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MEDITERRANEAN ACTION PLAN

Seventh Ordinary Meeting of the Contracting
Parties to the Convention for the Protection
of the Mediterranean Sea against Pollution and
its related protocols

Cairo, Egypt, 8-11 October 1991

**RECOMMENDATIONS AND PROPOSED BUDGET FOR 1992 - 1993
SUBMITTED FOR ADOPTION**

FOR REASONS OF ECONOMY, DELEGATES
ARE KINDLY REQUESTED TO BRING THEIR
DOCUMENTS TO THE MEETING



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INTRODUCTION

This document is based on the decisions of the Joint Meeting of the Scientific and Technical Committee and the Socio-Economic Committee (Athens, 6-10 May 1991) which approved recommendations and programme budget for 1992-1993, subject to the study requested on the actual impact of inflation rates and exchange rate fluctuations (UNEP(OCA)/MED WG.25/5).

Part I of this document contains all recommendations approved by the Joint Committees Meeting. In addition, following recommendations based on the decisions of the Joint Committees Meeting or previous decisions of the Contracting Parties are included in this document:

- waiving Lebanon's arrears, legal component, point A.3.2;
- legal component, points A.3.4, A.3.5 and A.3.6;
- incineration at sea and dumping of industrial waste, legal component, point A.3.8;
- urban sewage, LBS component, point B.6.2;
- LBS survey, LBS component, point B.6.3;
- reports on dumping, LBS component, point B.6.8;
- precautionary principle, LBS component, point B.6.9.

Part II of this document contains the proposed programme budget for the 1992-1993 biennium. Study on the actual impact of inflations rates and exchange rate fluctuations, as requested by the Joint Committees Meeting, was done by two financial experts (from UNCTAD and Malta) and results of the study (UNEP/BUR/39/4) were presented to the meeting of the Bureau of the Contracting Parties (Paphos, Cyprus, 16-17 July 1991). The Bureau reviewed the results of the study and authorized the Secretariat to propose to the Contracting Parties Meeting the programme budget as approved by the Joint Committees Meeting and presented in this document.

Part III of this document presents proposed sources of financing of the proposed budget and expected counterpart contributions in cash/kind to the programme.

Part IV of this document contains proposed contributions in the 1992-1993 biennium to the Mediterranean Trust Fund, necessary to implement the proposed programme budget.

The Contracting Parties are invited to adopt the recommendations and programme budget for 1992 - 1993 biennium presented in this document.

I. RECOMMENDATIONS

A. IMPLEMENTATION OF THE BARCELONA CONVENTION

The Contracting Parties adopt the following recommendations:

1. PROGRAMME APPROVAL THROUGH DECISION-MAKING MEETINGS

1. To approve the programme budget as it appears in part II.A.1 (page 33).
2. To conduct their Eighth Ordinary Meeting in plenary session, without establishing a Committee of the Whole.

2. PROGRAMME CO-ORDINATION

1. To approve the programme budget as it appears in part II.A.2 (page 34) with respective personnel and operational costs in part II.A (pages 42 and 43).
2. To invite the Secretariat to strengthen co-operation with financing institutions with a view to their participation in MAP activities, and particularly in the coastal areas management programme.
3. Invite the Secretariat to continue to provide technical support to the Adriatic member-countries whenever requested by them.
4. Invite the Secretariat to intensify co-ordination with the EEC in relation to the implementation of the actions and measures envisaged in the Nicosia Charter.
5. To call upon the Secretariat to promote and support all measures aimed at utilizing remote sensing technology at the Mediterranean level.

3. LEGAL COMPONENT

1. To approve the programme budget as it appears in part II.A.3 (page 35).
2. To waive Lebanon from paying its outstanding arrears up to the end of 1990.
3. To consider and develop proposed legal measures on the control of hazardous waste in the Mediterranean, based on existing international conventions on the subject.
4. To invite Syria and Lebanon to ratify the Land-Based Sources Protocol (LBS) and the Specially Protected Areas Protocol (SPA).
5. To invite the Contracting Parties, that have not done so yet, to ratify the International Convention for the Prevention of Pollution from Ships, 1973, and the related protocol, 1978 (MARPOL 73/78).

6. To reaffirm the decision of the Contracting Parties to submit a consolidated annual report by 30 June of each year on measures adopted to implement the Convention and its related protocols (Article 20 of the Convention).
7. To approve the following text of the Annex IV to the Land-Based Sources Protocol:

ANNEX IV TO THE LBS PROTOCOL

This annex defines the conditions of application of this Protocol to pollution from land-based sources transported by the atmosphere in terms of Article 4.1(b) of this Protocol.

1. This Protocol shall apply to polluting discharges into the atmosphere under the following conditions:
 - (a) the discharged substance is or could be transported to the Protocol Area under prevailing meteorological conditions;
 - (b) The input of the substance into the Protocol Area or its subregions is hazardous for the environment in relation to the quantities of the same substance reaching the Area by other means.
2. This Protocol shall also apply to polluting discharges into the atmosphere affecting the Protocol Area from land-based sources within the territories of the parties, from fixed man-made offshore structures, subject to the provision of Article 4.2 of this Protocol.
3. In the case of pollution of the Protocol Area from land-based sources through the atmosphere, the provisions of Articles 5 and 6 to this Protocol shall apply progressively to appropriate substances and sources listed in Annexes I and II to this Protocol as will be agreed by the Parties.
4. Subject to the conditions specified in paragraph 1 of this annex, the provisions of Article 7.1 of this Protocol shall also apply to:
 - (a) discharges - quantity and rate - of substances emitted to the atmosphere, on the basis of the information available to the Contracting Parties concerning the location and distribution of air pollution sources;
 - (b) the content of hazardous substances in fuel and raw materials;
 - (c) the efficiency of air pollution control technologies and more efficient manufacturing and fuel burning processes;
 - (d) the application of hazardous substances in agriculture and forestry.
5. The provisions of Annex III to this Protocol shall apply to pollution through the atmosphere whenever appropriate. Air pollution monitoring and modelling using acceptable common emission factors and methodologies, shall be carried out in the assessment of atmospheric deposition of substances, as well as in the compilation of inventories of quantities and rates of pollutant emissions into the atmosphere from land-based sources.
6. All Articles, including parts thereof to this Protocol not mentioned in paragraphs 1 to 5 above shall apply equally to pollution from land-based sources transported by the atmosphere wherever applicable and subject to the conditions specified in paragraph 1 of this Annex.

