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MEDITERRANEAN ACTION PLAN

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

Athens 26-30 June 1989

Recommendations and programme budget for 1990-1991
Proposal by the Secretariat

UNEP
Athens, 1989

Introduction

The refocusing of the Mediterranean Action Plan is reflected in 1989 in a streamlining of the decision-making process, in a revised presentation of the programme budget, and in a progressive re-allocation of resources to high priority areas for the 1990-1991 biennium.

The joint meeting of the Scientific and Technical Committee and of the Socio-Economic Committee, decided by the Bureau, will allow for the entire programme budget to be reviewed at the same time, within clear resource indications given by the Bureau. The Contracting Parties should be able to concentrate on policy decisions, during their four-day meeting in October 1989, without repeating a programme review already carried out by the present meeting.

The joint meeting of the two committees needs to adjust its method of work to the shorter time available. The progress report, presented as a single document (UNEP(OCA)/MED WG.3/Inf.3), contains a full reference to all documents issued since the previous meeting of Contracting Parties and summarizes their conclusions and recommendations. Comments and corrections on the progress report should be transmitted to the Secretariat at the beginning of the meeting, but no general debate on it is scheduled to take place. The debate should concentrate, instead, on the programme proposals and recommendations contained in the present document.

The presentation of the programme has been revised. In Part I.A. of the present document, the activities are presented by objectives as they have been discussed with the Bureau, taking into account several comments received by the Secretariat. They are believed to provide a clearer, more transparent information on which decisions can be made. In particular, a new self-contained component covers MAP coastal zones pilot projects. The Committees are requested to approve the four pilot projects proposed. In response to a general request, the budget for the information component has been doubled. At the same time, the regional character of MAP has been maintained in Med Pol, Rocc, PAP and SPA and a new post-Blue Plan component has been introduced.

In Part I.B. the personnel and office costs are indicated by location. No major changes are to be found here since none of the comments received suggested that any of the centers should be closed or its staffing reduced. Counterpart contributions from host countries (Greece, Yugoslavia, France, Malta and Tunisia), from UN Agencies and national laboratories are also identified.

The overall budget remains within the guidelines received from the Bureau, i.e. a 5 per cent annual increase.

Part I.C. indicates the administrative costs, based on the standard rate of 13 per cent applicable to UN-administered Trust Funds.

The present budget is carefully balanced between the need to innovate and the need to maintain structures and programmes that have demonstrated their usefulness as instruments for regional cooperation in the protection of the Mediterranean.

They will allow for the progressive implementation of the protocols and of other important decisions adopted by the Contracting Parties, and in particular of the long-term programme for pollution monitoring and research (Med Pol, Phase II), the calendar for implementation of the LBS protocol, and the Genoa Declaration.

The new emphasis on coastal zone pilot projects represents a major challenge to the MAP programme in playing its catalytic role. The success of this new type of projects depends on the full support of the local and national authorities concerned, and on the willingness of financing institutions to participate actively in the projects themselves. Failure to achieve this will produce plans without follow-up, and therefore without results, with negative effects on the credibility of the Action Plan.

Part II of the document contains the recommendations for adoption by the Contracting Parties, formulated for the most part by technical or expert meetings. The joint meeting is invited to advise the Secretariat on these proposed recommendations, before their submission to the Sixth Ordinary Meeting of Contracting Parties for approval.

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A. ACTIVITIES AND BUDGETARY REQUIREMENTS FOR 1990 - 1991 BIENNIUM:

1. PROGRAMME APPROVAL THROUGH DECISION-MAKING MEETINGS

Objective

To prepare the work-programme and budget for the Mediterranean Action Plan for review by the meetings of the Bureau and of the subsidiary committee and to be reviewed and approved by the ordinary meetings of the Contracting Parties.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS	-	-
2. SUB-CONTRACTS	-	-
3. MEETINGS		
- Meetings of the Bureau (two per year) to review the progress of the Action Plan, advise the secretariat on matters arisen since the meeting of Contracting Parties, and decide on programme/budget adjustments	24	24
- Meetings of the Committee of the Whole to consider the progress of the Action Plan and review technical matters and approve the programme and budget for MAP prior to submission to the Contracting Parties	55	55
- Seventh Ordinary Meeting of the Contracting Parties in 1991 to review and approve the programme and the budget for MAP; review the progress of the Action Plan; consider reports on the state of pollution of the Mediterranean Sea and adopt common measures for its protection	-	180
4. TRAINING AND FELLOWSHIPS	-	-

	1989	1990	1991
TOTAL	193	79	259

2. PROGRAMME CO-ORDINATION

Objective

To co-ordinate MAP activities with participating UN Agencies, governmental and non-governmental organizations; to co-ordinate activities of the Regional Activity Centres and to manage the Mediterranean Trust Fund.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- Facilitate co-operation with:	30	30
(i) intergovernmental organizations and sub-regional agreements;		
(ii) the World Bank, the European Investment Bank, the Islamic Development Bank and other sources of financing;		
(iii) non-governmental organizations and youth organizations		
2. SUB-CONTRACTS	-	-
3. MEETINGS		
- Inter-Agency Advisory Committee (IAAC) meeting to co-ordinate activities on MEDPOL with UN Agencies	(1)	(1)
- Meeting with Regional Activity Centres' Directors for programming and co-ordination of MAP activities	(2)	(2)
4. TRAINING AND FELLOWSHIPS		
- Training of national officials at MED Unit on MAP programmes and procedures	10	10
- Support to training courses relevant to MAP	30	30

	1989	1990	1991
TOTAL	77	70	70

(1) Travel cost included in B.2. (MEDPOL Co-operating Agencies)
(2) Travel cost included under the relevant Regional Activity Centres

3. LEGAL COMPONENT

Objective

To develop additional protocols, to promote sub-regional agreements, to formulate and adopt appropriate procedures for determination of liability and compensation for damage resulting from the pollution of the marine environment, and to promote the adoption of relevant national legislation.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- Develop Annex IV of the Land-Based Sources Protocol, concerning airborne pollution	5	5
- Facilitate implementation in the Mediterranean of the UNEP Agreement on transboundary movements of hazardous wastes and preparation of a draft protocol	20	20
- Assist four more Contracting Parties to compile their national legislation related to the protection of the marine coastal environment	10	10
2. SUB-CONTRACTS		
- Prepare (UNEP/International Juridical Organization) a draft of appropriate procedure for the determination of liability and compensation for damages from the pollution of the marine environment	20	-
- Prepare (UNEP/International Juridical Organization) draft rules concerning special machinery for compensation for damage in the Mediterranean: The Inter-State Guarantee Fund	-	20

Agree on specific objectives, beyond compilation.
With 3-4 experts in 4-5 countries at once. 100,000

	Proposed Budget 1990	1991
	(in thousands of US $)	
3. MEETINGS		
- Conference of Plenipotentiaries, to be convened in Athens during 1990, on the protocol on exploration and exploitation of the continental shelf and the sea-bed and its sub-soil, prepared by the International Juridical Organization and reviewed by the Working Group of experts nominated by the Contracting Parties (Athens, September 1989) (about 20 participants)	45	-
- Expert meeting to review the draft procedures for liability and compensation and the Inter-State Guarantee Fund and prepare recommendations to the Seventh Ordinary Meeting of the Contracting Parties (1991)	-	45
4. TRAINING AND FELLOWSHIPS		
- Assist participation in training courses relevant to national legislation on marine and coastal environment	10	10

	1989	1990	1991
TOTAL	78	110	110

of interest to Bank.
e.g. Tr. Institute in the Bank.
(EDI.)

4. IMPLEMENTATION OF THE LBS PROTOCOL

Objective

To prepare assessments of the state of pollution of the Mediterranean Sea by Annex I and II substances, to prepare proposed common measures for such substances and to assist countries in the implementation of such measures. To develop guidelines, and as appropriate, standards or criteria for the progressive implementation of the Protocol, and to assist countries in such implementation.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- To prepare documents on assessments of Mediterranean pollution by LBS substances	15	15
Yes, for industries financed by WB, unless WB guidelines already existing.		
2. SUB-CONTRACTS □ Technol. & economic aspects of poll. control		
Pilot projects:		
- Pilot project on monitoring of herbicides and fungicides	10	25
- Pilot project on monitoring of non-bio degradable detergents and other surface-active substances	10	25
- Pilot project on monitoring of selected chemical elements and their compounds listed in item 1 of Annex II of the LBS Protocol	5	30
Assessment of the pollution:		
- Assessment of the state of pollution in the Mediterranean Sea by pathogenic organisms	5	-
Common guidelines:		
- Preparation of common guidelines for the determination of the length, depth and position of pipelines for coastal outfalls	5	5
- Compilation of Mediterranean inventory of effluents requiring special and/or separate treatment	5	5
- Formulation of draft common guidelines, standards and criteria for effluents necessitating separate treatment	5	5

7 active borrower Tunisia Egypt Turkey Cyprus Morocco

□ selected countries helped to answer Med X. bis

	Proposed Budget 1990	1991
	(in thousands of US $)	
- Preparation of common guidelines for the inventory of air pollution sources	5	-
Research:		
- Assistance to institutions participating in research programmes, through provision of research grants (about 70 grants to about 60 institutions)	190	190
3. MEETINGS		
- Consultation meeting (WHO/UNEP) on health effects of chemical contaminants in Mediterranean seafood (about 15 participants)	-	15
- Consultation meeting (FAO/IAEA/UNEP) on environmental transformation of chemical contaminants (about 15 participants)	15	-
- Consultation meeting (WHO/UNEP) on updated survey on pollution from Land-Based sources (about 15 participants)	*	-
- Workshop (IOC/UNEP) on transport and dispersion of pollutants in the sea (about 15 participants)	15	-
- Consultation meeting (IAEA/FAO/UNEP) on assessment of pollution by herbicides and fungicides (about 10 participants)	8	-
- Consultation meeting (FAO/UNEP) on assessment of pollution ~~by~~ chemical elements and their compounds listed in item 1 of Annex II of the LBS Protocol (about 10 participants)	8	-
4. TRAINING AND FELLOWSHIPS	-	-

	1989	1990	1991
TOTAL	340	301	315

* Financed by WHO.

