme/Regional Activity Centre (PAP/RAC)

In 1990-1991, the activities of PAP were focused on the following:

- drafting and formulation of 4 ongoing MAP Coastal Areas Management Programme (CAMP), and preparations for and implementation of various PAP-related activities within the frame of the signed programmes;
- identification, evaluation and development of planning and management tools applicable in the region;
- implementation of co-operative projects and activities organized jointly with national authorities, institutions and/or programme centres;
- implementation of activities in various individual priority fields;
- strengthening the PAP network of experts and institutions, as well as cooperation with other MAP centres, UN agencies and international organizations.

The most important achievements in 1990-1991 were the following:

1. As part of activities geared to the development and application of planning and management tools:
 - At the invitation of the Executive Director of UNEP, the practical approach to EIA and the relative case studies were presented in Nairobi in March 1990. The preparation of a document followed which was finalized jointly with MEDU and UNEP-OCA/PAC, as well as a number of general guidelines for the preparation of EIA for relevant projects affecting the marine environment.

That document was published as UNEP Regional Seas Reports and Studies No.122. It is being translated into Arabic. The texts of 3 pilot case studies were also finalized and published as UNEP Regional Seas Reports and Studies (RSRS). Furthermore, two EIA programmes were drafted for two projects in Morocco which will be finalized by the end of the first

semester of 1991. Finally, a national seminar, held in English, was convened in 1990 on the application of the EIA practical procedure and legal aspects of EIA as a compulsory tool in making development and investment decisions, and another one is scheduled for May 1991. Organization of an expert meeting in French is also envisaged in order to review the Moroccan EIAs.

- A proposal of the methodology for carrying capacity assessment of tourist establishments was prepared, presented at a meeting organized by UNEP - Industry and Environment Office (IEO) and the World Tourism Organization (WTO) in Paris (June, 1990) and accepted as the basis for the preparation of pilot studies. A project outline for two such pilot studies was prepared, and the implementation of the first one started in February 1991, while the second one is scheduled for the period September-December 1991. Finally, an expert meeting to evaluate the results of the two studies is scheduled for December 1991.
- A proposal of the methodology for using the multicriterional analysis in selecting sites suitable for development projects was prepared in 1990. The preparation of major pilot case study started following a positive reaction of UNEP-Nairobi on that proposal, to be completed by June 1991.
- Documents were prepared for the initial training course on the application of GIS on pcARC/INFO (September, 1990) which was organized for team leaders, future trainers in GIS within ongoing CAMP. With a support of Global Resource Information Database (GRID)-Nairobi and United Nations Institute for Training and Research (UNITAR)-Geneva, an evaluation of the 1989 Kastela Bay programme was made, the basis was set for the 1990-1991 programme, and the hardware and software support to these activities was strengthened and completed. An advanced training course for the core group of PAP trainers was organized in January 1991 by UNITAR, Geneva and conducted by an expert of the Environmental Systems Research Institute (ESRI - USA). Further activities on strengthening PAP capabilities for this training will be

implemented by the end of 1991 in cooperation with GRID-Nairobi, UNITAR and ESRI (USA), while individual training programmes will be implemented within CAMPs. In cooperation with UNEP/IEO, Paris, a training course on hazard assessment and risk management (APELL) will be organized in 1991.

- A methodology was developed within CAMP "The Bay of Kastela" for hazard assessment and risk management, and the implementation of related pilot study was launched.
2. In cooperation with various national authorities, institutions and/or programme centres, the following was completed:
- The co-operative project on soil erosion: the implementation of the project was launched in Spain (the host country) with Instituto Nacional para la Conservacion de la Naturaleza (ICONA) - Madrid as the implementing institution, and the participation of Spain, Turkey and Tunisia. In 1990, PAP-FAO-ICONA missions visited Turkey (3), Tunisia and Morocco to select the pilot areas for erosion mapping; an expert meeting was held to develop the mapping programme, and a training course organized on the preparation of maps. The mapping started in three countries. In the first quarter of 1990, an expert meeting was organized in order to define a methodology of monitoring rainfall induced erosion. By the end of 1991, a training course on monitoring will be organized, as well as missions to two countries (two to each country) and a meeting to evaluate the results of the programme.
 - Within the activities of the co-operative project on seismic risk reduction (implemented as UNDP project in Genoa, Italy which is the host country), two workshops and two meetings of the Steering Committee were organized where PAP/RAC was represented, and documents on hazard and vulnerability assessment were completed.
 - Within the activities on the use of renewable sources of energy in the Mediterranean region, carried out with Spain as the host country and "Centro de Investigaciones Energeticas, Medioambientales y Technologicas" (CIEMAT) - Madrid as the host institution, in 1990 a training course was organized on the practical application of renewable energies with the participation of 26 trainees from 11 countries (Report-PAP/11/TC.4), a programme was prepared on environmentally sound energy planning for the island of Rhodes (part of CAMP "The Island of Rhodes") in