WORKPLAN FOR THE IMPLEMENTATION OF ANNEX IV TO THE LBS PROTOCOL
DURING 1992-1993

<u>Actions</u>	<u>Target date</u>
1. Establishment of an expert group on airborne pollution of the Mediterranean Sea ^{1/}	Feb. 1992
2. Compilation of a Mediterranean emission inventory of heavy metals (starting with Cd and Pb) following the adopted procedures	Dec. 1992
3. Compilation of a Mediterranean emission inventories for acidifying compounds following the adopted procedures	Dec. 1992
4. Assessment of airborne pollution of the Mediterranean Sea (primarily by heavy metals and acidifying compounds)	Dec. 1993

PRELIMINARY WORKPLAN FOR THE IMPLEMENTATION OF ANNEX IV TO THE LBS
PROTOCOL DURING 1994-1995

<u>Actions</u>	<u>Target date</u>
1. Compilation of information on existing legislative measures regarding the control of emissions of harmful substances into the atmosphere from various groups of sources	Sept. 1994
2. Initiation of collection and dissemination of information on existing air pollution control technologies (starting with heavy metals and acidifying compounds)	Sept. 1994
3. Identification and categorization of the most important groups of emission sources (starting with heavy metals) and preparation of general recommendations for control	Dec. 1994
4. Preparation of guidelines for inventory of emissions of other important pollutants (e.g. organic species)	March 1995
5. Reconsideration of the most important problems with regard to airborne pollution of the Mediterranean Sea and preparation of a plan for future actions	March 1995

1/ A meeting of the expert group could take place if hosted and financed by a Contracting Party.

8. BANNING OF (A) INCINERATION OF WASTES AT SEA AND (B) DUMPING OF INDUSTRIAL WASTE

Further to the recommendation by the Contracting Parties (UNEP(OCA)/MED IG.1/5, Annex V, A 3.8) to amend the Dumping Protocol in order to ban specifically ocean incineration activities in the Convention area and further to the suggestion (UNEP(OCA)/MED WG.25/5, para. 51) that Contracting Parties should stop dumping of industrial wastes in the sea, it is proposed to adopt the following amendments to the Dumping Protocol:

Article 3 Add:

6. "Industrial wastes" means waste materials generated by manufacturing or processing operations, including waste processing, as well as products resulting from such manufacturing or processing operations when they no longer serve their intended purpose. It does not include inert material of natural origin and uncontaminated organic materials of natural origin.
7. "marine incineration facilities" means any vessel, platform or other man-made structure operated for the purpose of waste incineration at sea.

Article 4

1. The dumping into the Mediterranean Sea area of industrial wastes is prohibited.
2. The dumping into the Mediterranean Sea area of wastes or other matter listed in Annex I to this Protocol is prohibited (present text).
3. The disposal into the Mediterranean sea of wastes or other matter listed in Annex I to this Protocol by combustion on marine incineration facilities is prohibited.

Article 5

1. The dumping into the Mediterranean Sea area of wastes or other matter listed in Annex II to this Protocol requires, in each case, a prior special permit from the competent national authorities (present text).
2. The disposal into the Mediterranean Sea of wastes or other matter listed in Annex II to this Protocol by combustion on marine incineration facilities is prohibited.

4. MONITORING OF MARINE POLLUTION IN THE MEDITERRANEAN

1. To approve the programme budget as it appears in part II.A.4 (pages 36, 37 and 38).
2. Monitoring programme and supporting activities
 - To endeavour towards the achievement of complete geographical coverage of the monitoring activities in the Mediterranean through the preparation of national Monitoring Programmes of MED POL and the provision of relevant pollution data;

- To include the monitoring of airborne pollution whenever possible in the MED POL national monitoring programmes and to initiate the collection of emission inventory data, especially for heavy metals;
- To welcome the contribution to MAP of the Mediterranean Environmental Technical Assistance Programme (METAP) in the field of MED POL data quality assurance activities which will enable the Secretariat to expand the activities limited by the MAP budget;
- To ask the METAP Implementation Committee through the Secretariat to continue in the future to support the MED POL activities for the overall benefit of the Barcelona Convention and the Mediterranean Action Plan;
- To hold a meeting of the National Co-ordinators for MED POL . The meeting should be convened in location and time so as to economize on travel costs.

3. Research

- That fifty per cent of the budget earmarked for the research can be used for one priority research area (which would be eutrophication and plankton blooms for 1992-1993). All the research proposals sent through National Co-ordinators on this subject, in addition to those solicited by the Med Unit and approved by the National Co-ordinators, would form the basis for a regional programme, to be defined in detail by the Unit and the Agencies' staff involved and by a number of selected scientists and National Co-ordinators at the consultation meeting and implemented by institutes selected from those who had submitted proposals. This system could allow for a higher financial contribution for participating institutes and could lead to multi-institutional joint projects in the region which would enhance the geographical coverage of the research component of MED POL.

4. Climatic Changes

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

5. INFORMATION

1. To approve the programme budget as it appears in Part II.A.5 (page 39).

B. IMPLEMENTATION OF THE LBS PROTOCOL AND DUMPING PROTOCOL

The Contracting Parties adopt the following recommendations:

6. IMPLEMENTATION OF THE LBS PROTOCOL AND DUMPING PROTOCOL

1. To approve the programme budget as it appears in part II.B.6 (pages 40 and 41) with respective personnel and operational costs in part II.A. (page 44).

2. MITIGATION OF THE PROBLEM OF URBAN SEWAGE

Contracting Parties agree that a concrete action plan for the collection, treatment and disposal of sewage for each Mediterranean coastal city with the population over 10,000 inhabitants be prepared by the end of 1992.

3. LBS SURVEY

Contracting Parties which did not send responses to the questionnaires for the survey of pollutants from land-based sources are urged to do so as soon as possible.