5. MONITORING OF MARINE POLLUTION IN THE MEDITERRANEAN

Objective

To achieve a comprehensive and co-ordinated marine pollution monitoring programme including all Mediterranean countries, covering pollution sources, coastal and reference areas and airborne pollution and to achieve a high quality of monitoring data.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- To prepare documents on analysis and data processing of MED POL data	20	20
2. SUB-CONTRACTS		
Monitoring:		
- Assistance to institutions participating in monitoring programmes, through provision of instruments and supplies (about 80 institutions)	530*	530*
- Maintenance of instruments provided to institutions participating in MEDPOL (spare parts) (about 40 institutions)	38	38
Data quality assurance:		
- Assistance to institutions participating in monitoring programmes in order to assure reliable and high quality data, through country data quality assurance programmes, joint monitoring exercises, intercomparison of results and dissemination of scientific information (about 20 institutions)	70	70
- Assistance to institutions participating in monitoring programmes through purchase and provision of standards and reference materials (about 40 institutions)	20	23
- Intercalibration programme for institutions participating in MEDPOL (about 40 institutions)	16	16

* An additional 40 thousand U.S. dollars are budgeted for monitoring programmes in coastal zones pilot projects

	Proposed Budget 1990	1991
	(in thousands of US $)	
Research:		
- Assistance to institutions participating in research programme, through provision of research grants (about 30 grants to about 25 institutions)	100	100
Assessment of the pollution:		
- Preparation of an assessment of the state of pollution of the Mediterranean sea, based on the set of assessments already prepared, results of monitoring programmes and other available information	50	-
- Printing of Proceedings of the 10th ICSEM/UNEP/IOC Workshop on Mediterranean marine pollution	10	-
- Study of the impact of climate change on Mediterranean coastal zones	20	20
3. MEETINGS		
Monitoring:		
- Workshop (WMO/UNEP)on evaluation of results on airborne pollution measurements (about 15 participants)	-	15
- Consultation meeting on the evaluation of monitoring programmes (about 8 participants)	-	8
- Consultation meeting on MEDPOL data processing programme and guidance for future work (about 8 participants)	8	8
Data quality assurance:		
- Workshop (FAO/IOC/UNEP) on effects of pollutants on marine organisms,communities and ecosystems (about 15 participants)	-	15
- Consultation meeting (IAEA/UNEP) on guidelines on data quality assurance (about 15 participants)	-	15
- Workshop on guidelines and reference method on sample work-up for organic contaminants analysis (IAEA/UNEP) (about 15 participants)	-	15

	Proposed Budget 1990	1991
	(in thousands of US $)	
4. TRAINING AND FELLOWSHIPS		
- Intercalibration and training course (WHO/UNEP) on determination of microbiological pollution (about 15 participants)	20	20
- Intercalibration and training workshop (IAEA/FAO/UNEP) on determination of organotin compounds (about 15 participants)	15	-
- Training workshop (FAO/IOC/UNEP) on statistical treatment and interpretation of marine community data (about 15 participants)	-	20
- Assistance for on-job training to participants in MEDPOL monitoring programme (about 40 participants)	80	80
- Assistance for fellowships to participants in MEDPOL research and monitoring programme in order to present at meetings MEDPOL data (about 70 persons in 1990, including participants at ICSEM/UNEP workshop, and 40 in 1991)	70	40

	1989	1990	1991
TOTAL	1,068	1,067	1,053

6. PREVENTION AND COMBATING POLLUTION FROM SHIPS

Objective

a. To strengthen the capacities of the coastal states in the Mediterranean and to facilitate co-operation among them in order to respond to accidents causing or likely to cause pollution of the sea by oil and other harmful substances especially in case of emergency in which there is grave and imminent danger to the marine environment or when it can affect human lives.

b. To promote port reception facilities for dirty ballast waters and other oily residues received from tankers and ships in 56 major ports in the Mediterranean.

a. Protocol on emergencies

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS	13	13
- Assist countries in preparation of national contingency plans and bilateral or multilateral agreements; assist countries in the case of emergencies		
- Develop and maintain a regional information system: a) Assist ROCC in establishing a partially computerized database on hazardous substances b) Assist ROCC in adapting behavior simulation and Risk Assessment models to the region		
2. SUB-CONTRACTS	-	-
- Catalogue of spill response equipment and products	*	*
3. MEETINGS	-	-

* at no extra cost

	Proposed Budget 1990	1991
	(in thousands of US $)	
4. TRAINING AND FELLOWSHIPS		
- General training course on harmful substances (MEDIPOL) (about 20 participants)	40	40
- Specialized training course on harmful substances (MEDEXPOL) (about 20 participants)	-	40
- Regional seminar on financial questions, liability and compensation for consequences of accidents causing pollution by oil or other harmful substances (about 20 participants)	40	-
- Assistance to states in the organization of national training courses (2 per year) (about 35 participants)	5	5
- Alert exercises	*	*

	1989	1990	1991
TOTAL	98	98**	98**

* at no extra cost

** An additional 15 thousand U.S. dollars are budgeted for coastal zones pilot projects

b. Port reception facilities

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990 (in thousands of US $)	1991
1. CONSULTANTS		
- Promote the establishment of port reception facilities in 56 major ports in the Mediterranean region	20	20
2. SUB-CONTRACTS	-	-
3. MEETINGS	-	-
4. TRAINING AND FELLOWSHIPS		
- To assist participants in training courses relevant to port reception facilities	10	10

	1989	1990	1991
TOTAL	0	30	30

List of 56 ports to be used when developing a country project or port project. (reallocate funds from existing projects)

7. PROTECTION OF THE COMMON MEDITERRANEAN HERITAGE

Objective

a. To strengthen and co-ordinate activities undertaken by the Contracting Parties for the safeguard of the natural resources and natural sites of the Mediterranean Sea Area, as well as for the safeguard of their cultural heritage in the region.

b. To protect the coastal historic sites of common Mediterranean interest already identified by the Contracting Parties.

a. Protocol on Specially Protected Areas

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS	55*	55*
- Promote (SPA-RAC/IUCN) the establishment of at least 50 new protected areas through the approved guidelines (1985-1995)		
- Assist (SPA-RAC/IUCN) countries to develop their legislation related to protected areas		
- Promote (SPA-RAC/IUCN) the application of the Action Plan on the conservation of the Mediterranean Monk Seal approved in 1987		
- Implement (SPA-RAC/IUCN) the action plan on the conservation of the Mediterranean Marine Turtles prepared by an expert meeting held in 1989		
- Promote (SPA-RAC/IUCN) the protection of the Mediterranean marine vegetation in accordance with the recommendations of the expert's meeting held in 1989		

* An additional 10 thousand U.S. dollars are budgeted for coastal zones pilot projects

	Proposed Budget 1990	1991
	(in thousands of US $)	
2. SUB-CONTRACTS		
- Prepare (SPA-RAC/IUCN) the directory on marine and coastal protected areas (part II - sites of particular importance because of their scientific, aesthetic, historical, archeological, cultural or educational interest, 1990)	10	5
3. MEETINGS		
- Workshop on selection and creation of protected areas	15	-
- Workshop on protected areas of particular importance because of their scientific, aesthetic, historical, archeological, cultural or educational interest	-	15
4. TRAINING AND FELLOWSHIPS		
- To assist participants in training courses relevant to Specially Protected Areas	10	15

	1989	1990	1991
TOTAL	85	90	90

Done:
Inventory, criteria,
WB: Study est. of new nat. parks: impl. management
☐ feasibility study for a self-sustaining case
Legisl. ~~the~~ part (part of legal).

Packaging problem (fragmentation)

b. 100 Historic Sites

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- Assist (UNESCO/ICOMOS/PAP-RAC) in co-operation with the network of 100 coastal historic sites established in Marseilles in 1989 and support its co-operative programme in the field of stone degradation and protection of underwater archaeological sites, especially shipwrecks (SPA-RAC/IUCN)	20	20
2. SUB-CONTRACTS		
- Promote (MAP/PAP-RAC) the network of 100 sites of common Mediterranean interest established at Marseilles and support its work-programme	12	12
3. MEETINGS	-	-
4. TRAINING AND FELLOWSHIPS		
- To assist participants in relevant training courses	20	20

	1989	1990	1991
TOTAL	0	52	52

Only as part of coastal zone mgt. projects.

8. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONE

Objective

a. To develop national Blue plan scenaria, to collect statistical data at the Mediterranean basin level; to bring to the competent authorities the tools and methods for long and medium term work; to emphasize and to make available new data on the technological changes and technologies which would promote development while respecting the environment through "a prospective Observation Centre on the changes in the Mediterranean regions through the relationships between economic development, environment and land-use".

b. To develop methodology on integrated management for sustainable development of the Mediterranean coastal region with the full integration of environmental considerations and to develop and implement specific priority actions relative to integrated planning.

c. To integrate environmental and resource management policies in coastal zones proposed and accepted by Contracting Parties. Such integrated management programmes will include, as appropriate, findings and knowhow of all components of MAP such as development of coastal zones (including development scenaria), particular PAP actions, monitoring, implementation of common measures adopted by Contracting Parties, implementation of Barcelona Convention and related protocols, contingency plans, and specially protected areas.
At present the following four pilot country projects are on-going:
Kastela Bay (Yugoslavia), Izmir Bay (Turkey), island of Rhodes (Greece) and Syrian coast.

a. Data base on Mediterranean Environment and Development

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- Responding to request of states for assistance on scenaria	-*	-*
2. SUB-CONTRACTS		
- Develop and update** the Mediterranean database established through the Blue Plan exercise giving priority to the environment of coastal areas, technological changes, training programmes, etc. and use it for national and regional scenarios and coastal zone planning pilot project exercises	45	45
3. MEETINGS	-	-
4. TRAINING AND FELLOWSHIPS		
- Training course on scenaria	25	25

	1989	1990	1991
TOTAL	95	70	70

* An additional 30 thousand U.S. dollars are budgeted for scenaria in selected coastal zones pilot projects

** Regular up-dating of B.P. data base will require matching funds from outside sources

b. Coastal Planning and Management

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
(a) Priority action "Integrated planning and management of Mediterranean coastal areas" Identify, develop and evaluate mechanisms, tools and techniques for integrated planning and environmentally sound management applicable in Mediterranean coastal areas	10	10
(b) Priority action "Application of environmental impact assessment in the development of Mediterranean coastal zones" Assist in preparation of pilot EIAs in Morocco (3), Egypt (2), in on-going CPPs (3); prepare training course documents and documents for an inter-regional conference on application of a simplified procedure for EIA (supported by OCA/PAC)	15	15
Four expert consultations for preparation of EIA in selected countries (3 participants each), 1 inter-regional meeting on EIA (25 participants)	10	10
(c) Priority action "Water resources development for Mediterranean islands and isolated coastal areas" Prepare documents for training course on modelling of aquifers in Mediterranean; assist national institution in the implementation of the on-going project on Water resources management of the island of Malta (supported partially by host country)	10	10
Two expert consultations for the evaluation of water resources management of the island of Malta (6 participants)	4	4

	Proposed Budget 1990	1991
	(in thousands of US $)	
(d) Priority action "Rehabilitation and reconstruction of historic settlements" Prepare methodological documents for a workshop on planning and design and a workshop on implementation of the rehabilitation process of Mediterranean historic sites; prepare training documents on the subjects; participate in missions to selected sites	12	12
Two expert consultations for the preparation of the workshop documents (6 participants each, 4 supported by PAP)	5	5
(e) Priority action "Land-use planning in earthquake zones" Participate in activities of the Co-operative project on seismic risk mitigation in the region related to urban planning and macro- and micro-zoning; prepare proposal for follow-up activities in 1992-93 biennium	5	5
Expert consultation for the preparation of documents (6 participants - partial funding by the Co-operative project) Expert consultation for the preparation of follow-up activities (6 participants - partial funding by Co-operative project)	5	5
(f) Priority action "Soil erosion mapping and measurements" Assist in: creation of network of institutions and pilot areas for erosion mapping and measurements of rainfall induced erosion, in establishment of data base and common methodology for mapping and measurements applicable in Mediterranean conditions; preparation of demonstration maps and erosion measurements, correlation and interpretation of results (partial funding by host country and host institution)	25	25
(g) Priority action "Solid and liquid waste management, collection and disposal" Prepare guidelines for planning and design of urban waste treatment plants and submarine outfalls and training course documents on the subject; prepare training course documentation on solid waste management in developing countries of the region (partial funding by host country and host institution)	10	10