cooperation and with support of DPCU-Energy Unit, UNEP-Nairobi; a training course was organized, with the support of the Stockholm Environment Institute - Boston (USA) Office, on the application of long-term energy-environment alternatives of planning (LEAP) (Report PAP-11/TC.3), with the attendance of 10 trainees from 3 countries.

In 1991, a training course will be organized on the application of photovoltaic conversion of solar energy. The workplan also envisages the implementation of the programme of environmentally sound energy planning for the island of Rhodes within the relative CAMP.

- In the field of liquid waste management, a training course was organized with the support of the "Centre de Formation Internationale à la Gestion des Ressources en Eau" (CEFIGRE -Sophia Antipolis, France) on the management and maintenance of urban liquid waste treatment plants, with the participation of 16 trainees from 7 countries (Report PAP-7/TC.3); another training course was held on the planning and design of urban liquid waste treatment plants for big Mediterranean cities, with the support of the City of Marseille and MAP Co-ordinating Unit and participation of 14 trainees from 8 countries (Report PAP-7/TC.2).
- In the field of water resources management, the implementation started of the Water Resources Management Project of the Island of Malta developed by PAP/RAC and the Maltese authorities with the support of the European Community. The implementation of the project was entrusted to the "Bureau de Recherches Géologiques et Minières" (BRGM) - Orleans, France. In this phase of the project, PAP/RAC acts as consultant to the Maltese Government. In this context, two consultant missions were organized in 1990. A PAP document on the methods and techniques of water conservation has been prepared and will be evaluated in an expert meeting (May 1991). A training course on data base for water conservation will be organized in Malta in the second half of 1991.
- After the signing of the Barcelona Convention by the Government of Albania, a mission was organized of the representatives of the Albanian Committee for the Protection of the Environment - Council of Ministers to PAP/RAC. In February 1991, a PAP mission visited Tirana, and on that occasion, basis was defined of a programme for 1991 and the following biennium.

3. The following was achieved in individual priority actions:

- Water resources management: in addition to activities mentioned above, the document entitled "Wastewater Reuse for Irrigation in the Mediterranean Region" was published as MAP Technical Reports Series No. 41.
- Rehabilitation and reconstruction of Mediterranean historic settlements: a set of methodological documents was completed; a preparatory meeting for and a workshop on the methodology of planning, designing and implementation of rehabilitation projects in Mediterranean historic areas were organized. In 1991, documents have been prepared for evaluating the adopted methodology, based on the experience of seven countries. A seminar on the application of the adopted methodology in the Arab historic settlements will be organized in Tripoli, Libya in September 1991. Preparations will be made for the conference on the adopted methodology envisaged for the beginning of 1992.
- Solid and liquid waste management: Code of Practice for Environmentally Sound Management of Liquid Waste Discharge in the Mediterranean Sea was prepared and disseminated in English and French. Code of Practice for the Management of Urban Solid Waste in Mediterranean Coastal States was redrafted and disseminated.

A training course on management and maintenance of wastewater treatment plants for towns of 10,000 - 100,000 inhabitants will be organized in 1991. Training documents will be prepared for a seminar on solid waste management envisaged for 1992.

- Tourism harmonized with the environment: see paragraph E.9.b.1 above referring to carrying capacity assessment.
- Aquaculture: In 1990, an approach to the Inventory of Sites Suitable of Aquaculture in Mediterranean Coastal Areas was completed; initiative was taken to secure resources for the implementation of the co-operative project "Environmentally Sound Planning and management of Aquaculture Activities in the Mediterranean Region", but without success. In 1991, documents will be prepared for the environmentally sound planning and management of aquaculture activities in lagoons.