4. POLLUTION BY ORGANOPHOSPHORUS COMPOUNDS

(i) Assessment of the situation regarding organophosphorus compounds in the Mediterranean Sea

- (1) The available information on the production and use of both organophosphorus pesticides and non-pesticides is limited, fragmentary and in some cases unreliable. On the basis of the limited information received from Mediterranean countries the organophosphorus pesticides, dimethoate, chlorpyrifos, malathion, methamidophos, phenthoate, dichlorvos, fenitrothion and parathion were the ones mostly used during the recent years. Other important compounds used were methidathion, fenthion and azinphos-methyl.
- (2) Even though in many cases they are looked at and treated as a group, organophosphorus compounds have varying physical and chemical properties eg. their solubility in water can vary as much as 10 000 times. In general, however, they are considered unstable in water but some of them can have a very high toxicity. The "no-observed effect level" for crustaceans, which appear to be the most sensitive group of marine biota, to organophosphorus compounds is well below 100 ng l⁻¹.
- (3) Organophosphorus compounds reach the marine environment through rivers, the atmosphere, agricultural run-off and industrial point sources. Information on their levels in the Mediterranean marine environment is very scarce. A MED POL study indicated that both pesticide and non-pesticide organophosphorus compounds can be detected in Mediterranean river estuaries and coastal areas subjected to pollution from these compounds. Some compounds were also detected in fish. However, in general, these concentrations are lower than those found in freshwater systems.

- (4) In most countries these compounds are controlled through the general legislation on pesticides and certain countries have taken specific measures for the control of water pollution by organophosphorus compounds either in the form of emission standards or water quality criteria.
- (5) It is generally accepted that on the basis of the available information there is no human health hazard from the consumption of seafood and therefore specific measures are not warranted at the present stage.
- (6) As far as the aquatic ecosystems are concerned it is evident that fresh water ecosystems are exposed to a bigger danger than the marine ones. However, in view of the uncertainties conferred by reliance on single species toxicity tests, lack of data on vulnerable biotopes and lack of data on behaviour of organophosphorus compounds in the marine environment, it is probable that potential impacts on marine ecosystems have been underestimated and therefore the principle of precautionary approach could be followed.

(ii) **Measures for control of pollution by organophosphorus compounds**

The Contracting Parties, taking into consideration the precautionary principle, agree:

- (a) to promote measures to reduce inputs into the marine environment and to facilitate the progressive elimination by the year [2000] [2005] of organophosphorus compounds (for pesticides, the "WHO-recommended Classification of Pesticides by Hazards and Guidelines to Classification 1990-1991" should be utilized insofar as human health hazards are concerned).

Such measures should, inter alia, include:

- (i) the promotion of Integrated Pest Management in agriculture;
 - (ii) the strict observance of the FAO International Code of Conduct on the Distribution and Use of Pesticides;
 - (iii) the financial and technical support of extension and educational services to train farmers in Integrated Pest Management, whereby non-chemical methods of controlling pests are to be emphasized;
 - (iv) the support of farm-based research and the long-term training in safe and efficient use of pesticides and environmentally sound management of pest control practices in agriculture;
- (b) to take the following immediate actions:
- (i) monitor the presence of organophosphorus compounds in "hot-spot" areas and if concentration levels so warrant, take the necessary measures for the reduction of pollution;
 - (ii) prohibit the import and export to Contracting Parties of organophosphorus compounds not registered for use or withdrawn in the country of manufacture;
- (c) to report to the Secretariat on all measures taken in accordance with this decision.

5. POLLUTION BY PERSISTENT SYNTHETIC MATERIALS

(i) Assessment of the situation regarding persistent synthetic materials in the Mediterranean Sea

- (a) Attention has focused recently on the increasing amounts of man made debris littering the world oceans and coastlines and the Mediterranean is no exception. However, the studies made on this problem are very limited and the available information does not allow a quantitative assessment of litter input, level and decay in the Mediterranean Sea and its coasts. The quantities of litter which are based on measurements in the field cover only a small part of the Mediterranean Sea and its coasts and are not enough to provide a quantitative assessment of the litter problem. However, the MED POL survey provided for the first time some indication of the quantities of litter found on various beaches in some Mediterranean countries (UNEP(OCA)/WG.25/Inf.5).
- (b) There are 3 sources of litter input: i) litter which reaches the beach and the sea as drainage from land; ii) litter which is left on the beach by beach goers who come to the beach for recreation and by construction contractors who at times dump building debris there; iii) litter which is discarded from ships directly into the sea.
- (c) Factors which control the distribution of litter are: proximity to the litter source which may be shipping lanes at sea or population concentration on land, winds and currents which disperse the litter from its source, and waves which drive the litter from the front of the beach to its back and in case of storms even beyond it, landward.
- (d) Close to 3/4 of the coastal litter is composed of plastic materials. The remaining are litter pieces which are made of metal, glass, lumber and wood, Styrofoam and others. Floating litter consists almost entirely of plastics, Styrofoam and wood, whereas seabed litter consists mostly of wood and then plastics, metal and glass in the same abundance.
- (e) Field observations yield the impression that the container fraction of the coastal litter in the Mediterranean consists mostly of those used for beverages, food and cosmetics. This is in contrast to containers of household detergents and cleansers which are the most abundant on the European coastline of the Atlantic. It has been proposed that most of the Mediterranean coastal litter is left by beach goers and therefore should be considered as land-based litter whereas that of the Atlantic beaches of Europe is mostly discarded from ships and therefore marine-based.
- (f) Even though the studies on the damage caused by marine litter in the Mediterranean are limited, it is to be expected that the same ill effects that marine litter has in other parts of the world would also exist in the Mediterranean. These are damage to fish, marine mammals, marine turtles and birds through entanglement and ingestion; damage to free navigation through entanglement in ship propellers and clogging intakes of cooling water systems, and damage to beaches by deterioration of their aesthetics. In the case of the Mediterranean the last one may be the most serious one, economically, in view of the heavy investments which are made to attract tourists to the Mediterranean coastline.

(ii) **Measures for control of pollution by persistent synthetic materials in the Mediterranean Sea**

The Contracting Parties agree:

- (a) that legislation and law enforcement are the tools which should be employed at all levels (locally, nationally and internationally) to control and mitigate the problem of persistent litter in the Mediterranean Sea and its coast;
- (b) that Mediterranean countries which have not done so ratify Annex V of the MARPOL 73/78 Convention and install the necessary facilities for reception of garbage from vessels at all ports, anchorages and marinas so that the provisions of Annex V for special areas apply to the Mediterranean as soon as possible;
- (c) to carry out reconnaissance surveys, following the guidelines described in the report IOC/FAO/UNEP (1989), on coasts, where necessary, and coastal waters of the Mediterranean, especially those of the South for which no data exist and where industrial development and urbanization are still relatively low, to determine the level and nature of the litter, the litter sources, marine or land-based, in an effort to formulate the proper strategy required to control litter contamination. Monitoring should be repeated every 2-3 years to assess any changes;
- (d) to design and implement educational programmes, mainly for youngsters but also to increase general public awareness and participation, aimed at the prevention of littering the beach and coastal waters, as well as open-seas and river beds;
- (e) to encourage the use of biodegradable synthetic materials and promote research on the development of such materials;
- (f) to promote and to encourage national and local authorities to carry out beach cleaning operations.