	Proposed Budget 1990	1991
	(in thousands of US $)	
(h) Priority action "Development of Mediterranean tourism harmonized with the environment" Preparation of guidelines on application of Carrying Capacity assessment in planning and management of touristic complexes; preparation of 4 pilot assessments; guidelines for planning of tourism activities within the coastal zones planning process; pilot implementations of guidelines in 2 PAP projects	16	15
Expert consultation for the preparation of guidelines on Carrying Capacity (6 participants), and one expert consultation for the preparation of workshop on guidelines (6 participants)	9	9
(i) Priority action "Environmental planning and management of aquaculture in Mediterranean conditions" Prepare guidelines for the inventory and protection of sites suitable for aquaculture; guidelines for environmentally sound planning, management and monitoring of aquaculture activities	10	10
(j) Priority action "Mediterranean co-operative network in renewable sources of energy" Prepare guidelines on role and application of renewable sources of energy in planning and management of Mediterranean coastal areas e.g. participation in UNEP project "Development of computerized energy planning systems"; prepare training documents for national course on renewable energy sources (partial funding by host country and host institution)	10	10
2. SUB-CONTRACTS		
(a) Priority action on water resources	16	-
- Sub-contract with host institution to assist in preparation of an aquifer model for training purposes		
(b) Priority action on soil erosion	15	15
- Sub-contract with host institution as support to activities on data base creation, erosion mapping and measurements in participating developing Mediterranean countries (PAP support to the project)		

	Proposed Budget 1990	1991
	(in thousands of US $)	
3. MEETINGS	-	-
4. TRAINING AND FELLOWSHIPS		
(a) Priority action on integrated planning:	30	30
- One training course on application of EIA and Risk assessment in integrated planning (25 participants)		
- One workshop for the presentation and assessment of results hitherto achieved in PAP CPPs (25 participants)		
(b) Priority action on environmental impact assessment (supported partially by OCA/PAC)	20	20
- Workshop in French to evaluate the pilot EIAs and amend the relevant draft guidelines on procedure and preparation of EIAs (30 participants)		
- Two training courses on application and preparation of EIAs (1 in English, 1 in French) (20 participants each)		
(c) Priority action on water resources development	-	20
- Training course on mathematical modelling of aquifers in Mediterranean islands (25 participants - partial funding by PAP/RAC)		
(d) Priority action on historic settlements	25	25
- Workshop on planning and design in the process of rehabilitation of Mediterranean historic settlements (30 participants - 15 participants supported by PAP/RAC)		
- Workshop on implementation of the rehabilitation process of Mediterranean historic settlements (30 participants - 15 participants supported by PAP/RAC)		

		Proposed Budget 1990	1991
		(in thousands of US $)	
(e)	Priority action on soil erosion (partial funding by host country and host institution)	10	10
-	Training course of national and local experts on erosion mapping and erosion measurements in 3 countries (10 participants each)		
(f)	Priority action on solid and liquid waste	40	38
-	Two training courses on maintenance and management of urban waste treatment plants (1 in English, 1 in French) (15 participants each - partial funding by host institution)		
-	Two training courses on planning and design of urban waste treatment plants and submarine outfalls (15 participants each - partial funding by host institution and MEDU)		
(e)	Priority action on renewable sources of energy (partial funding by host country and host institution)	35	34
-	Two training courses on practical application of renewable sources of energy in the region (1 in English, 1 in French) (20 participants each)		
-	Workshop on application of renewable sources of energy in the planning and management of renewable sources of energy (20 participants)		
-	National training courses on application of renewable sources of energy (25 participants each - partial funding by host country)		

	1989	1990	1991
TOTAL	361	347*	347*

* An additional 150 thousand U.S. dollars are budgeted for coastal zones pilot projects

c. Coastal Zones Pilot Projects

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS	110	110
- To assist in preparation and implementation of documents and activities resulting in the implementation of coastal zones pilot projects		
- Preparatory activities for follow-up		
2. SUB-CONTRACTS		
- Assistance to institutions participating in coastal zone pilot projects approved by the Contracting Parties	182	188
3. MEETINGS		
- Consultation meetings relevant to each pilot coastal zone	40	40
4. TRAINING AND FELLOWSHIPS	-	-

	1989	1990	1991
TOTAL	125	332	338

Note: The above programme is broken down as follows:
PAP 150; Med Pol 40; Scenaria 30; ROCC 15; SPA 10; Data 20; Co-ordinating Unit 67 (1990) and 73 (1991)

It is expected that the four host countries of the pilot projects will contribute matching funds for the implementation of the projects.

9. PUBLIC INFORMATION

Objective

To communicate environmental information to governments in order to influence response and follow up action; to develop greater public awareness and create attitudes that will support policies and action for sustainable development and environmental protection.

Activities and Budgetary Requirements for 1990-1991 Biennium

	Proposed Budget 1990	1991
	(in thousands of US $)	
1. CONSULTANTS		
- Preparation and editing of MAP Technical Reports Series	21	21
- Preparation of and translation of MEDWAVES (Arabic, English and French)	12	12
- Support for the celebration of the Mediterranean Environment Week	20	20
- Librarian (exchange of information, dissemination of information)	10	10
2. SUB-CONTRACTS		
- Preparation of posters, stickers and Press releases; promotion of television; display the MAP Exhibition in two countries	10	10
- Printing and dissemination of MAP, MEDWAVES and other documents	36	37
3. MEETINGS	-	-
4. TRAINING AND FELLOWSHIPS	-	-

	1989	1990	1991
TOTAL	47	109	110

B. PERSONNEL AND OPERATIONAL BUDGETARY REQUIREMENTS FOR 1990 - 1991 BIENNIUM:

1. CO-ORDINATING UNIT (UNEP) (Athens, Greece)

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- Co-ordinator - A. Manos (Italy) - D.2	12	84	88	92
- Senior Programme Officer/Marine Scientist L.Jeftic (Yugoslavia) - P.5	12	69	72	76
- Programme Officer/Economist - I. Dharat (Libya) - P.4	12	60	63	66
- Programme Officer/Marine Scientist - F.S. Civili (Italy) - P.3	12	46	48	50
- Data Processing Officer - A. Aksel (Turkey) - P.3	12	40	42	44
- Fund Management/Admin. Officer - C. Marx (France) - P.2	12	(1)	(1)	(1)
Total Professional Staff		299	313	328
(b) Administrative Support				
- Administrative Assistant - N. Zevelakis (Greece) G.6	12	(1)	(1)	(1)
- Information Assistant - H. Pissala-Petrou (Greece) G.5	12	(2)	(2)	(2)
- Senior Secretary - D. Voga (Greece) - G.4	12	(1)	(1)	(1)
- Senior Secretary - E. Stamatopoulou-Kalimani (Greece) - G.4	12	(2)	(2)	(2)
- Senior Secretary - D. Mandika (Greece) G.4	12	(2)	(2)	(2)
- Research Assistant - G.4 (under recruitment)	12	(2)	(2)	(2)
- Bilingual Typist - P.Ballis (Greece) - G.3	12	(2)	(2)	(2)
- Telephone Operator/Receptionist - E. Zaimis (Greece) - G.3	12	(2)	(2)	(2)
- Bilingual Typist- M.Foerter-Platis (France/Greece) - G.3	12	(2)	(2)	(2)
- Data Processing Assistant - L. Janssen (Canada) - G.3	12	(1)	(1)	(1)
- Typist - G.3 (under recruitment)	12	(2)	(2)	(2)
- Clerk/Driver - D. Magiras (Greece) - G.2	12	(2)	(2)	(2)
- Clerk - S. Fakis (Greece) - G.2	12	(2)	(2)	(2)
- Temporary Assistance	8	(2)	(2)	(2)
- Overtime		(2)	(2)	(2)
Total Administrative Support		-	-	-

(1) Paid under Programme Support costs
(2) Paid from Greek counterpart contribution (Table III)

	1989	1990	1991
	(in thousands of U.S. $)		
(c) Travel on Official Business	45	50	50
(d) Office Costs			
- Equipment			
a) expendable equipment	(2)	(2)	(2)
b) non-expendable equipment	10	9	18
- Rental and maintenance of premises			
a) Rent	(2)	(2)	(2)
b) Cleaning	(2)	(2)	(2)
- Operation and maintenance of equipment	(2)	46	49
- Reporting costs	(2)	17	20
- Sundry			
a) Telephone, telex and postage	(2)	(2)	(2)
b) Miscellaneous	4	3	3
Total Office Costs	14	75	90

	1989	1990	1991
TOTAL	358	438	468

(2) Paid from Greek counterpart contribution (Table III)

2. MEDPOL CO-OPERATING AGENCIES

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- WHO Senior Scientist - MAP Co-ordinating Unit (Athens) - L. Saliba (Malta) - P.5	12	70	73	77
- FAO Senior Fishery Officer - MAP Co-ordinating Unit (Athens) - G. Gabrielides (Cyprus) - P.5	12	68	71	74
- IAEA Maintenance Engineer - IIMR - (Monaco) T. Barisic (Yugoslavia) - P.3	12	63	66	69
Total Professional Staff		201	210	220
(b) Administrative Support				
- WHO Secretary - WHO/EURO. - (Copenhagen) - S. Louro (Portugal) - G.4	6	10	11	11
- WHO Secretary - MAP Co-ordinating Unit (Athens) - M. Rollo (Ireland) - G.4	12	12	13	14
- FAO Secretary - MAP Co-ordinating Unit (Athens) - V. Papapanagiotou (Greece) - G.4	12	11	12	13
- IAEA Laboratory Assistant - IIMR - (Monaco) - C. Cattini (France) - G.5	12	28	30	32
Total Administrative Support		61	66	70
(c) Travel on Official Business				
- WHO (Athens)		12	12	12
- FAO (Athens)		12	12	12
- WMO (Geneva)		8	8	8
- IAEA (Monaco)		24	24	24
- UNESCO/IOC (Paris)		6	6	6
Total Travel		62	62	62

(d) Office Costs:
Office costs incurred by FAO and WHO staff stationed in Co-ordinating Unit in Athens are covered by MED Unit office costs. Office costs incurred by all Agencies at their own Headquarters or Regional Offices are covered by the
respective agencies as part of their counterpart contributions.