4. With the support of MAP Co-ordinating Unit, PAP/RAC maintained a fruitful co-operation with other components of MAP, particularly with the Blue Plan (a harmonization meeting was held in November 1990).
- The co-operation with UNEP-Nairobi (OCA/PAC, DPCU, GRID) was strengthened with regard to the activities in the fields of EIA, presentation of experiences in integrating planning, and renewable sources of energy. Also, PAP was granted the equipment worth 25,000 US \$ (by GRID) and two softwares worth 7,000 dollars each (UNITAR), and for 1991 a grant is expected of equipment for three training lines for pcARC/INFO and the ARC/INFO software for main frame computer applications of GIS.
- Cooperation was established with UNEP-IEO (Paris), and joint activities for 1991 (training course on APELL, and cooperation in carrying capacity assessment for tourist complexes) as well as the basis of cooperation in 1992-93 were determined.
- The cooperation with UNESCO (in the field of historic settlements and integrated planning) and FAO (soil erosion) continued, and the cooperation with OECD (coastal management) established, as well as with IAEA - Vienna, Dutch Ministry of Environment, Rijnmond (Holland) Environmental Protection Agency, The Safety and Reliability Directorate (England) on hazard assessment and risk management (HARM).
- The meeting of RAC Directors and the Coordinating Unit held in January 1991 discussed, among others, the PAP implementation of its workplan in the period 1990-1991 and made suggestions relevant to the solution of certain problems of practical nature.
- On the basis of the host-country federal law on PAP/RAC, in 1990 the Centre was constituted as an independent institution, which definitively resolved the problem of its status. The host country agreement between UNEP and the Yugoslavia has not yet been signed.

Problems encountered during the implementation of the Programme

Most of the problems encountered during the implementation of in 1990-1991 referred to the following:

- financial difficulties due to the depreciation of US Dollars in the period 1989-1991 and a successive, often delayed delivery of contributions approved by the Contracting Parties, the full amount of which was not delivered;

- increase of all office costs and all other costs in the host country, and a drop of the real value of PAP/RAC staff salaries due to the high internal inflation while maintaining fixed the rate of YU din/US\$ exchange;
- in the implementation of CAMPs: delays in signing some CAMPs, the need for a stronger and more intensive cooperation between all MAP components in some CAMPs, delays in securing financial support of the World Bank and the European Investment Bank for two CAMPs, need for strengthening national and local structures implementing the CAMPs.

Unless these difficulties are solved in 1991, or at least diminished, they could effect the completion of the Workplan approved for 1991.

(c) Coastal Areas Management Programme (CAMP)

Four agreements concerning the four CAMP's programme were signed by UNEP/MAP and the respective governments:

- The Agreement concerning the Syrian coast (Syria) was signed in 18 June 1990;
- The Agreement concerning the Bay of Izmir (Turkey) was signed in 20 June 1990;
- The Agreement concerning the Island of Rhodes (Greece) was signed in November 1990;
- The Agreement concerning the Bay of Kastela (Yugoslavia) was signed in December 1990.

Since two of the above CAMPs were signed only towards the end of 1990, their original time schedule had to be modified, which will effect the terms of completion of the programmes.

Some basic preliminary arrangements were completed with regard to Fuka (Egypt) and Sfax (Tunisia) CAMPs which were scheduled for implementation in the 1992-1993 biennium.

Within the framework of ongoing CAMPs, the following was completed:

CAMP "The Coastal Region of Syria".

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. A PAP mission was organized to assess the possibility, develop detailed programmes and lay grounds for the work on the preparation of the Coastal Resources Management Plan (CAMP), training on Geographic Information System (GIS) on pcARC/INFO, and an EIA for a tourist complex.

The first phases of GIS training and CRMP were completed. Groups of national experts were formed in both actions which are working in cooperation with PAP consultants. The basic document was prepared for the EIA 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.

Preliminary survey of microbiological quality of bathing waters along the Syrian coast was done by MEDPOL as a component of this CAMP.

The Blue Plan provides advices directly to the Syrian experts.

CAMP "The Bay of Izmir".

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.

Full implementation of PAP related activities is envisaged to start in the second quarter of 1991. The completion of those activities, however, is directly dependant 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.

A Consultation meeting on the preparation of the Monitoring Programme of Izmir Bay was organized by MED POL and held in Athens (2-3 July 1990) at which important elements for such programme were agreed upon (UNEP(OCA)/MED WG.17/1).

The Blue Plan provides advices directly to the Turkish experts.

CAMP "The Bay of Kastela"

Documents presenting the model of wind-driven exchange of sea water, mechanism of red tide phenomena, 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 were prepared and commitments of local teams regulated by contracts.