6. POLLUTION BY RADIOACTIVE SUBSTANCES

(i) **Assessment of the State of Pollution in the Mediterranean Sea by Radioactive Substances**

In considering radioactive pollution sources for the Mediterranean Sea, it is necessary to differentiate well-defined point sources of radioactive effluent discharges such as nuclear power plants, fuel reprocessing plants, etc. from wide-spread or combined sources like atmospheric fallout, river run-off, etc. Since many nuclear installations in the Mediterranean Region are located along major rivers, artificial radionuclides discharged from these installations enter into the Mediterranean Sea through rivers. While travelling along the rivers, these discharged radionuclides are subjected to various geochemical processes, so that the concentrations of the radionuclides entering the marine environment tend to be reduced in the rivers as compared with the original levels at which they were released. Thus, in considering the sources for radioactive pollution of the Mediterranean Sea the individual point sources of radioactive effluent discharge become less important than the combined sources like contaminated rivers, which introduce combined amounts of radionuclides from several point sources.

Artificial radionuclides released from various sources are introduced into the Mediterranean Sea through different routes and then distributed in sea water, marine sediments and marine biota after having been subjected to a variety of environmental processes. The major route of radiation exposure of man to artificial radionuclides

occurring in the marine environment should be through ingestion of radiologically contaminated marine organisms.

The assessments made on sources, inputs, biogeochemical behaviour and levels of artificial radionuclides occurring in the Mediterranean marine environment as well as their effects on marine organisms and man have led to the following conclusions:

- (1) Atmosphere fallout of Cs-137 into the Mediterranean Sea estimated as 10 ± 2 PBq in 1985 predominates the riverine and strait-exchange (Gibraltar and Dardanelles) inputs which are estimated to be respectively 0.4 ± 0.1 PBq and 1.6 PBq;
- (2) Base-line levels of Cs-137 in Mediterranean surface sea water and surface coastal sediments are estimated to be respectively $3-4 \text{ mBq l}^{-1}$ and around 6 Bq kg^{-1} dry in 1985. The total Mediterranean inventory of Cs-137 in 1985, 11 ± 1 Pbq, estimated on the basis of data available, agrees well with the total input value up to 1986. Although the agreement may be rather coincidental, it is considered to indicate that the general approach adopted for estimating the input and inventory is not grossly in error;
- (3) On the basis of the amounts of deposition of various radionuclides, especially those of Cs-137, resulting from the Chernobyl fallout at several locations in the Mediterranean region, it was estimated that the Chernobyl fallout increased the Cs-137 deposition approximately 25-40% in addition to the amounts existing in the region up to 1986. The deposition of radionuclides through the Chernobyl fallout was very heterogeneous depending on the trajectories of high radioactivity plumes, although the radioactivity levels were, generally speaking, much higher in the northern Mediterranean region than those in the southern part;
- (4) Significant increases in the Cs-137 levels by a factor of 2 to 4 were observed in surface coastal sediments along the French coast in 1986-87. The high Cs-137 levels found in various marine organisms after the Chernobyl accident are considered to have decreased to levels close to those in the pre-Chernobyl period towards the end of 1989;
- (5) While the effects of the presence of artificial radionuclides in the Mediterranean Sea on living marine organisms are presently considered negligible, the increased radiation risk for man may correspond to one case of severe harm in 10^6 , mainly due to artificial radionuclides introduced by fallout from nuclear weapon testing.

(ii) Measures for Control of Radioactive Pollution

The Contracting Parties agree that:

- (1) Pertinent recommendations by competent international organizations concerning emissions of radionuclides will be respected;
- (2) ICRP and human health basic principles for radiation protection of man will be used as the basis for controlling releases of radionuclides from land-based national nuclear installations into the Mediterranean marine environment;
- (3) In view of site-specific influences of radionuclide releases into the marine environment, it is not advisable to adopt common emission standards for releases from individual national nuclear installations in the Mediterranean Coastal States;

- (4) In cases where releases of radionuclides from a land-based national nuclear installation are being discharged into the Mediterranean marine environment (either directly or through a river), the Co-ordinating Unit for the Mediterranean Action Plan should be informed about the nationally authorized and actual annual amounts of radionuclides released from the installation and related monitoring data. Reporting should take into account the experience of the Paris Convention;
- (5) In cases where atmospheric and aquatic radionuclide releases from new nuclear installations are expected to influence the Mediterranean marine environment the Co-ordinating Unit for the Mediterranean Action Plan should be informed about the results of pre-operational surveys and assessments of such releases;
- (6) Methods and reporting of monitoring operations on releases of radionuclides into the Mediterranean marine environment should be harmonized internationally as much as possible so as to facilitate the assessments on the influence of the radionuclide releases to the marine environment at a regional level.

7. POLLUTION BY PATHOGENIC MICRO-ORGANISMS

(i) Assessment of the situation regarding pathogenic micro-organisms in the Mediterranean Sea

A considerable number of species and strains of pathogenic micro-organisms, including mainly bacteria and viruses, but also fungi and protozoa, are known to be present in varying degrees of population density in Mediterranean coastal waters and/or shellfish. Some of these are endemic in a number of Mediterranean areas. While the majority are released into the immediate coastal zone in sewage effluents, there is also evidence indicating that in certain cases, direct release by affected human subjects while bathing may also be a route of entry.

The diseases and disorders associated with infection by such pathogenic micro-organisms have been recorded, both among local Mediterranean populations and among tourists visiting the region. It is, however, difficult to estimate even approximate morbidity figures specifically linked with marine pollution as practically all such infections can be contracted through causes other than bathing in polluted waters or consumption of contaminated shellfish.

A number of algal species producing biotoxins affecting man through consumption of contaminated shellfish are also present in various parts of the Mediterranean, and can pose a risk particularly where local conditions lead to eutrophication and the development of algal blooms.

In all Mediterranean countries, the rationale for establishing and enforcing water and shellfish quality criteria and standards is, in conformity with accepted global practice, mainly dependent on upper concentration limits of one or more bacterial indicator organisms as an index of acceptability or otherwise. While monitoring records over the last decade show a steady decrease in such bacterial concentrations, probably as a direct result of improved sewage treatment and disposal methods and associated hygienic procedures, recent international data have resulted in serious doubts as to the validity of current indicator bacteria as an accurate index of pathogen presence and density, in view of longer survival in seawater and shellfish, and greater resistance to conventional treatment, of the latter (particularly viruses) as compared to the former. Similarly, recent international findings have cast doubt on the validity of most

epidemiological studies correlating recreational water quality with health effects on exposed population groups. Such doubt is accentuated by the different results obtained from such studies, both in the Mediterranean and worldwide.