	1989	1990	1991
TOTAL	324	338	352

(1) Paid from Greek counterpart contribution (Table III)

3. REGIONAL OIL COMBATING CENTRE (ROCC) - (Malta)

Co-operating Agency IMO

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- Director - J.C. Sainlos (France) P.4	12	68	71	71
- Technical Expert - D. Domovic (Yugoslavia) P.4	12	60	62	64
- Chemist - P.3 (under recruitment)	12	43	43	45
- Engineer - P. Moreuil (France) G.2	12	(1)	(1)	(1)
Total Professional Staff		171	176	180
(b) Administrative Support				
- Information Officer - R. Laiviera (Malta) - G.4	12	20	21	22
- Bilingual Secretary - A. Trigona (Malta) - G.4	12	17	20	21
- Clerk/Secretary - D. Stellini (Malta) - G.3	12	15	18	19
- Caretaker/Docs. Reproducer - A. Zerafa (Malta) - G.2	12	14	16	17
- Clerk/Telex Operator - J. Pace (Malta) - G.3	12	15	18	19
Total Administrative Support		81	93	98
(c) Travel on Official Business		16	16	16
(d) Office Costs		58	58	60

	1989	1990	1991
TOTAL	326	343	354

(1) On secondment from the government of France

4. SPECIALLY PROTECTED AREAS/REGIONAL ACTIVITY CENTRE (SPA/RAC) (Salammbo, Tunisia)

In assosiation with IUCN

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- Director - M. Haj Ali (Tunisia)	12	(1)	(1)	(1)
- Expert - (Tunisia)	12	(1)	(1)	(1)
- IUCN Expert - A. Jeudy de Grissac (France)	12	50	50	50
- IUCN Data Researcher (under recruitment)	12	40	40	40
Total Professional Staff		90	90	90
(b) Administrative Support				
- Bilingual Secretary - L. Chakchouk (Tunisia)	12	8	7	7
- Typist - M. Laalaa - (Tunisia)	12	-	3	3
- Driver - H. Sayeh (Tunisia)	12	5	3	3
- Clerk/Driver - Aloui (Tunisia)	12	(1)	(1)	(1)
- Finance Officer - Resghi (Tunisia)	12	(1)	(1)	(1)
- Cleaning - Toujani (Tunisia)	12	(1)	(1)	(1)
- Caretaker	12	(1)	(1)	(1)
Total Administrative Support		13	13	13
(c) Travel on Official Business		15	15	15
(d) Office Costs		42	37	37

	1989	1990	1991
TOTAL	160	155	155

(1) Paid by host country

5. MEDITERRANEAN OBSERVATION CENTRE ON ENVIRONMENT AND DEVELOPMENT/REGIONAL ACTIVITY CENTRE (BP/RAC - Sophia Antipolis, France)

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- President - M. Batisse (France)	-	-	-	-
- Scientific Director - M. Grenon (France) (1)	6	50	50	50
- Technical Expert - Ecogeographer (under recruitment)	12	70	70	70
- Statistician - Computer Expert - J. Giraud (France) (2)	6	20	20	20
Total Professional Staff		140	140	140
(b) Administrative Support				
- Secretary - Information retrieval Specialist - M. Watkins (France)	12	30	30	30
- Executive Secretary	12	(3)	(3)	(3)
- Secretary	12	(3)	(3)	(3)
- Administrator	12	(3)	(3)	(3)
Total Administrative Support		30	30	30
(c) Travel on Official Business		30	15	15
(d) Office Costs		55	15	15

	1989	1990	1991
TOTAL	255	200	200

(1) Part of salary paid by host country
(2) Half time paid by host country
(3) Paid by host country

6. PRIORITY ACTIONS PROGRAMME REGIONAL ACTIVITY CENTRE (PAP/RAC) - (Split, Yugoslavia)

	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(a) Professional Staff				
- Director - A. Pavasovic (Yugoslavia)	6	35	30	30
- Co-ordinator of Pilot Projects - I. Trumbic - (Yugoslavia)	6	20	20	20
Total Professional Staff		55	50	50
(b) Administrative Support				
- Technical Assistant to Projects - K. Tulic (Yugoslavia)	12	9	10	10
- Technical Assistant to Projects - V. Katunaric (Yugoslavia)	12	8	10	10
- Technical Assistant to Projects - Z. Skaricic (Yugoslavia)	12	8	10	10
- Technical Assistant to Projects - N. Stipica (Yugoslavia)	12	7	10	10
- Administrative Assistant - L.Prebanda (Yugoslavia)	12	9	10	10
- Fund Management Affairs - A. Bjelica (Yugoslavia)	12	9	10	10
- Temporary Assistance		16	6	6
Total Administrative Support		66	66	66
(c) Travel on Official Business		32	32	32
(d) Office Costs		71	68	68

	1989	1990	1991
TOTAL	224	216	216

C. PROGRAMME SUPPORT COSTS

In accordance with United Nations rules concerning the establishment and management of trust funds, administrative and technical costs incurred in the implementation of programmes and projects financed from trust funds are reimbursed to UNEP. The amount of the reimbursement is calculated at the standard percentages rate approved by the General Assembly (13%).

They cover the administrative services provided in the Headquarters or in the Med Unit such as project management, personnel administration, accounting, internal and external auditing.

	1989	1990	1991
TOTAL	542	578	609

II. PROPOSED RECOMMENDATIONS

The meeting recommends that the Contacting Parties agree:

1. PROGRAMME APPROVAL THROUGH DECISION-MAKING MEETINGS

1. To approve the programme budget as proposed in part I.A.1 (page 1).

2. To conduct their Sixth Ordinary Meeting in plenary session, without establishing a Committee of the Whole.

3. To convene every year a joint meeting of the Scientific and Technical Committee and of the Socio-Economic Committee to act as a Committee of the Whole to review the progress of the Action Plan and to prepare the decisions of the Contracting Parties.

2. PROGRAMME CO-ORDINATION

1. To approve the programme budget as proposed in part I.A.2 (page 2) and I.B.1 (page 25).

2. To invite the secretariat to strengthen co-operation with financing institutions with a view to their participation in MAP activities, and particularly in coastal zone pilot projects.

3. LEGAL COMPONENT

1. To approve the programme budget as proposed in part I.A.3 (pages 3 and 4).

2. To authorize the Executive Director to convene in 1990 a Conference of Plenipotentiaries to consider the draft Protocol on Exploration and Exploitation of the Continental Shelf and the Sea-bed and its Sub-soil.

3. To authorize the Secretariat to develop draft procedures for liability and compensation and the Inter-State Guarantee Fund.

4. To authorize the Secretariat to prepare a draft Protocol to enforce the provisions of the Basle Convention (convention on the control of tranboundary movement of hazardous wastes and their disposal) in the Mediterranean Sea area.

4. IMPLEMENTATION OF THE LBS PROTOCOL

1. To approve the programme budget as proposed in part I.A.4 (pages 5 and 6)

2. Pollution by used lubricating oils

To adopt the:

(i) Assessment of the situation regarding used lubricating oils in the Mediterranean Basin

Lubricating oils are essential for many industrial and transportation purposes as well as for a number of other uses. Following their use, they represent a potentially serious pollution threat, as they can reach the marine environment via municipal and industrial wastewaters and urban run-off. For this reason, used lubricating oils have been included in Annex I to the Protocol for the Protection of the Mediterranean Sea against pollution from land-based sources which contains substances pollution by which Contracting Parties have undertaken to eliminate.

In the absence of direct data from all countries in the region regarding production and consumption of lubricating oils and the eventual fate of the used product, it is not possible at this stage to make an accurate assessment of the actual state of pollution of the Mediterranean Sea by used lubricating oils in the specific sense. However, extrapolation of data available from other regions on the used lubricating oil or petroleum hydrocarbon content of urban run-off and municipal and industrial wastewaters, together with available information on population numbers, industrial activities involving used lubrication oil generation, and vehicular figures in the coastal zone of the Mediterranean affords a reasonable indication that a significant marine pollution problem could actually or potentially exist in the region.

Apart from the four Mediterranean states members of the Commission of the European Communities, which are expressly bound by the terms of EEC Directive 75/439/EEC of 16 June 1975, as amended by Directive 87/101/EEC of 22 December 1986, specifically dealing with the disposal of waste oils, few of the other countries in the region currently possess specific legislation for dealing with marine pollution by used lubricating oils, although partial coverage through more general legislation exists in a number of cases.

(ii) Measures for control of pollution by used lubricating oils

On the basis of the assessment prepared by UNIDO/WHO/UNEP on the situation regarding used lubricating oils in the Mediterranean basin (document UNEP(OCA)/MED WG.3/Inf. 4) the Contracting Parties:

(a) adopt, for the purposes of Article 5 and Annex I to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources, the following definition of used lubricating oils:

"Any mineral-based lubricating oils which, through use, storage or handling have become unfit for the purpose for which they were intended, in particular used oils from combustion engines and transmission systems, as well as mineral oils for machinery, turbines and hydraulic systems.";

(b) adopt the principle that wastes containing used lubricating oils should not be discharged directly or indirectly into the protocol area;

(c) undertake to progressively implement, through appropriate national procedures, programmes and measures to ensure the eventual realization of this principle as early as possible to the extent dictated by national circumstances and not later than 1 January 1994;

(d) take into account, as and where appropriate, in the progressive formulation and implementation of national control measures, the various control measures available, including recovery and re-use of used lubricating oils;

(e) provide the Secretariat to the Convention with the fullest information possible on:

- relevant national data regarding used lubricating oils, including legislative and administrative measures controlling disposal, necessary both for specific baseline regional data and for the regular availability of updated regional overviews;

- progressive measures taken on (c) and (d) above.

3. Pollution by cadmium

To adopt the:

(i) Assessment of the state of pollution of the Mediterranean Sea by cadmium and cadmium compounds

Cadmium is a scarce, naturally occurring and fairly expensive metal of low mechanical strength. Its yearly world production is about 18,000 tons. Mediterranean countries account for about 10% of this. It is mainly used in batteries, electroplating, pigments, stabilizers and alloys. It reaches the marine environment from contaminated agricultural soils, mining wastes, mine waters, and the industrial use of cadmium. An important source is municipal sewage effluents and sludges, including those of domestic origin. No reliable data on cadmium inputs are available. The currently available technology for the removal of cadmium from industrial waste waters is based on physico-chemical methods such as ion exchange, reverse

osmosis, dialysis and electrodialysis, adsorption, evaporation, electrolysis, freezing, ion flotation, liquid-liquid extraction and ultrafiltration. Phosphatic fertilizer manufacturers can also decrease the cadmium concentration in their product by choosing raw phosphate with low cadmium content.

Levels of cadmium reported for the various compartments of the Mediterranean marine environment are not alarming and in general they are comparable to those found in other regions of the world. Data available for air are limited to the western Mediterranean. The lack of proper quality control and the diversity of analytical methods used do not allow a comparison of the seawater data. Levels of up to 2 mg Cd l^{-1} have been reported for coastal waters. Only in coastal lagoons and river deltas were cadmium concentrations high in sediments. Research workers use different extraction methods and many of them do not take into consideration the mineralogical composition of the sediment. It is estimated however that the background concentration must be in the range of 0.1 to 2.5 $\mu g\ g^{-1}$ (DW). Typical cadmium levels in biota are 50-150 $\mu g\ kg^{-1}$ (FW) for shrimps, 40-1200 $\mu g\ kg^{-1}$ (FW) for mussels and 20-150 $\mu g\ kg^{-1}$ (FW) for demersal fish.

The uptake of cadmium in marine organisms depends both on the chemical species of cadmium and on the route of entry into the organism. Cadmium is slowly accumulated at low water concentrations and therefore only low-term chronic exposures can be used to estimate the toxicity of this metal. In fact 96-h LC_{50}s for a wide range of species are usually in excess of 1 mg Cd l^{-1} while chronic effects usually become apparent at concentrations greater than 50 μg Cd l^{-1}. However, some species have been reported to be affected at concentrations less than 15 $\mu g\ l^{-1}$. A concentration of 0.5 $\mu g\ l^{-1}$ could be an eventual water quality objective.

In general, cadmium in seafood constitutes only a small fraction of the total daily intake. Terrestrial food and smoking are much more important for humans who are non-occupationally exposed. A provisional tolerable weekly intake of 400 to 500 μg of cadmium for an average person was proposed in 1972 by FAO/WHO. At this stage, it is not considered that the adoption of a common regional legal limit on the permissible concentration of cadmium in seafood would be justified.

A limitation on the amount of cadmium discharged into the marine environment is recommended. Some countries in the Mediterranean have already set effluent standards. The EEC countries have to apply directive 83/513/EEC of 26/9/83 which sets limits for effluents from various industrial sectors. No limit is set for the manufacturers of phosphatic fertilizers.