First meeting of the Task Team on Implications of Climatic Changes on Kastela Bay will be held in Split (25-26 April 1991) as a part of MED POL activities at which detailed programme and calendar of implementation will be adopted.

Preparations for the survey of land-based sources of pollution in Kastela Bay with the support of MED POL are in progress.

Monitoring programme of Kastela Bay, relevant to this CAMP was prepared in co-operation with MED POL and is being implemented.

The full implementation of all activities started in the end of December, and the programme should be completed within the envisaged terms.

The BP/RAC has prepared a tripartite agreement (BP/PAP/ Dr. Simunovic) on the Blue Plan participation in the project.

CAMP "The Island of Rhodes"

Since the agreement for this particular programme was signed at the end of the year, in 1990 only preparatory activities were completed.

In the beginning of 1991, meetings were held with the Greek authorities to review progress in the implementation of the workplan contained in the Agreement (Athens, Rhodes, February 1991). During a mission to Rhodes, organized in the same period, conditions were defined for starting some activities in May 1991. However, as the financial support by the European Investment Bank has not yet been obtained and the implementation started with a considerable delay, part of the programme may be completed in the first quarter of 1992.

First meeting of the Task Team on the implications of climatic changes on the Island of Rhodes was organized by MED POL in Athens (23-27 October 1990) and details of the programme of work and the calendar of implementation were agreed upon.

Two meetings were organized by MED POL on the monitoring programme for the Island of Rhodes and the calendar of implementation was agreed upon.

Survey of land-based sources of pollution for the Island of Rhodes was organized through MED POL and is being carried out.

A study implemented through BP/RAC involves the analysis of an environmental system, a report on the resources and possibly a preliminary ecological balance sheet, furthermore the analysis of the political and administrative system prevailing in the island and the analysis of trends and development factors in the socio-economic sphere.

Preparatory activities were also completed for Fuka (one MAP/PAP mission and another mission of one PAP expert, collection and synthesis of available data). The Bureau of the Contracting Parties (Rome, September 1990) approved US \$ 30,000 from operational savings to develop the second phase of the project in 1991. As regards Sfax a proposal of preliminary activities and training of national and local experts on GIS was prepared and a PAP/MEDPOL preparatory mission visited Tunisia.

In conformity with the decision of the last joint meeting of the Contracting Parties, copies of the four signed Agreements relative to the four CAMP's projects were distributed to the MAP focal points. An appropriate section on the development of the projects appears regularly in MEDWAVES.

II. Financial Matters

- There is still \$ 1.5 million in unpaid contributions from 1990. No Contracting Parties have paid the 1991 contribution so far. This financial situation has necessitated the postponement of some activities and a delay in the implementation of the coastal area management programme. Moreover, staff contracts could be extended only for the first half of 1991.
- The status of contributions to the MTF as at 31 December 1990 is contained in Annex V to this report.

III. Administrative matters

- Ms Lori Janssen, Data Processing Assistant, resigned on 1 November 1990. Arrangements are being undertaken to fill in the post.
- During its Rome meeting (September 1990), the Bureau was informed that the lease of the office of the Co-ordinating Unit in Athens might not be renewed at the end of 1991. The Bureau invited the host country to provide the necessary accommodation. Contacts are being made with relevant authorities in Greece on this issue.

ANNEX ICALENDAR OF MEETINGS ORGANIZED IN THE FRAMEWORK OF THE
MEDITERRANEAN ACTION PLAN

(as of 1 March 1991)

Meeting	Date, place	Organizer & co-sponsor (co-sponsor in brackets).	Responsible officer. Travel marked with *	Report Status
1991				
Expert Group on Offshore Protocol	2-11 Jan. Athens	UNEP-MEDU IJO	A. Manos I. Dharat	UNEP(OCA)/MED WG.18/4
Meeting of RAC Directors	14-15 Jan. Athens	UNEP-MEDU	A. Manos L. Jettic I. Dharat F.S. Civilis	UNEP(OCA)/MED WG.20/2
Review Meeting for adoption of the final version of Mediterranean Report to the 1992 Conference on Environment and Development	16-18 Jan. Athens	UNEP-MEDU	A. Manos I. Dharat	UNEP(OCA)/MED WG.19/4
Expert Meeting on historic settlements	21-22 Jan. Split	PAP/RAC (UNEP-MEDU)	A. Pavasovic	Issued by PAP/RAC
Consultation Meeting on assessment of pollution by chemical elements and their compounds listed in item 1 of Annex II of the LBS Protocol	12-14 Feb. Athens	FAO/IAEA (UNEP-MEDU)	G.Gabrielides	to be issued by FAO
Meeting of the Bureau of the Contracting Parties (BUR 38)	9-10 Apr. Brussels	UNEP-MEDU	A.Manos* I.Dharat*	to be issued by MEDU