(ii) **Measures for control of pollution by pathogenic micro-organisms**

The Contracting Parties agree:

- (a) that every effort should be made to accelerate, to the extent possible, implementation by countries of the necessary measures in line with achievement of the 1985 Genoa objective of ensuring adequate sewage treatment and disposal facilities for coastal cities and towns;
- (b) to inform the Secretariat on the status of treatment plants in coastal cities and towns, and to indicate the type of treatment utilized;
- (c) that more care should be devoted to the maintenance of proper hygienic quality in public beaches, in particular the assurance of public participation in such maintenance, and that serious consideration should be accorded to possible solutions to the problem of beach overcrowding;
- (d) that in view of the current international situation regarding the validity of bacterial indicator organisms, it would be premature, at the present stage, to consider substitution of the interim criteria for bathing waters jointly adopted in 1985 by any firm criteria and, similarly, equally premature to consider modification of the criteria for shellfish waters jointly adopted in 1987;
- (e) that until such time in the medium term when such substitution and/or modification can be achieved in the light of new international scientific evidence, every effort should be made by individual countries, within the limits imposed by their infrastructural and legal frameworks, to expand their monitoring programmes in areas so indicated as justifying such expansion, in line with current recommendations of the competent United Nations bodies and of the European Economic Community;
- (f) that studies should be carried out, both within the framework of MED POL and otherwise, to provide a more comprehensive catalogue of the presence and (wherever feasible) density of pathogenic micro-organisms in sewage effluents and in coastal marine areas known to be affected by such effluents;
- (g) that future epidemiological studies correlating recreational water and sand quality with health carried out within the framework of MED POL should be more intimately linked with large-scale studies conducted elsewhere;
- (h) that other microbiological studies within the framework of MED POL should be further reoriented towards coordinated studies on priority, target topics, including
 - (i) studies on the epidemiology, pathogenicity and survival of viruses and enteropathogenic bacteria in seawater and shellfish and their resistance to sewage treatment and to depuration techniques, (ii) adverse health effects of algal and related blooms, particularly concerning the presence and concentration of algal biotoxins under Mediterranean conditions, and (iii) effects of pathogenic microorganisms on fish and other edible seafood species.

8. NATIONAL REPORTS ON DUMPING

Contracting Parties which do not comply with the obligation to send annual reports to the Secretariat are urged to do so.

9. PRECAUTIONARY APPROACH IN LBS AND DUMPING PROTOCOLS

Further to the recommendation by the Contracting Parties (UNEP(OCA)/MED IG.1/5, Annex V, A 3.6) to introduce the precautionary principle in the Dumping Protocol, it is proposed that the following recommendation be adopted concerning the LBS and Dumping Protocols:

Contracting Parties will facilitate access to and transfer of clean production methods, including clean technologies, in particular to promote a transition to clean production in order to reduce and eliminate the amount of wastes generated, and to ensure that the above measures do not result in additional pollution in other parts of the environment.

C. IMPLEMENTATION OF THE PROTOCOL ON EMERGENCIES

The Contracting Parties adopt the following recommendations:

7. PREVENTION AND COMBATING POLLUTION FROM SHIPS

a) Protocol on emergencies

1. To approve the programme budget as it appears in part II.C.7(a) (pages 45 and 46) with respective personnel and operational costs in part II.C. (page 48).
2. To approve the following recommendations and the principles and guidelines concerning co-operation and mutual assistance in case of emergency prepared by the Seminar and the Meeting of Drafting Group held in Malta, 8-12 October 1990 and 21-22 March 1991 respectively:
 1. The Contracting Parties should incorporate in their national systems for preparedness and response special institutional and administrative provisions related to aspects of mutual assistance. For this purpose they should take into account the check-list of the principle institutional provisions aimed at facilitating mutual assistance in case of a major marine pollution accident, which appears in Appendix V of the Principles and Guidelines concerning co-operation and mutual assistance.
 2. The Centre should endeavour to help the States which so request in the preparation of projects for the acquisition of response equipment which could be presented to possible sources of international financing.
 3. The Mediterranean States which are not Party to the International Convention on Civil Liability for Oil Pollution Damage and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage should take the necessary steps to become Party to these Conventions.

4. Prior to any accident the neighbouring States should endeavour to conclude bilateral agreements, including among others arrangements specifying in advance the financial conditions and administrative modalities related to co-operation in case of emergency. In conformity with its functions, the Centre will endeavour to help the States which so request to prepare such agreements.
5. The Contracting Parties involved in actions of mutual assistance should not by their practice concerning the reimbursement of costs of assistance be in contradiction with the "polluter pays" principle, according to which the polluter bears the costs of prevention and pollution response, taken by the public authorities.
6. The principle which should be applied in case of State to State assistance, unless a bilateral agreement exists including financial arrangements covering this question, is that of reimbursement of costs of assistance provided by a State at the request of another State. If measures are taken by a Party on its own initiative, this Party bears the cost of these measures.
7. However, when the whole or a part of the expenses cannot be recovered under existing international legal regimes or under the TOVALOP and CRISTAL Agreements, the Party requesting assistance may ask the Party providing assistance to waive the reimbursement of non-recoverable expenses. It may also request for the postponement of reimbursement. In considering such requests Parties to the Protocol solicited should take into consideration the specific needs of certain States of the Mediterranean region.
8. When experts are made available to a Contracting Party, this Contracting Party should ensure that the role and responsibility of these experts are limited to assisting national authorities to make decisions.

PROPOSED PRINCIPLES AND GUIDELINES CONCERNING CO-OPERATION AND MUTUAL ASSISTANCE

(that should be incorporated in Part A of the Regional Information System)

- Appendix I: Principles and Guidelines concerning role and responsibilities of experts sent on mission by the Centre following the request of a State in case of an emergency, and duties and obligations of States towards them.
- Appendix II: Principles and Guidelines concerning the sending, receiving and returning of equipment in case of international assistance operation.
- Appendix III: Principles and Guidelines concerning arrangements and operational procedures which could be applied in case of a joint operation.
- Appendix IV: Check-list of procedures to be followed and persons to be contacted in case of emergency.
- Appendix V: Check-list of principal institutional provisions aimed at facilitating mutual assistance in case of a major marine pollution accident which should be included in national contingency plans.
- Appendix VI: Aspects to be considered when receiving a request for entry in a safe haven.