(ii) Measures for control of pollution by cadmium and cadmium compounds

On the basis of the assessment prepared by FAO/WHO/UNEP (document UNEP(OCA)/MED WG.3/Inf.5) the Contracting Parties as from 1st January 1991:

(a) adopt an upper limit (to be calculated as a monthly average) of 0.2 mg cadmium (expressed as total cadmium) per litre for all effluent discharges into the Mediterranean sea before dilution in terms of Article 5 and Annex I of the Protocol for the protection of the Mediterranean sea against pollution from land-based sources. This limit will apply to phosphate fertilizer industry as from 1.1.93;

(b) enforce such limit, for those effluents so demanding through compulsory monitoring requirements and procedures, including (i) the taking each day (for a period of one month) of a sample representative of the discharge over 24 hours and the measurement of the cadmium concentration of that sample, and (ii) the measurement of the total flow of the discharge during this period;

(c) reinforce such measures by limitations on the total amount of cadmium discharged, based on monthly averages and taking into account (i) the production capacity of each relevant industry and (ii) the possible reductions in cadmium emissions capable of being achieved by currently available technological processes;

(d) agree to abandon the practice of dumping phosphogypsum in the marine environment;

(e) ensure, through all appropriate measures available, that the cadmium prevented from reaching the marine environment through application of the measures described in (a), (b), (c) and (d) above is not disposed of in such a way as to render it liable to intake by man from non-marine sources;

(f) adopt, in principle, an eventual water quality objective of a maximum of 0.5 μg cadmium per litre in marine waters;

(g) for the purpose of progressively reaching the objective, adjust relevant outfall structures in such a way as to achieve maximum dilution in the mixing zone adjacent to the outfall and monitor sediments and biota in areas 5 km radius from outfall structures to ensure an increase of not more than 50% above background levels in the case of new plants, and achieve a progressive decrease towards the same objective in areas affected by existing plants;

(h) consider, if national or local circumstances so dictate, the imposition of upper limits for concentrations of cadmium in edible marine organisms;

(i) include, to the extent possible, the sampling and analysis of appropriate species of edible seafood and of appropriate effluents for cadmium within the framework of their national MED POL monitoring programmes;

(j) encourage the development of substitutes and alternative technologies leading to the reduction of cadmium pollution;

(k) provide the Secretariat to the Convention with the fullest information possible on:

- present legislation and administrative measures on existing national standards and criteria on permissible limits of cadmium concentrations in seafood cadmium emissions into the marine environment, and water quality regarding cadmium;

- measures taken relevant to (a), (b), (c), (d), (e), (f), (g), (h), (i) and (j) above;

- relevant monitoring data on (i) above;

(l) continue to support, within the framework of the research component of MED POL those studies on seafood consumption patterns which can be utilized, in conjunction with monitoring data on cadmium concentrations in seafood, to identify possible high risk groups.

4. Pollution by organotin compounds

To adopt the:

(i) Assessment of the state of pollution of the Mediterranean Sea by organotin compounds

The worldwide production of organotin compounds had risen from a very low level in the late 1940's to more than 30,000 tons per year at present. It is estimated that about one third of this amount is used for biocidal purposes which can be divided equally between uses in agriculture and for antifouling treatments. The main uses of antifouling agents are in cooling-water pipes for electric power plants and other industries such as chemical and steel factories, and in paints for boats, ships, and marine structures. The compounds used are mainly tri-organotin compounds and especially tributyltin (TBT) derivatives. Two types of antifouling paints are available: "free association" and copolymer paints. The leaching rate (ie the input rate of these contaminants from the painted surface to the marine environment) from copolymer paints is less than that from free association paints.

At present, little information is available in the current scientific literature on amounts of organotin compounds released into the environment by way of production and processing operations. Estimation of inputs from painted surfaces are based on leaching rates. Assuming a constant release rate of 10 $\mu g\ cm^{-2}\ d^{-1}$, 15 $g\ d^{-1}$ would be the input into the marine environment from a painted surface of 150 m^2. Inputs from the use of TBT in protecting pipes against fouling organisms could also be important especially when the water flow is high.

The solubility of TBT compounds is of the order of 10 mg l^{-1} while that for triphenyl (TPT) derivatives is 1 mg l^{-1} or less. In locations where surfaces have been treated with TBT based antifoulants, the levels of TBT can exceed 1 μg l^{-1} in water and 10 μg g^{-1} in sediments. The results from the pilot survey in selected Mediterranean areas indicate that the following are typical TBT contaminated sites:

- those receiving industrial discharges, mainly related to the use of TBT as an antifoulant in cooling pipes;

- harbours, where commercial shipping activities occur, often together with ship maintenance operations, and which receive large quantities of industrial and other effluents;

- marinas, occupied by pleasure boats;

- mariculture areas.

Marinas have shown to be one of the most polluted areas but values of TBT did not exceed 1,000 ng l^{-1} except in one case. The degradation products of TBT, dibutyltin and monobutyltin were also detected but in lower concentrations. The highest TBT levels recorded were in front of a power plant outlet in North Tyrrhenian sea. In general, values were similar to those found in similar situations outside the Mediterranean area. Marine organisms are able to accumulate TBT to levels considerably greater than those found in the surrounding water. With a cessation of inputs, TBT concentrations can be lost in a relatively short time (within one year).

The toxic potential of organotin compounds received considerable attention in the 1950's following the "Stalinon" incident in France. In the late 1970's French scientists found anomalies in the shell calcification of the Pacific oysters growing in Arcachon bay close to a yacht harbour. Since then, work undertaken demonstrated that TBT, together with methyltins and phenyltins, belongs to the most toxic organotin compounds; even low concentrations in aqueous environments may have adverse effects on sensitive stages of invertebrates as well as vertebrates. The most sensitive effect found for TBT is the development of imposex (change of sex) in certain gasteropod molluscs at concentrations greater than 1 ng l^{-1}.

Triorganotin compounds can enter the human body directly at the workplace where these chemicals are manufactured or formulated, and where formulations are used or removed after use. These compounds can also enter the human body directly, through residues contained in treated vegetarian food or in contaminated seafood. Some of the symptoms in humans are headaches, memory defects, loss of vigilance, disorientation, etc. An acceptable daily intake (ADI) for man was proposed by FAO/WHO in 1971 for the triphenyltin compounds of chloride, hydroxide and acetate, at 0.5 μg kg^{-1} body weight. Recent estimates of research workers for the ADI of TBT oxide vary from 1.6 to 3.2 μg kg^{-1} body weight.

The first measures for controlling the use of antifouling paints containing organotin compounds were brought by France in 1982. Since then, other countries have followed suite, the most common measures being the ban on the use of TBT paints on vessels smaller than 25m and on mariculture structures. Recently, measures have also been introduced for sea-going vessels. Measures at regional and international level are promoted through the competent organizations.

(ii) Measures for control of pollution by organotin compounds

On the basis of the assessment document prepared by FAO/WHO/IAEA/UNEP (document UNEP(OCA)/MED WG 1/7), the results of the Mediterranean pilot survey (document FIR/MED POL/OT/5) and the deliberations of the First meeting of the Scientific and Technical Committee (document UNEP(OCA)/MED WG 1/12), the Contracting Parties agree:

(a) as from 1st January 1991 to ban the use of preparations containing organotin compounds intended for the prevention of fouling by micro-organisms, plants or animals:

- on hulls of boats having an overall length (as defined by ISO standard no. 8666) of less than 25 m;

- on all structures, equipment or apparatus used in mariculture;

(b) to report to the Secretariat on measures taken in accordance with this decision.

(c) that a code of practice be developed to minimize the contamination of the marine environment in the vicinity of boat-yards, dry docks, etc., where ships are cleaned of old anti-fouling paint and subsequently repainted;

(d) to encourage the further development of alternative, environmentally acceptable, biocides for anti-fouling paints and coatings;

(e) to transmit to the Secretariat relevant information on production and use of organotin compounds, including their use in cooling water systems;

(f) to communicate to the Secretariat all available information on alternative products in current use.

5. Pollution by organohalogen compounds

To adopt the:

(i) Assessment of the state of pollution of the Mediterranean Sea by organohalogen compounds

Relevant information was assembled on the pesticides, DDT, Drins, Heptachlor, HCH, HCB and the industrial compound PCB. No reliable data on the production and use of these compounds is available and the figures for their inputs are rather rough estimates. World literature indicates that the transport of organohalogens from continental sources to the sea by wet and dry deposition is one of the most important sources of contamination of the marine environment by these compounds. Very few data are available on organohalogens in effluents discharged into the Mediterranean sea.

Organochlorine incorporation into biogenic particles, with subsequent migration via chain transfer, or faecal pellet deposition, provides a rapid and ecologically important transport system in the marine environment. The toxicity of some organohalogen pesticides and PCBs to marine organisms is relatively well documented through toxicological investigations performed both in the Mediterranean and elsewhere in the world. This toxicity in combination with their persistence and bioaccumulation properties makes them one of the most hazardous group of compounds for the marine environment.

Using the acceptable daily intake (ADI) recommended by FAO/WHO and the levels of contamination reported, a risk assessment showed association with the consumption of seafood. HCB, HCH and heptachlor is safe for low, and mostly safe for medium consumption, while the intake of DDT and PCB from one fish meal per week elevates life-time risk above 10^{-5}. The drins present intermediate risk but the evidence for their carcinogenicity is very weak.

(ii) Measures for control of pollution by organohalogen compounds

On the basis of the assessment prepared by FAO/WHO/IAEA/UNEP (document UNEP(OCA)/MED WG.3/Inf.6) the Contracting Parties agree as follows from 1st January 1991:

(a) to ban the use of DDT for shade trees, tobacco, domestic applications, and for aquatic environments, marshes, etc., except where specifically authorized by public health officers for vector control;

(b) to adopt an environmental quality objective in coastal waters of 25 $\mu g\ l^{-1}$ for total DDT;

(c) to adopt and use the International Code of Conduct on the distribution and use of pesticides, prepared by FAO (1985);

(d) to ban the use of PCBs and PCTs (polychlorinated terphenyls) in new equipment in the following applications: transformers, large and small capacitors, heat-transmitting fluids;

(e) to pursue a policy for the phasing out of PCBs in all existing operations;

(f) to pursue a policy of retrofilling PCB-containing transformers with substitutes;

(g) to ensure good management of existing PCB-filled units, of retrofilling operations and the disposal of all PCB-containing fluids and equipment;

(h) to establish national programmes to find and define diffuse sources of PCBs and PCTs;

(i) to promote monitoring programmes for the establishment of (i) organochlorine baseline concentrations; (ii) trends; and (iii) the localization of high pollution areas;

(j) to provide the Secretariat to the Convention with the fullest information possible on:

- present legislation and administrative measures concerning the production, use and disposal of PCB and halogenated hydrocarbon biocides;
- on the number and location of PCB-containing transformers
- measures taken relevant to (a), (b), (c), (d), (e), (f), (g) and (h) above;
- relevant monitoring data on (h) above.

5. MONITORING OF MARINE POLLUTION IN THE MEDITERRANEAN

1. To approve the programme budget as proposed in I.A.5 (pages 7, 8 and 9).

2. Monitoring Programme

To endorse the recommendations of the Meeting of Responsible Investigators of Monitoring Programmes (document UNEP(OCA).MED WG.5/3):

(i) Sources of pollution

- all countries participating in the MED POL monitoring programme should monitor sources of pollution in order to obtain information on the type and amount of pollutants directly released into the environment;

- monitoring of nutrients' inputs at sources and their vicinity should be of high priority;

- stations in national monitoring programmes should be located in such a manner that major sources of pollution (cities above 10,000 inhabitants, big touristic complexes, rivers, major industries) are covered to the extent possible;

- guidelines for monitoring of land-based marine pollution, at and in vicinity of sources, together with relevant reference methods should be completed by the end of 1989 in order to be used in 1990.