Meeting	Date, place	Organizer & co-sponsor (co-sponsor in brackets).	Responsible officer. Travel marked with *	Report Status
Working Group on the future of Blue Plan	10-11 Apr. Sophia Antipolis (tentative)	BP/RAC UNEP-MEDU	M. Batisse B. Glass I. Dharat*	to be issued by Blue Plan
Workshop on evaluation of airborne pollution measurements	April France	WMO (UNEP-MEDU)	A. Soudine*	to be issued by WMO
Joint Meeting of the Scientific and Technical Committee and the Socio- Economic Committee	6-10 May Athens	UNEP-MEDU	A. Manos L. Jeftic I. Dharat F.S. Civil	to be issued by MEDU
Workshop on guidelines and reference method on sample work-up for organic contaminants analysis	May Monaco	IAEA	L.Mee	to be issued by IAEA
Training workshop on statistical treatment and interpretation of marine community data	3-13 June Alexandria	FAO/IQC (UNEP-MEDU)	G.Gabrielides*	to be issued by FAO
Meeting of the Bureau of the Contracting Parties (BUR 39)	July Cyprus (Tentative)	UNEP-MEDU	A. Manos* I.Dharat*	to be issued by MEDU

Meeting	Date, place	Organizer & co-sponsor (co-sponsor in brackets).	Responsible officer. Travel marked with *	Report Status
Workshop on the biological effects of pollutants on marine organisms	10-14 Sept. Malta	FAO/IOC EUMED CENTRE OF MARINE CONTAMINATION HAZARDS (UNEP-MEDU)	G.Gabrielides*	to be issued by FAO
Meeting of Arab Experts on Methodology of rehabilitation of historic Settlements	22-24 Sept. Tripoli	PAP/RAC (UNEP-MEDU)	A. Pavasovic* I. Dharat*	to be issued by PAP/RAC
Consultation Meeting on guidelines on data quality assurance	September Monaco	IAEA (UNEP-MEDU)	L. Mee	to be issued by IAEA
Intercalibration and training course on determination of microbiological pollution	September Morocco	WHO (UNEP-MEDU)	L.J. Saliba*	to be issued by WHO
Seventh Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols	8-11 October Cairo	UNEP-MEDU	A. Manos* L. Jeftic* I. Dharat* S. Civili*	to be issued by MEDU
Consultation meeting on the evaluation of monitoring programmes	October Athens	UNEP-MEDU	L. Jeftic F.S. Civili	to be issued by MEDU

Meeting	Date, place	Organizer & co-sponsor (co-sponsor in brackets).	Responsible officer. Travel marked with *	Report Status
Consultation Meeting on pollutants from land- sources in the Mediterranean	29 Oct-2 Nov. Athens	WHO (UNEP-MEDU)	L.J. Saliba	to be issued by WHO
Consultation Meeting on MEDPOL data processing programme and guidance for future work	November Monaco	UNEP-MEDU	L. Jeftic* A. Aksel*	to be issued by MEDU
Consultation Meeting on health effects of chemical contaminants in Mediterranean seafood	November Padova (Tentative)	WHO (UNEP-MEDU)	L.J. Saliba*	to be issued by WHO
Consultation Meeting on updated survey on pollution from Land- based sources (MED X-bis)	Athens	WHO (UNEP-MEDU)	L.J. Saliba	to be issued by WHO

STATUS OF SIGNATURES AND RATIFICATIONS OF THE CONVENTION FOR THE PROTECTION OF THE MEDITERRANEAN SEA AGAINST POLLUTION AND ITS RELATED PROTOCOLS