APPENDIX I

PRINCIPLES AND GUIDELINES CONCERNING ROLE AND RESPONSIBILITIES OF EXPERTS SENT ON MISSION BY THE CENTRE, FOLLOWING THE REQUEST OF A STATE IN CASE OF EMERGENCY, AND DUTIES AND OBLIGATIONS OF STATES TOWARDS THEM

1. The Contracting Parties to the Protocol concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (Protocol to the Barcelona Convention) may, in case of accidents causing or likely to cause marine pollution, request inter alia assistance in the form of expert advice from either the Regional Centre or from another Contracting Party.
2. A directory of experts and Centres of expertise able to offer this type of assistance in case of emergency has been established and regularly updated by the Regional Centre.
3. On the request of a State in case of emergency, the Centre can, if the circumstances necessitate it, send an expert with a view to providing national authorities with advice and technical expertise which they may need during the initial period in order to decide which measures to take. This advice and technical expertise may include:
 - assessment of the situation;
 - adapting national response organization to the circumstances of the accident;
 - response methods and techniques;
 - experts, equipment and products which can be requested from other Contracting Parties or from private organizations.
4. Role and responsibility of the expert are to help national authorities in taking decisions and, in this respect, he only has an advisory role. Every operational decision, as well as its consequences, fall under the complete responsibility of the competent authorities of the requesting State.
5. In all his/her activities related to such an advisory mission, the expert should endeavour to protect the interests of the State which requested his/her services in particular concerning protection of the environment and of the resources and taking into account economic and financial implications.
6. The State requesting the assistance of an expert should endeavour to specify as precisely as possible, considering the given circumstances, the field or fields of expertise required.
7. The State requesting the assistance of an expert should make the necessary arrangements concerning immigration procedures and customs clearance for the expert and material (including written or electronically recorded) which the expert may bring him/her in order to help him/her in executing his/her duties.
8. The authorities of the requesting State should also make the necessary arrangements for accommodation of the expert and provide him/her with necessary working space and office facilities. They should also provide for free access of the expert to necessary communication facilities (telephone, telex, telefax, radio) which he/she may need in his/her work.
9. Initial financing (air tickets, daily subsistence allowance, etc.) of the expert's mission will be taken in charge by the Regional Centre.

APPENDIX II

PRINCIPLES AND GUIDELINES CONCERNING THE SENDING, RECEIVING AND RETURNING OF EQUIPMENT IN CASE OF INTERNATIONAL ASSISTANCE OPERATION

1. International assistance, by one or more States, in case of accidents resulting in serious marine pollution may necessitate transfer of equipment and products from one country to another.
2. Sending, receiving and returning of such material creates a number of logistic, administrative and legal problems which should be resolved quickly, since a delay in the above chain of actions may considerably reduce the efficiency of the assistance. General arrangements in this regard should be adopted prior to any accident and could be usefully included in the national contingency plan. Thus only the details of application remain to be settled at the time of action.
3. Following the detailed evaluation of the situation, the State requesting assistance should specify as precisely as possible the type and quantity of equipment and products needed.
4. The State supplying assistance should, in its reply, attach a detailed list of equipment and products available including necessary technical specifications (dimensions, weights, capacities), precise power requirement (type of fuel, consumption, etc.) and envisaged transport modalities. It should also indicate equipment needed for handling such material in the port or airport of entry, number of people required for off-loading operations and necessary means of transportation of response material to the site of the accident.
5. In order to put such equipment in use as soon as possible the requesting State will take the necessary measures for immediate customs clearance of all arriving material and if needed authorize their use (e.g. authorization to navigate), as well as for immediate clearing of immigration formalities for personnel needed for operating the equipment. The same arrangements should be implemented when personnel and the equipment are provided by the ship insurers.
6. Requesting State undertakes to return the equipment as soon as the operations are terminated if requested so by the supplier.

APPENDIX III

PRINCIPLES AND GUIDELINES CONCERNING ARRANGEMENTS AND OPERATIONAL PROCEDURES WHICH COULD BE APPLIED IN CASE OF A JOINT OPERATION

A. COMMAND STRUCTURE FOR JOINT COMBAT OPERATIONS

The organisational structure in joint operations should contain two main co-ordination and command levels, namely Operational Control ashore and Tactical Command on the scene of operations;

The Operational Control should be exercised by the country that has asked for assistance (lead country) which normally is the country within whose zone the operation takes place;

Change of Operational Control and Tactical Command might, when practical and agreed between the Parties concerned, take place when the main body of a combating operation moves from one zone to another;

Liaison officers from participating countries should be integrated in the staff of the Operational Control to secure necessary knowledge of rendered national resources;

The overall Tactical Command is laid upon a designated Supreme On-Scene Commander/Co-ordinator (SOSC) from the lead country;

Strike teams provided by assisting countries should operate under the command of a National On-Scene Commander/Co-ordinator (NOSC);

The NOSC operates under the command/co-ordination of the SOSC.