(ii) Coastal and reference areas

(a) Microbial pollution

- efforts should be made by the MED Unit and respective countries in order to improve the geographical coverage of microbial pollution monitoring, in particular in the south of the Mediterranean;

- the rationale behind on-going microbial pollution monitoring programmes at country level should be reviewed in order to ensure general assessment of microbial pollution along the coast and to serve as a tool for national action;

- a coordinated effort should be made by the MED Unit, the National Co-ordinators for MED POL and all participating centres to follow recommended reference methods, adopted reporting formats and agreed procedures for data submission;

- participating Centres should be encouraged to utilize the methodology adopted by the MED Unit to interpret and evaluate microbiological data;

- data quality assurance programmes in microbiological monitoring should be enhanced in order to ensure reliability and comparability of data;

- taking into account the interim environmental quality criteria for bathing waters adopted by the Contracting Parties during the 4th Ordinary Meeting and especially point (3) (a) 1st sub-paragraph of recommendation F6 (Doc. UNEP/IG.56/5), a closer collaboration between the EEC and the Co-ordinating Unit for the Mediterranean Action Plan-Athens should be envisaged.

(b) Halogenated and petroleum hydrocarbons and heavy metals

- efforts should be made by the MED Unit and the Mediterranean countries to ensure adequate geographical coverage of monitoring, in particular in the south of the Mediterranean;

- a coordinated effort should be made by the MED Unit, the National Co-ordinators for MED POL and all participating centres to follow adopted reporting formats and agreed procedures for data submission;

- all efforts should be made to ensure that at least a minimum, but significant, monitoring programme be implemented by each country, which will include at least all parameters of category I to the extent possible. Such programmes should have the following types of stations: hot-spots, general coastal stations and reference stations. Suggested frequency for biota sampling should be four times a year for hot-spot stations, two times a year for general coastal stations and once a year for reference stations Suggested minimum sampling frequency for sediments analysis is once a year for all types of stations. Frequency of sampling should take into account previous measurements in the same area;

- participation in the intercalibration exercise should be mandatory for all participating laboratories and therefore only laboratories participating in an intercalibration exercise and having validated their methods should take part in MED POL monitoring activities. Intra-laboratory analytical data quality control against laboratory standards, calibrated against certified standards, should be regular practice;

- biota should be a mandatory matrix for halogenated hydrocarbons and heavy metals and every effort should be made to analyze the recommended species which are: the Mediterranean mussel (Mytilus galloprovincialis), the red mullet (Mullus barbatus), the deep water pink shrimp (Parapaeneus longirostris), tuna or sword fish and sardine or anchovy. In the case where the above species are not available in a particular area, a list of alternative species, as approved by the Contracting Parties should be used;

- the development or updating of reference methods and reporting formats should be continued for the needs of the revised monitoring programme.

(c) Monitoring of airborne pollution

Since this new monitoring component of MED POL is still at the very initial stage, the recommendations for future work in the Mediterranean countries are connected at present mainly with organizational matters and are the following:

- to nominate monitoring stations for the programme;
- to nominate national research institutions responsible for implementation of the programme;
- to include officially the proposed monitoring activities into the national monitoring programme and submit them to the MED Unit.

(d) Data quality assurance

Assessment of the present level of the implementation of national monitoring programmes and data received so far necessitates preparation and implementation of National Data Quality Assurance programmes which will include workplan and timetable for

intercalibration, intralaboratory data quality assurance, training, scientific and technical visits and other details. MED POL Unit should assist in preparation and implementation of such programmes to the extent possible.

(e) Data collection, processing and presentation

- In order to process and present data, collected in the Mediterranean Unit, in faster and more efficient way the secretariat should assist countries, through direct assistance for monitoring activities, in the development of communication of data and reports from countries to the Mediterranean Unit in agreed uniform format, initially on diskettes and later through network facilities;

- In order to improve capabilities of countries for processing and presentation of data, the secretariat should supply countries with appropriate software.

(f) Future activities

- In view of the assessment of the present situation and recent encouraging developments in the collection of data and data quality assurance programmes, it is recommended that the MED POL-Phase II monitoring programme be extended for four additional years (until 1995) to enable full participation of all Mediterranean countries and to allow for a proper evaluation of the situation at a regional level;

- In the light of the experience gained so far it is considered important that national monitoring programmes be designed in such a way that they ensure assessment of the state of pollution but also simultaneously lead to solution of defined scientific and environmental problems and motivate both young and experienced scientists to participate in the monitoring programme;

- In this context, a scientific in-depth assessment on monitoring itself should be promoted on the basis of passed experience in order to prepare the programmes to be implemented in 1995 in the best possible way.

3. Research

In view of the refocussing of the Mediterranean Action Plan, the Contracting Parties decide:

(i) to re-orient the research activities within MED POL in order to generate information which will also be useful for the technical implementation of the LBS protocol in addition to supporting monitoring activities

(ii) as from 1990 to replace research activities A-L by the following five new research areas:

(a) Research area I
Characterization and measurement

This area will include projects which research into the characterization (identification of chemical or microbiological components) and measurement (development and testing of methodologies) of specified contaminants

(b) Research area II
Transport and dispersion

This area will include projects which aim in improving our understanding of the physical, chemical and biological mechanisms that transport potential pollutants from their sources to their ultimate repositories. Typical topics will be atmospheric transport and deposition, water movements and mixing, transport of contaminants by sedimentation and their incorporation in biogeochemical cycles. Priority will be given to the provision of quantitative information ultimately useful for modelling the system and contributing to regional assessments.

(c) Research area III
Effects

This area will include projects relevant to the effects of selected contaminants listed in Annexes I and II of the LBS and Dumping protocols to marine organisms, communities and ecosystems or man and human populations. Priority will be given to effects and techniques providing information useful for establishing environmental quality criteria

(d) Research area IV
Fates/Environmental transformation

This area will include projects studying the fate of contaminants (including microorganisms) in the marine environment such as persistence or survival, degradation, transformation, bioaccumulation etc. but excluding transport and dispersion which is dealt in area II

(e) Research area V
Prevention and control

This area will include projects dealing with the determination of the factors affecting the efficiency of waste treatment and disposal methods under specific local conditions as well as the development of environmental quality criteria and common measures for pollution abatement

(iii) that target contaminants or other variables will be defined at periodic intervals depending on the progress of implementation of the LBS protocol.

4. Plankton blooms and eutrophication

To endorse the recommendations of the Meeting of Experts on Implications and Control of Undesirable Plankton Blooms (document UNEP(OCA)/MED WG.4/2):

(i) The Meeting considered that action was needed at national and international level in order to:

- preserve the oligotrophic ecosystem considered as the main characteristic of the natural inheritance of a large part of the Mediterranean Sea as well as an essential resource for the national economies;

- prevent any further increase of eutrophication phenomena in certain areas where eutrophication already presents a hindrance and/or negative impact upon fisheries and mariculture, tourism and recreation, thallasotherapeutic use of sea water as well as a potential health hazard, particularly as related to eventual toxicity of sea food.

(ii) Before any practical action is taken which would aim at reducing or eliminating algal blooms, the Meeting recommended that:

(a) the inputs in biogenic elements be calculated by including all chemical forms (i.e. dissolved, particulate, mineral, organic) in the water column and the mobilizable fraction of sediments especially as concerns nitrogen and phosphorus and that silicon be taken into consideration in the calculations;

(b) the relative value of external inputs be calculated in relation to the natural pool. A decrease in inputs would in effect not have any practical interest unless these inputs would be at least as considerable as the natural pool.

(iii)

(a) In any event, all discharges, direct or indirect through water courses should be prohibited in enclosed or semi-enclosed areas of a limited surface, where the self-cleaning capacity is saturated. A study of the hydrographic structure of such areas should also be made. Furthermore, in areas where episodes of eutrophication and plankton blooms are regular events, it was suggested to reduce local input of nutrients by at least 50 percent.

(b) Taking into consideration that certain factors are recognized as possibly facilitating the development of phytoplanctonic disturbances, the Meeting recommended, wherever possible, the promotion of all measures which would prevent or correct density stratification of the environment and which would lessen the confinement of the waters through any hydraulic arrangement which would be likely to increase water circulation.

(c) The Meeting also recommended intervention, whenever possible and after making an estimation of possible negative effects, on the natural cycle of the environment, either through direct elimination of biogenic elements (dredging, burying of sediments), or indirectly through the development of shellfish - growing activities; the latter would on the one hand make possible the recovery of biogenic elements as an economic resource and on the other the reconcentration of biogenic material at the level of sediments. It is hoped that the European Community, within the framework of the MAST and STEP programmes, will consider the study of this type of intervention.

(iv) The cooperation among projects studying eutrophication and plankton blooms should be enhanced by exchange of information and regular meetings of experts especially in concomitance with exceptional phenomena in order to identify possible causes and environmental conditions. MAP secretariat should prepare and distribute questionnaires to governmental offices and scientific institutions in order to collect and disseminate information on past and ongoing programmes on undesirable plankton blooms.

(v) Considering that the problems of eutrophication and plankton blooms is already a serious and complex problem in the Mediterranean and that it is expected to worsen in the next years, the meeting recommended the establishment of a working group of specifically competent ecologists and oceanographers from the Mediterranean region who would have the responsibility to propose activities, projects and organizational details to be submitted to the MAP Coordinating Unit for consideration and eventual approval.

(vi) The establishment of a Centre for the toxonomic identification of species causing blooms is highly recommended.

(vii) It was suggested to start multidisciplinary studies (preferably together with international teams) in those areas markedly affected by external nutrients and in which significant restoration activities were planned. The studies would provide a model of ecosystem functioning in different nutrient load conditions, and offer information on the effects of reducing nutrient load compared to those due to changes of oceanographic and climatic conditions, e.g. the northern Adriatic, since a large restoration recovery program of the Po River, the largest external nutrient source in the region, has been launched.

(viii) It was recommended that for Mediterranean sites known to be affected by frequent plankton blooms, a collection of coordinated and comparable information should be made on agreed forms containing physical and biological data which would give a full picture of the geomorphological, environmental and biological characteristics of the bloom area.

(ix) It was recommended that continuous recording sensors be developed and implemented in particularly sensitive areas at least during critical periods. In particular, continuous monitoring should be implemented including stratification of density, velocity field, dissolved oxygen in the bottom layer and chlorophyll. Specific monitoring campaigns should allow the intercalibration of instruments and the collection of samples needed for the study of biogenic compounds and of phytoplankton quantity, structure and density as well as the dominant species.

(x) A Standard Reference Method on eutrophication monitoring should be developed. It should include, among others, sampling strategies, methods of measurement (including aerial surveys) and interpretation of results.

(xi) On the long-term, any effort should be made to establish simultaneously in several Mediterranean areas, both affected and unaffected by external nutrient sources but particularly in those already contaminated by plankton products, a plankton bloom monitoring, based on essential but reliable set of parameters and conducted with a common methodology.

Such a monitoring would be useful for some practical purposes:

(a) these activities should represent an early warning system, efficient at least in already well investigated regions (in Adriatic and Aegean areas, Gulf of Lyon, etc);

(b) monitoring would provide comparable data, useful to evaluate the regional scale of undesirable events, as well as the relative importance of natural (e.g. unusual oceanographic and climatic conditions) and anthropogenic factors;

(c) the comparison between data from different areas would contribute to put in evidence common and/or specific characteristics of each area and give indication for specific field and laboratory experiments to explain plankton bloom mechanisms;

(d) such a monitoring would provide evidence of the relative importance of different external sources of nutrients indicating priorities of interventions.