Status as at 1 March 1991

	Convention(1)		Dumping(2)		Emergency(3)		Land-Based Sources(4)		Specially Protected Areas(5)	
	Signature	Ratification	Signature	Ratification	Signature	Ratification	Signature	Ratification	Signature	Ratification
Albania	--	30 May 90/AC	--	30 May 90/AC	--	30 May 90/AC	--	30 May 90/AC	--	30 May 90/AC
Algeria	--	16 Feb 81/AC	--	16 Mar 81/AC	--	16 Mar 81/AC	--	2 May 83/AC	--	16 May 85/AC
Cyprus	16 Feb 76	19 Nov 79	16 Feb 76	19 Nov 79	16 Feb 76	19 Nov 79	17 May 80	28 Jun 88/AC	--	28 Jun 88/AC
Egypt	16 Feb 76	24 Aug 78/AP	16 Feb 76	24 Aug 78/AP	16 Feb 76	24 Aug 78/AP	--	18 May 83/AC	16 Feb 83	8 Jul 83
France	16 Feb 76	11 Mar 78/AP-R	16 Feb 76	11 Mar 78/AP-R	16 Feb 76	11 Mar 78/AP-R	17 May 80	13 Jul 82/AP-R	3 Apr 82	2 Sep 86/AP-R
Greece	16 Feb 76	3 Jan 79	16 Feb 76	3 Jan 79	16 Feb 76	3 Jan 79	17 May 80	26 Jan 87	3 Apr 82	26 Jan 87
Israel	16 Feb 76	3 Mar 78	16 Feb 76	1 Mar 84	16 Feb 76	3 Mar 78	17 May 80	21 Feb 91	3 Apr 82	28 Oct 87
Italy	16 Feb 76	3 Feb 79	16 Feb 76	3 Feb 79	16 Feb 76	3 Feb 79	17 May 80	4 Jul 85	3 Apr 82	4 Jul 85
Lebanon	16 Feb 76	8 Nov 77/AC	16 Feb 76	8 Nov 77/AC	16 Feb 76	8 Nov 77/AC	17 May 80	--	--	--
Libya	31 Jan 77	31 Jan 79	31 Jan 77	31 Jan 79	31 Jan 77	31 Jan 79	17 May 80	6 Jun 89/AP	--	6 Jun 89/AP
Malta	16 Feb 76	30 Dec 77	16 Feb 76	30 Dec 77	16 Feb 76	30 Dec 77	17 May 80	2 Mar 89	3 Apr 82	11 Jan 88
Monaco	16 Feb 76	20 Sep 77	16 Feb 76	20 Sep 77	16 Feb 76	20 Sep 77	17 May 80	12 Jan 83	3 Apr 82	29 May 89/R
Morocco	16 Feb 76	15 Jan 80	16 Feb 76	15 Jan 80	16 Feb 76	15 Jan 80	17 May 80	9 Feb 87	2 Apr 83	22 Jun 90
Spain	16 Feb 76	17 Dec 76	16 Feb 76	17 Dec 76	16 Feb 76	17 Dec 76	17 May 80	6 Jun 84	3 Apr 82	22 Dec 87
Syria	--	26 Dec 78/AC-R	--	26 Dec 78/AC	--	26 Dec 78/AC	--	--	--	--
Tunisia	25 May 76	30 Jul 77	25 May 76	30 Jul 77	25 May 76	30 Jul 77	17 May 80	29 Oct 81	3 Apr 82	26 May 83/R
Turkey	16 Feb 76	6 Apr 81	16 Feb 76	6 Apr 81	16 Feb 76	6 Apr 81	--	21 Feb 83/AC	--	6 Nov 86/AC-R
Yugoslavia	15 Sep 76	13 Jan 78	15 Sep 76	13 Jan 78	15 Sep 76	13 Jan 78	--	16 Apr 90	30 Mar 83	21 Feb 86
EEC	13 Sep 76	16 Mar 78/AP	13 Sep 76	16 Mar 78/AP	13 Sep 76	12 Aug 81/AP	17 May 80	7 Oct 83/AP	30 Mar 83	30 Jun 84/AP

1- Convention for the protection of the Mediterranean sea against pollution Adopted (Barcelona): 16 February 1976 Entry into force: 12 February 1978

2- The Protocol for the prevention of pollution of the Mediterranean Sea by dumping from ships and aircraft

Adopted (Barcelona): 16 February 1976

Entry into force: 12 February 1978

3- The Protocol concerning co-operation in combating pollution of the Mediterranean Sea by oil and other harmful substances in cases of emergency

Adopted (Barcelona): 16 February 1976

Entry into force: 12 February 1978

4- The Protocol for the protection of the Mediterranean Sea against pollution from land-based sources