B. ARRANGEMENTS CONCERNING RADIO COMMUNICATIONS IN JOINT OPERATIONS

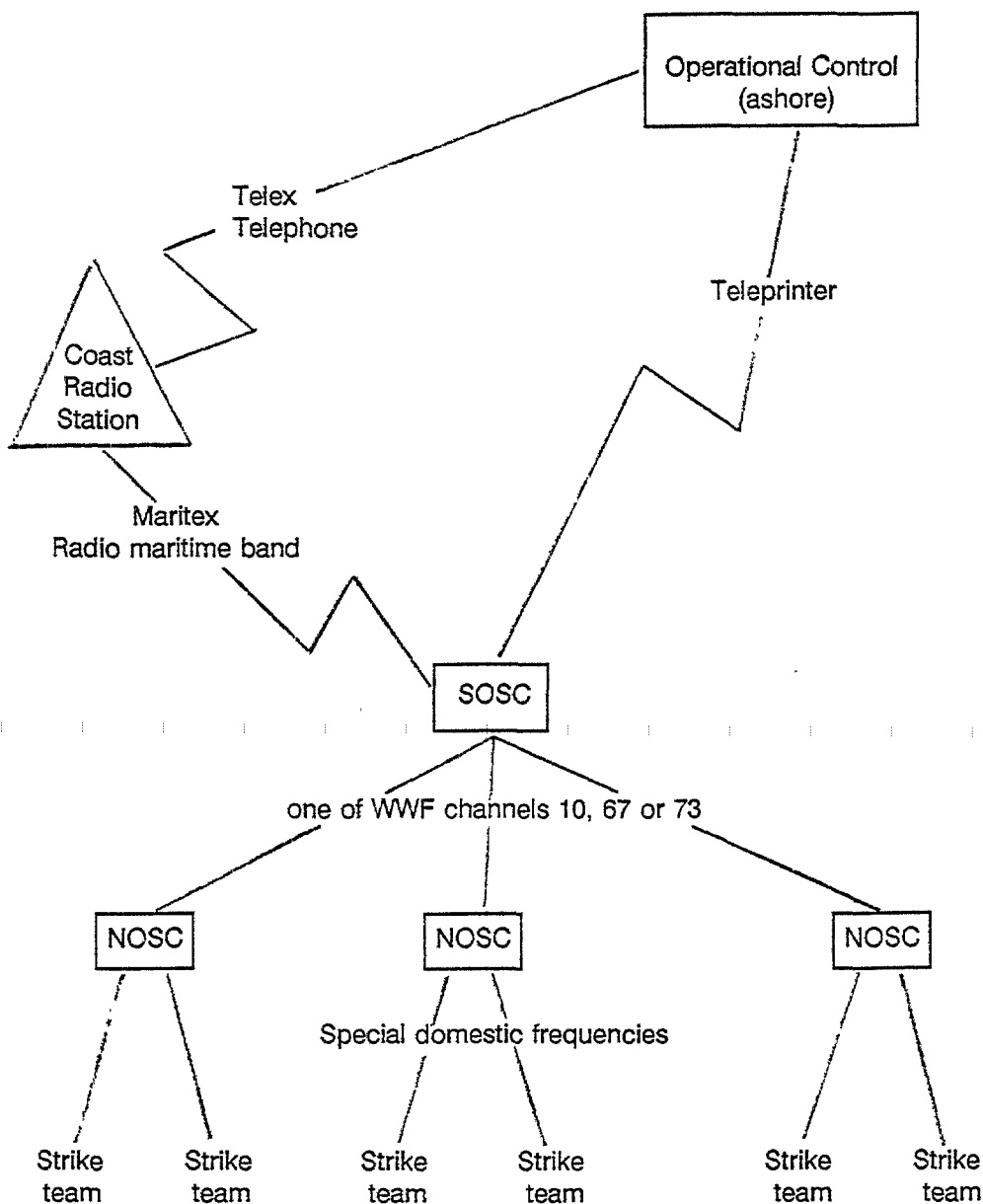
In order to avoid disturbance and jamming in a joint operation, there is a strong need for different radio communication frequencies on the one hand between the Operational Control ashore and the Supreme On-Scene Commander/Co-ordinator (SOSC) and, on the other hand, between the SOSC and participating National On-Scene Commander/Co-ordinators (NOSC) as well as between the different NOSCs and their respective team units.

In accordance with the provisional scheme of radio communications for joint combating operations presented below, the following procedures should be followed:

- concerning the communications between the Operational Control ashore and the SOSC (which is the concern of the lead country of the operation), consideration should be given to the possibility of using wireless teleprinter or telex (Maritex);
- communication between the SOSC and the NOSCs should be performed on one or, if needed, more of the international VHF channels 10, 67 and 73;
- the vessels, from which the SOSC operates should have at least two VHF stations on board with a stand-by function on channel 16;

- communications between a NOSC and the strike team units should be performed on special domestic (internal) frequencies;
- the working language, between OSCs from different countries, should be the most appropriate one;
- the broad aspects of the radio communication problems in joint oil combatting operations at sea should be presented to the telecommunications authority in each country for information and internal consideration.

PROVISIONAL SCHEME OF RADIO COMMUNICATIONS FOR JOINT COMBATING OPERATIONS



APPENDIX IV

CHECK-LIST OF PROCEDURES TO BE FOLLOWED AND PERSONS TO BE CONTACTED IN CASE OF EMERGENCY

This appendix deals with the sequence of actions to be carried out by the competent national authorities responsible under the national contingency plan for dealing with matters relating to response to marine pollution incidents, following the receipt of information of a pollution or threat thereof in order to implement provisions of the Protocol to the Barcelona Convention concerning co-operation in combating pollution of the Mediterranean Sea by oil and other harmful substances in cases of emergency.

Although this check-list, which is by no means exhaustive, has been prepared primarily for incidents involving vessels, it should be used where applicable in case of incidents involving offshore units.*

1. INITIAL ASSESSMENT

An initial assessment necessitates the gathering of information as listed in "A" below through a number of contacts as described in "B".

A. Information required

- place, time, nature, extent and cause of the incident;
- identification of vessel;
- identification of owner/operator and his representatives and insurers;
- condition of the vessel;
- identification of the cargo and its state;
- intentions of the master;
- intentions of the salvor, if any;
- intentions of the owner or his representative.

B. Contacts

- master of the vessel;
- salvor/salvage company, if any;
- shipowner or his representative;
- last port(s) of call;
- next port(s) of call.

2. NOTIFICATION

Once the Party has finalized initial assessment and when the severity of the incident so justifies, it should:

- a) inform relevant bodies within the country in accordance with the national contingency plan;

* "Offshore unit" is defined in OPRC Convention as "any fixed floating offshore installation or structure engaged in gas or oil exploration, exploitation or production activities, or loading or unloading of oil".

- b) inform all Parties whose interests are affected or likely to be affected by the pollution, as well as REMPEC and provide them with:
 - i) details of its assessments and any action it has taken, or intends to take, to deal with the incident, and
 - ii) further information as appropriate,

until the action taken to respond to the incident has been concluded or until joint action has been decided by such Parties.

For transmitting such information use should be made of the pollution reporting system (POLREP) and the list of competent national authorities, as they appear in Section 1 of Part 8 of this Regional Information System;

- c) contact the vessel's insurers and, if the incident involves oil:
 - The International Tanker Owners Pollution Federation Ltd. (ITOPF);
 - IOPC Fund when the Party possibly affected by the pollution is a Party to the 1971 Fund Convention.