Monitoring of toxic plankton species should be intensified and enlarged to those areas in which they did not yet occurred but changes in the plankton composition were observed.

5. Impact of climatic change on the Mediterranean coastal zone

To approve the continuation of studies of the impact of climatic change on the Mediterranean coastal zone in the light of the importance of the problem and the basis of the work done so far.

6. PREVENTION AND COMBATING POLLUTION FROM SHIPS

a. Protocol on emergencies

1. To approve the programme budget as proposed in part I.A.6(a) (page 10) and I.B.4 (page 28).

2. To approve the recommendations of the Workshop on Harmful Substances, held in Malta, 22-26 May 1989, as they appear in document UNEP(OCA)/MED WG.3/Inf.9.

b. Port reception facilities

1. To approve the programme budget proposed in part I.A.6(b) (page 12).

2. To promote port reception facilities and inform the Secretariat on progress made.

7. PROTECTION OF THE COMMON MEDITERRANEAN HERITAGE

a. Protocol on Specially Protected Areas

1. To approve the programme budget proposed in part I.A.7(a) (pages 13 and 14) and I.B.3 (page 29).

2. To recommend to the Co-ordinating Unit of MAP, in co-operation with the responsible bodies of the country hosting SPA/RAC, signing of an agreement between the host country and UNEP on their mutual obligations regarding the Centre.

3. To open a line in the budget to cover one half of the salary of the full time Director of the Centre, as is the case for the other MAP Centres and following the recommendations of UNEP evaluation report "The Regional Activity Centre for the Mediterranean Specially Protected Areas: evaluation of its development and achievements" - UNEP Regional Seas Reports and Studies No. 100. If this budget were approved, SPA/RAC would have a full-time director appointed to the Centre.

4. SPA/RAC to assist countries in their endeavour to promote activities relevant to the identification and protection of at least 50 new marine and coastal sites or reserves of Mediterranean interest in accordance with the protocol concerning Specially Protected Areas and the Genoa Declaration.

5. SPA/RAC to assist countries to develop activities for the protection of endangered species (Monk Seal and Marine Turtles) through the Action plans developed or being developed by the SPA Centre and in accordance with the protocol concerning Specially Protected Areas and the Genoa Declaration.

6. To support other actions concerning additional endangered species (marine plants)

7. SPA/RAC to develop and support national activities in the field of selection, creation and management of Specially Protected Areas in accordance with the already approved guidelines.

b. 100 Historic Sites

1. To approve the programme budget as proposed in part I.A.7(b) (page 15)

2. To express appreciation to the authorities in France for the offer of Marseilles to service the network of 100 Mediterranean historic sites.

8. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONE

a. Data base on Mediterranean Environment and Development

1. To approve the programme budget as proposed in part I.A.8(a) (page 17) and I.B.5 (page 30).

2. As a follow-up of the Blue Plan scenarios report published in 1989, to establish under the auspices of the Blue Plan Regional Activity Centre a "Mediterranean Environment and Development Observatory" based on the experience acquired and using the information, documentation and network of contacts established by the Blue Plan. The purpose of the Mediterranean Environment and Development Observatory is to provide governments, international organizations and decision-makers of Mediterranean countries with a continuous and integrated view of the evolution and trends of development/environment interactions in the Mediterranean basin upon which coherent and environmentally sound planning, investment and developmental activities can be based, particularly as regards urbanization, agriculture, industry, energy and tourism in coastal regions. Such monitoring of interactions and analyses of trends will in particular provide the framework for countries and development agencies to establish national, regional and coastal scenarios as a tool for action, with appropriate training and exchange of methodologies being arranged as required.

3. To welcome the offer of France to host and co-finance an observatory of the coastal areas, as a follow-up to the Blue Plan exercise.

4. To welcome the offer of the University of Genoa to undertake, in close co-operation with BP/RAC and the Co-ordinating Unit, the updating of the Blue Plan regional data base.

b. Coastal planning and management

1. To approve the programme budget as proposed in part I.A.8(b) (page 18) and I.B.6 (page 31)

2. To recommend to the Co-ordinating Unit of MAP to speed up, in co-operation with the responsible bodies of the country hosting PAP/RAC, signing of the agreement between the host country and UNEP on their mutual obligations regarding the Centre.

3. To recommend that the Co-ordinating Unit of MAP and the responsible bodies of the country hosting PAP/RAC set to create necessary conditions for recruiting at least one international expert who would work in PAP/RAC on a 6-month (or longer) basis as consultant assisting the Director of PAP/RAC in implementing the programme.

4. To recommend to National Focal Points for PAP, particularly those with whom a direct and continuing co-operation has not yet been developed, to intensify the co-operation by including their consultants in various PAP activities and improving communication with PAP/RAC.

c. Coastal zone pilot projects

1. To approve the programme budget as proposed in part I.A.8(c) (page 23).

2. To adopt an initial list of four coastal zone MAP pilot projects (Bay of Kastela, Bay of Izmir, Island of Rhodes, Coast of Syria).

3. To invite the national authorities concerned and the relevant bilateral and multilateral programmes to support the above four pilot projects as practical demonstration areas for the protection of the Mediterranean.

9. PUBLIC INFORMATION

1. To approve the programme budget as proposed in part I.A.9 (page 24).

2. To combine the existing information bulletins (Medwaves, PAP Bulletin, ROCC News, SPA Bulletin) into one simple bulletin, Medwaves, to be issued in Arabic, English and French.

Table I

Summary of Budgetary Requirements from MIF
by Activity & Expenditure
(in thousands U.S. $)

	Consultants			Sub-Contracts			Meetings			Training & Fellowships			TOTAL		
	1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991
1. Decision Making	0	0	0	0	0	0	193	79	259	0	0	0	193	79	259
2. Programme Co-ordination	12	30	30	0	0	0	0	0	0	65	40	40	77	70	70
3. Legal Component	8	35	35	0	20	20	70	45	45	0	10	10	78	110	110
4. IBS Protocol	15	15	15	295	240	285	30	46	15	0	0	0	340	301	315
5. Monitoring of Marine Pollution	20	20	20	858	854	797	30	8	76	160	185	160	1068	1067	1053
6.a Protocol on Emergencies	13	13	13	0	0	0	0	0	0	85	85	85	98	98	98
b Port Reception Facilities	0	20	20	0	0	0	0	0	0	0	10	10	0	30	30
7.a Specially Protected Areas (SPA)	60	55	55	10	10	5	15	15	15	0	10	15	85	90	90
b 100 Historic Sites	0	20	20	0	12	12	0	0	0	0	20	20	0	52	52
8.a Mediterranean Data base	35	0	0	0	45	45	0	0	0	60	25	25	95	70	70
b Coastal Planning & Management	228	156	155	33	31	15	45	0	0	55	160	177	361	347	347
c Coastal Zones Pilot Projects	125	110	110	0	182	188	0	40	40	0	0	0	125	332	338
9. Public Information	47	63	63	0	46	47	0	0	0	0	0	0	47	109	110
Totals	563	537	536	1196	1440	1414	383	233	450	425	545	542	2567	2755	2942

Table II

Summary of Personnel and Operational
Budgetary requirements from MTF by Location
(in thousands of U.S. $)

Location	Professional Staff				General Service				Travel of Staff on Official Business			Office Costs			Total		
	#		Salaries 1989	1990	1991	#		Salaries 1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991
MED UNIT (Athens)																			
UNEP	6	(1)	299	313	328	13	(3)	-	-	-	45	50	50	14	75	90	358	438	468
FAO	1		68	71	74	1		11	12	13	12	12	12	Covered by MED Unit			91	95	99
WHO	1		70	73	77	1		12	13	14	12	12	12	Covered by MED Unit			94	98	103
AGENCIES																			
WHO (Copenhagen)	-		-	-	-	1		10	11	11	-	-	-	Covered by Agency			10	11	11
WMO (Geneva)	-		-	-	-	-		-	-	-	8	8	8	Covered by Agency			8	8	8
IAEA (Monaco)	1		63	66	69	1		28	30	32	24	24	24	Covered by Agency			115	120	125
UNESCO/IOC (Paris)	-		-	-	-	-		-	-	-	6	6	6	Covered by Agency			6	6	6
RCOC/IMO (Malta)	4	(1)	171	176	180	5		81	93	98	16	16	16	58	58	60	326	343	354
SPA/RAC (Salambo)	4	(2)	90	90	90	3	(4)	13	13	13	15	15	15	42	37	37	160	155	155
BP/RAC (S. Antipolis)	4	(1)	140	140	140	4	(3)	30	30	30	30	15	15	55	15	15	255	200	200
BAP/RAC (Split)	2		55	50	50	6		66	66	66	32	32	32	71	68	68	224	216	216
Total	23	(5)	956	979	1008	35	(10)	251	268	277	200	190	190	240	253	270	1647	1690	1745

Note: In addition see administrative support and office costs paid from Greek counterpart contribution (Table III).
Numbers in brackets correspond to the number of persons whose salaries are covered by Programme Support cost or host country.

Table III
Counterpart and other contributions
to the MAP Programme
(in thousands of U.S. $)

Location	Environment Fund			Host Country Contributions			Counterpart Contributions			Total		
	1989	1990	1991	1989	1990	1991	1989	1990 estimates	1991	1989	1990	1991
UNEP (Nairobi)	50	50	50							50	50	50
GREECE				400	400	400				400	400	400
NAT. INSTITUTIONS							1000	1000	1000	1000	1000	1000
PILOT PROJECTS							0	330	350	0	330	350
FAO (Rome)							96	96	96	96	96	96
WHO (Copenhagen)							100	100	100	100	100	100
WMO (Geneva)							22	22	22	22	22	22
IAEA (Monaco)							98	98	98	98	98	98
UNESCO/IOC (Paris)							50	50	50	50	50	50
ROCC (Malta)												
MALTA				20	20	20				20	20	20
FRANCE							30	30	30	30	30	30
BP/RAC (S.Antipolis)												
FRANCE				280	280	280				280	280	280
PAP/RAC (Split)												
YUGOSLAVIA				150	150	150				150	150	150
SPA/RAC (Salammbo)												
TUNISIA				50	50	50				50	50	50
UNEP	50	-	-							50	-	-
Total	100	50	50	900	900	900	1396	1726	1746	2396	2676	2696

Table III (continued)
Greek Counterpart contribution
to the MAP Programme
(in thousands of U.S. $)