Adopted (Athens): 17 May 1980

Entry into force: 17 June 1983

5- The Protocol concerning Mediterranean Specially Protected Areas

Adopted (Geneva): 3 April 1982

Entry into force: 23 March 1986

Accession - AC Approval - AP Reservation - R

Annex III

PUBLICATIONS OF THE MAP TECHNICAL REPORTS SERIES

(Volumes published since May 1990)

- No. 36 UNEP/IUCN: Directory of marine and coastal protected areas in the Mediterranean region. Part I - Sites of biological and ecological value. MAP Technical Reports Series No. 36. UNEP, Athens, 1990 (198 pages) (French only).
- No. 37 UNEP/FAO: Final reports on research projects dealing with eutrophication and plankton blooms (Activity H). MAP Technical Reports Series No. 37. UNEP, Athens, 1990 (74 pages) (parts in English or French only).
- No. 38 UNEP: Common Measures adopted by the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution. MAP Technical Reports Series No. 38. UNEP, Athens, 1990 (100 pages) (English, French, Spanish and Arabic).
- No. 39 UNEP/FAO/WHO/IAEA: Assessment of the state of pollution of the Mediterranean sea by organohalogen compounds. MAP technical reports Series No. 39. UNEP, Athens, 1990 (224 pages) (English and French).
- No. 40 UNEP/FAO: Final reports on research projects (Activities H, I and J). MAP Technical Reports Series No. 40. UNEP, Athens, 1990 (125 pages) (English and French).
- No. 41 UNEP: Wastewater reuse for irrigation in the Mediterranean region. MAP Technical Reports Series No. 41. UNEP, Priority Actions Programme, Regional Activity Centre, Split, 1990 (330 pages) (English and French).
- No. 42 UNEP/IUCN: Report on the status of Mediterranean marine turtles. MAP Technical Reports Series No. 42. UNEP, Athens, 1990 (204 pages) (English and French).
- No. 43 UNEP/IUCN/GIS Posidonie: Livre rouge "Gérard Vuignier" des végétaux, peuplements et paysages marins menacés de Méditerranée. MAP Technical Report Series No. 43. UNEP, Athens, 1990 (250 pages) (French only).
- No. 44 UNEP: Bibliography on Aquatic Pollution by Organophosphorus Compounds. MAP Technical Reports Series No. 44. UNEP, Athens, 1990. (98 pages) (English only).

- No. 45 UNEP/IAEA: Transport of Pollutants by Sedimentation: Collected papers from the first Mediterranean Workshop (Villefranche-sur-Mer, France, 10-12 December 1987). MAP Technical Reports Series No. 45. UNEP, Athens, 1990 (302 pages) (English only).
- No. 46 UNEP/WHO: Epidemiological studies related to Environmental Quality Criteria for bathing waters, shellfish-growing waters and edible marine organisms (Activity D). Final report on project on relationship between microbial quality of coastal seawater and rotavirus-induced gastroenteritis among bathers (1986-88). MAP Technical Reports Series No. 46. UNEP Athens, 1991 (64 pages) (English only).
- No. 47 UNEP: Jellyfish blooms in the Mediterranean. Proceedings of the II Workshop on Jellyfish in the Mediterranean Sea. MAP Technical Reports Series No.47. UNEP, Athens, 1991.

ANNEX IV

Resolution adopted by MEPC of IMO on 15 November 1990

MEASURES TO CONTROL POTENTIAL ADVERSE IMPACTS ASSOCIATED WITH
USE OF TRIBUTYL TIN COMPOUNDS IN ANTI-FOULING PAINTS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

NOTING that scientific studies and investigations by Members and other competent international organizations have shown that tributyl tin compounds can pose substantial risk of toxicity and other chronic impacts to ecologically and economically important marine organisms,

NOTING ALSO that use of tributyl tin compounds in anti-fouling paints for vessels is a significant source of tributyl tin found in the marine environment,

NOTING FURTHER that the existing scientific studies and investigations indicate that adverse impacts associated with tributyl tin compounds are of greatest concern in coastal waters, which by their nature can serve as important habitat and breeding grounds for marine organisms and are subject to concentrated shipping activities,

BEING AWARE that measures to control the use of tributyl tin compounds in anti-fouling paints have been adopted by a number of Governments and competent international organizations,