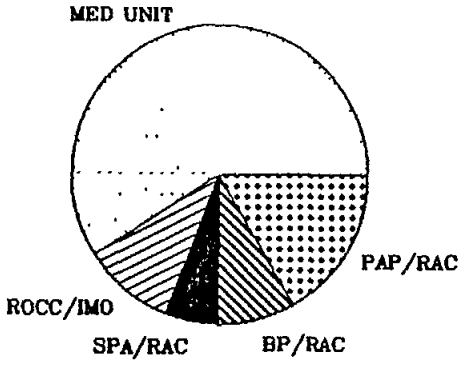
1. CO-ORDINATING UNIT (UNEP) (Athens, Greece)	m/m	1989	1990	1991
		(in thousands of U.S. $)		
(b) Administrative Support				
- Administrative Assistant - N. Zevelakis(1) (Greece) G.6	12	-	-	-
- Information Assistant - H. Pissala-Petrou (Greece) G.5	12	10	13	13
- Senior Secretary - D. Voga(1)(Greece) - G.4	12	-	-	-
- Senior Secretary - E. Stamatopoulou-Kalimani (Greece) - G.4	12	11	13	14
- Senior Secretary - D. Mandika (Greece) G.4	12	10	12	12
- Research Assistant - G.4 (under recruitment)	12	10	12	12
- Bilingual Typist - P.Ballis (Greece) - G.3	12	10	12	12
- Telephone Operator/Receptionist - E. Zaimis (Greece) - G.3	12	9	10	10
- Bilingual Typist- M.Foerter-Platis (France/Greece) - G.3	12	8	10	11
- Data Processing Assistant - L. Janssen (Canada) - G.3 (1)	12	-	-	-
- Typist - G.3 (under recruitment)	12	9	10	10
- Clerk/Driver - D. Magiras (Greece) - G.2	12	9	10	11
- Clerk - S. Fakis (Greece) - G.2	12	7	9	10
- Temporary Assistance	8	19	19	19
- Overtime		7	7	7
Sub-Total		119	137	141
(d) Office Costs				
- Equipment				
a) expendable equipment		21	38	36
b) non-expendable equipment		12	9	-
- Rental and maintenance of premises				
a) Rent		80	75	82
b) Cleaning		14	21	22
- Operation and maintenance of equipment		38	-	-
- Reporting costs		25	8	9
- Sundry				
a) Telephone, telex and postage		85	112	110
b) Miscellaneous		6	-	-
Sub-Total		281	263	259
Total Greek counterpart contribution		**400**	**400**	**400**

Table IV
Summary of Budgetary requirements from MTF
by Location
(in thousands of U.S. $)

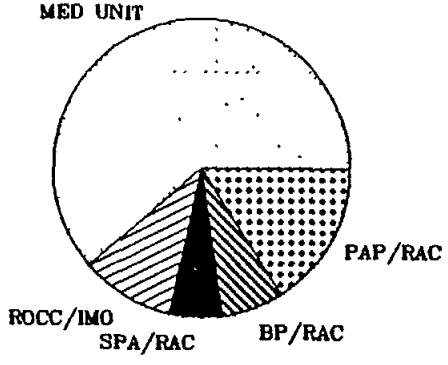
Location	Activities			Personnel & Operational Costs			Total			Personnel & Operational Costs as percentage of Total		
	1989	1990	1991	1989	1990	1991	1989	1990	1991	1989	1990	1991
MED UNIT* (Athens)	1803	1945	2132	682	776	820	2485	2721	2952	27.4%	28.5%	27.8%
ROCC/IMO (Malta)	98	113	113	326	343	354	424	456	467	76.9%	75.2%	75.8%
SPA/RAC (Salammbo)	85	100	100	160	155	155	245	255	255	65.3%	60.8%	60.8%
BP/RAC (S. Antipolis)	95	100	100	255	200	200	350	300	300	72.9%	66.7%	66.7%
PAP/RAC (Split)	486	497	497	224	216	216	710	713	713	31.5%	30.3%	30.3%
Total	2567	2755	2942	1647	1690	1745	4214	4445	4687	39.1%	38.0%	37.2%
Programme Support Costs							542	578	609			
GRAND TOTAL							4756	5023	5296			

* Includes Activities and Personnel and Operational Costs for MEDPOL Co-operating Agencies.

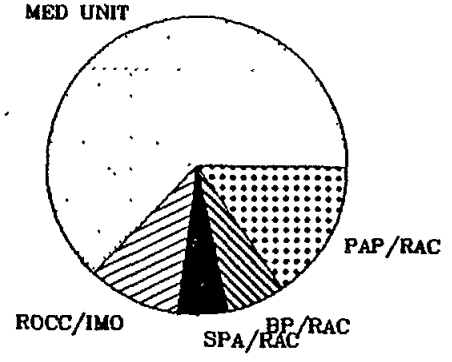
TABLE V
BUDGETARY REQUIREMENTS FROM MTF (1989-1991)
BY LOCATION



1989

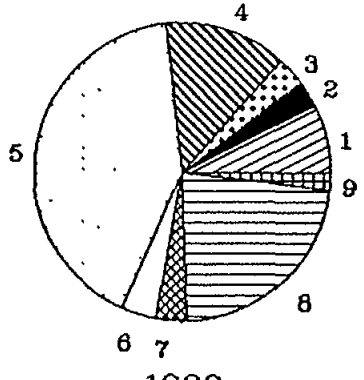


1990

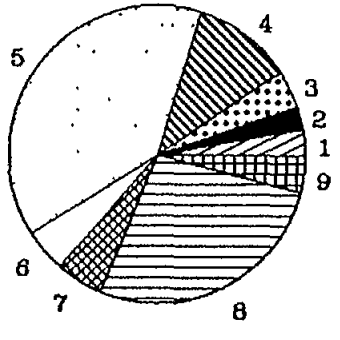


1991

BY ACTIVITY



1989



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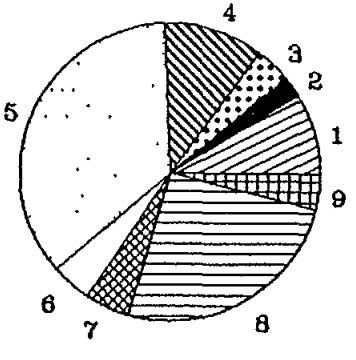


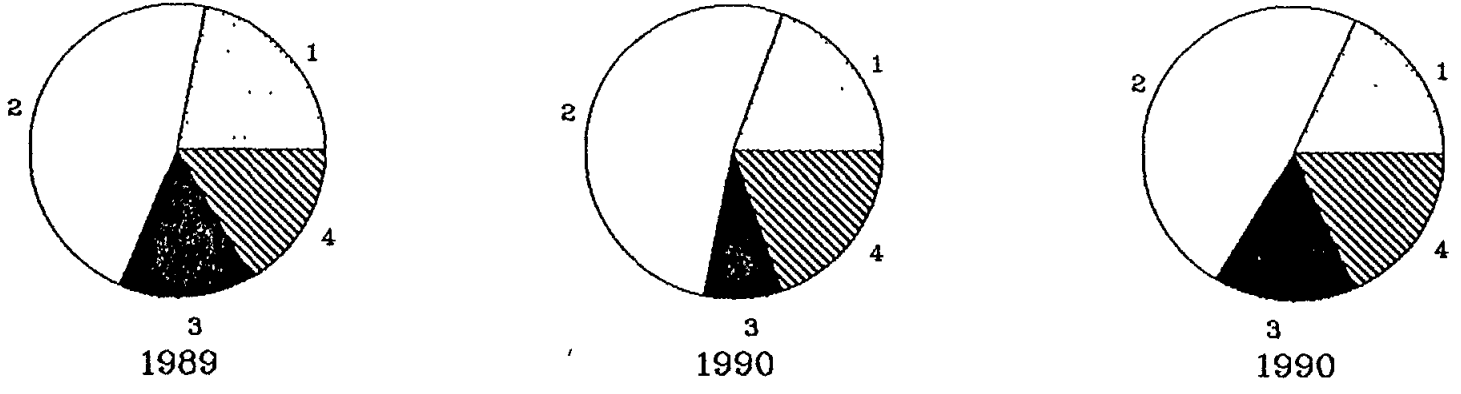
1991

1. Programme approval through decision-making meetings; **2.** Programme co-ordination; **3.** Legal component; **4.** Implementation of the LBS Protocol; **5.** Monitoring of marine pollution in the Mediterranean; **6.** Prevention and combating pollution from ships; **7.** Protection of the common Mediterranean heritage; **8.** Environmentally sound management of the Mediterranean coastal zone; **9.** Public information

TABLE VI

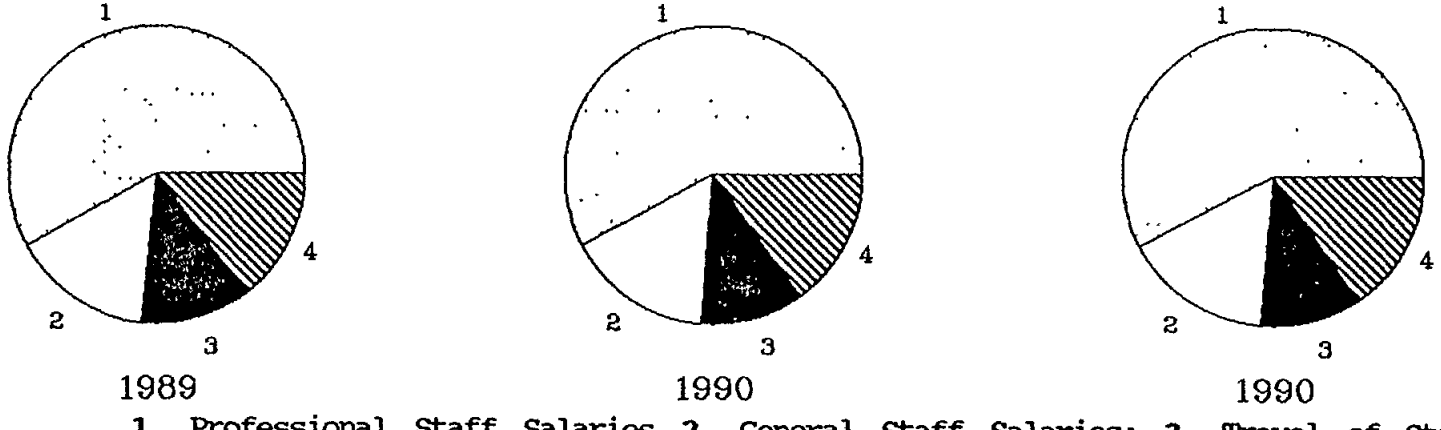
BUDGETARY REQUIREMENTS FROM MTF (1989-1991)

BY TYPE OF EXPENDITURE FOR ACTIVITIES



1. Consultants; 2. Sub-Contracts; 3. Meetings; 4. Training and Fellowships

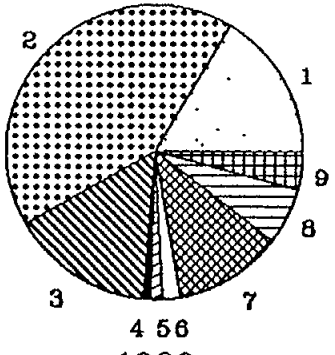
BY STAFF AND OFFICE COST



1. Professional Staff Salaries 2. General Staff Salaries; 3. Travel of Staff on Official Business; 4. Office Costs

TABLE VII

COUNTERPART CONTRIBUTIONS TO THE MAP PROGRAMME (1989-1991)



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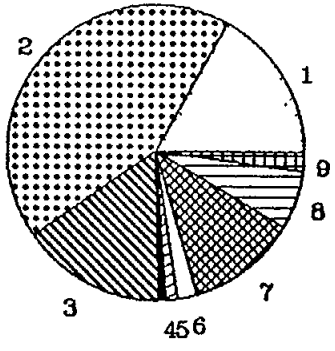
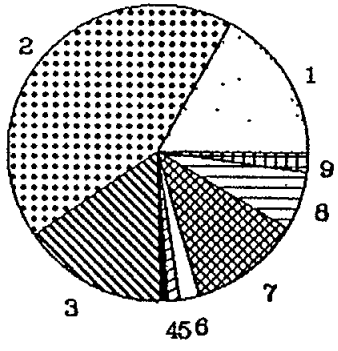


1990



1991

1. Greece (Med Unit); 2. Institutions (MEDPOL); 3. Agencies (MEDPOL); 4. Malta (ROCC); 5. France (ROCC); 6. Tunisia (SPA/RAC); 7. France (BP/RAC); 8. Yugoslavia (PAP/RAC); 9.UNEP (Med Unit).