RECOGNIZING that there is a need for actions to control the use of tributyl tin compounds in anti-fouling paints in order to reduce or eliminate potential adverse impacts to the marine environment,

RECOGNIZING ALSO that there are a number of different measures and approaches which can be used to reduce the potential for such adverse impacts,

AGREES:

1. to recommend that Governments adopt and promote effective measures within their jurisdictions to control the potential for adverse impacts to the marine environment associated with the use of tributyl tin compounds in anti-fouling paints, and as an interim measure specifically consider actions as follows:
 - (a) to eliminate the use of anti-fouling paints containing tributyl tin compounds on non-aluminium hulled vessels of less than 25 meters in length;

- (b) to eliminate the use of anti-fouling paints containing tributyl tin compounds which have an average release rate of more than 4 microgrammes of organotin per square centimetre per day;
 - (c) to develop sound management practice guidance applicable to ship maintenance and construction facilities to eliminate the introduction of tributyl tin compounds into the marine environment as a result of painting, paint removal, cleaning, sandblasting, or waste disposal operations, or run-off from such facilities;
 - (d) to encourage development of alternatives to anti-fouling paints containing tributyl tin compounds, giving due regard to any potential environmental hazards which might be posed by such alternative formulations; and
 - (e) to engage in monitoring to evaluate the effectiveness of control measures adopted and provide for sharing such data with other interested parties.
2. to consider appropriate ways towards the possible total prohibition in the future on the use of tributyl tin compounds in anti-fouling paints for ships.

ANNEX V

Regional Trust Fund
for the Protection of the Mediterranean Sea Against Pollution
Status of Contributions as at 31 December 1990.
(in United States Dollars)

COUNTRIES	Unpaid pledges as at 31 Dec. 1989	Adjustments for prior years	Pledges for 1990	Pledges for 1991	Collections during 1990 for prior years	Collections in 1990 for 1990 & future years	Unpaid pledges for 1990 and prior years	Unpaid pledges for 1991
Albania	--	--	--	2,459	--	--	--	2,459.00
Algeria	32,342.66	--	35,116	36,872	16,495.64	50,963.00	--	36,872.00
Cyprus	(1,444.81)	--	4,683	4,917	--	3,230.82	--	4,917.00
Egypt	22,920.66	--	16,389	17,208	22,920.66	--	16,389.00	17,208.00
France	580,658.97	--	1,266,800	1,330,140	580,658.97	1,266,800.00	--	1,330,140.00
Greece	--	--	93,640	98,322	--	93,640.00	--	98,322.00
Israel	75,576.32	--	49,163	51,621	75,576.32	49,163.00	--	51,621.00
Italy	1,644,061.52	(1.52)	1,003,440	1,053,612	1,644,860.00	24,359.00	979,081.00	1,053,612.00
Lebanon	24,353.29	--	2,342	2,459	--	--	26,695.29	2,459.00
Libyan Arab Jamahiriya	109,010.80	--	65,549	68,826	--	--	174,559.00	68,826.00
Malta	2,949.90	--	2,342	2,459	2,949.90	2,342.00	--	2,459.00
Monaco	10.00	--	2,342	2,459	--	2,342.00	--	2,469.00
Morocco	16,416.17	--	9,365	9,833	16,416.17	9,365.00	--	9,833.00
Spain	--	--	500,054	525,057	--	500,054.00	--	525,057.00
Syrian Arab Republic	3,762.31	--	9,365	9,833	--	--	13,127.31	9,833.00
Tunisia	9,911.65	--	7,025	7,376	9,820.00	7,116.65	--	7,376.00
Turkey	(111,043.45)	36,127.45	74,916	78,662	--	--	--	78,662.00
Yugoslavia	121,762.40	--	107,690	113,075	121,262.00	--	108,190.40	113,075.00
European Economic Community pledge	--	--	83,340	87,507 1/	--	83,340.00	--	87,507.00
Total	2,540,049.02	36,125.93	3,333,561	3,502,697	2,498,959.66	2,092,723.47	1,318,042.80	3,502,707.00
EEC Voluntary contribution	--	--	586,708	--	--	506,708.00	--	--
Total	2,540,049.02	36,125.93	3,920,269	3,502,697	2,498,959.66	2,679,431.47	1,318,042.80	3,502,707.00

1/ In addition, the EEC intends to contribute a voluntary contribution of US \$582,541 for 1991.
Total collections during 1990 as at 31 December 1990 US \$4,999,049.40.