3. RESPONSE MEASURES

- a) Activation of national pollution response arrangements as stipulated by the national contingency plan or otherwise.
- b) Continuous evaluation of the situation by using:
 - expertise available within the country;
 - expertise available from/through REMPEC*
 - expertise available from other sources*.
- c) Decision on measures and actions appropriate for mitigating the consequences of pollution incident, such as intervention on the vessel itself, combating pollution at sea, protection of sensitive areas, restoration.
- d) Mobilizing the necessary personnel, equipment and products either from national sources or by requesting outside assistance:
 - directly from other Contracting Parties;
 - from other Contracting Parties through REMPEC;
 - from other sources, including stockpiles owned by oil and shipping industry.

4. FINANCIAL MATTERS

- a) Detailed records of costs incurred by Parties participating in the response during the entire operation should be kept by the Party(ies) directly in charge of response and by the assisting Parties, if any.
- b) These Parties should designate a body to collate the relevant financial documentation, preferably as stipulated in the contingency plan, and request all those taking part in the response to establish the necessary documentation.

* Such experts will assist national authorities to take decisions, but in no case should take decisions themselves in lieu of the responsible national authorities

- c) Prepare claims in accordance with recommendations of applicable compensation schemes.
- d) Present the necessary documentation to the insurers, IOPC Fund or other organizations liable for compensation.
- e) The assisted and assisting Party should co-operate in concluding any action in response to a compensation claim. Unless assisted Party(ies) disagree, assisting Parties may present their claims for reimbursement directly to compensating organizations.

Note: For all these steps expertise from other Contracting Parties or from REMPEC may be requested.

APPENDIX V

CHECK-LIST OF PRINCIPAL INSTITUTIONAL PROVISIONS AIMED AT FACILITATING MUTUAL ASSISTANCE IN CASE OF A MAJOR POLLUTION ACCIDENT WHICH SHOULD BE INCLUDED IN NATIONAL CONTINGENCY PLANS

A quick intervention and facilitation of mutual assistance in the case of major marine pollution accident must be planned and organised. To this end, within the national contingency plan, special institutional arrangements should be adopted and administrative and financial arrangements should be established such as:

- designation of the competent national authority which, once the situation has been assessed, will determine the extent of the required assistance;
- designation of a national authority entitled to act on behalf of the State to request assistance or to decide to provide the requested assistance, as well as to deal with legal and financial aspects of mutual assistance, and arrangements which would enable this authority to be contacted rapidly in case of an urgent request for assistance;
- financial modalities applicable to mutual assistance, based on the recommendations appearing in Annex V to Report REMPEC/WG.2/5;
- roles and obligations of the Party requesting assistance concerning:
 - a) the receipt of equipment;
 - b) costs of board and lodging, possible medical expenses and repatriation of assisting personnel;
 - c) arrangements, in particular concerning customs and immigration, for facilitating the movement of personnel, vessels, aircraft and equipment, based on the provision of the Guidelines for Co-operation in Combating Marine Oil Pollution in the Mediterranean as adopted by the Fifth Ordinary Meeting of the Contracting Parties, Athens, 7-11 September 1987 (UNEP/IG.74/5).

APPENDIX VI

ASPECTS TO BE CONSIDERED WHEN RECEIVING A REQUEST FOR ENTRY IN A SAFE HAVEN

If a State is requested to receive a vessel in distress in its territorial waters or in one of its ports, the decision is often very difficult to take and may in some cases be taken at high level, bearing in mind that there is no legal obligation for the State to accept such vessel.

Prior to giving a possible positive answer, due consideration should be given to the threat the vessel might present to people living in the vicinity of the harbour (e.g. risk of explosion). From an environmental point of view, one should consider what solution is the least detrimental: either keeping the vessel out at sea with the threat of massive pollution or accepting a risk of pollution, although sometimes even slight, to the coastline.

One should also evaluate the risk of the port being blocked if an accident occurs during the operation e.g. sinking of a vessel at the port entrance, with the consequences for the economy of the port area, including ships which might be forced to remain in the port. In any case, access to the port might be allowed only if the shipowner abandons his right to limit his liability with regard to possible damage to the port and property within.

Answering the following questions can help in making decisions:

- What are the risks presented by the cargo?
- Are there any offshore and fishery activities in the approach of the haven which can be endangered by an incoming vessel?
- Is the haven and its approaches located in sensitive areas, such as areas of high ecological or touristic value which might be affected by possible pollution?
- What is the nearest distance to populated and industrial centres?
- Is there, on environmental grounds, a better choice of haven close by?
- Is there anti-pollution equipment present in the area?
- Is there a possibility of containing any pollution within a confined area?
- Are there reception facilities for harmful and dangerous cargoes?
- What are the prevailing winds and currents in the area?
- Is the haven safely guarded against heavy winds and rough seas?
- What is the seabed formation (rocky, sandy, etc.) regarding the possibility to ground the vessel in the haven or its approaches?

- In the case of a non-sheltered haven, can salvage and trans-shipment operation be safely conducted?
- Is there sufficient space to manoeuvre the vessel, even without propulsion?
- Is pilotage compulsory and are pilots available?
- Are tugs available? If so, how many, what bollard pull, etc?
- What mooring facilities are available in the haven?
- Are there transfer facilities, such as pumps, hoses, barges, pontoons?
- Are there repair facilities, such as dockyards, workshops, cranes, etc?
- Is there a fire brigade?
- Is there a disaster relief plan available in the area?
- Is a bank guarantee imposed on the vessel before admission is granted into the haven?

b) Port reception facilities

1. To approve the programme budget as it appears in part II.C.7(b) (page 47).
2. To promote port reception facilities in major ports in the Mediterranean and inform the Secretariat on progress made.

D. IMPLEMENTATION OF THE PROTOCOL ON SPECIALLY PROTECTED AREAS AND HISTORIC SITES

The Contracting Parties adopt the following recommendations:

8. PROTECTION OF THE COMMON MEDITERRANEAN HERITAGE
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a) Specially Protected Areas

1. To approve the programme budget as it appears in part II.D.8(a) (pages 49 and 50) with respective personnel and operational costs in part II.D. (page 52).
2. To welcome the signature of the agreement between The Republic of Tunisia and UNEP concerning the operation of the SPA Centre.
3. To invite the Contracting Parties to channel additional assistance to the Centre on a bilateral basis.

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 Turtle, small cetaceans) 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 and the ecosystems important for their protection (e.g. marine plants).
7. SPA/RAC to support national activities in the field of selection, creation and management of Specially Protected Areas in accordance with the already approved guidelines.

b) Preservation of Historic Sites

1. To approve the programme budget as it appears in part II.D.8(b) (page 51).
2. To organize a Working Group of Experts on historic sites in 1992.
3. To identify through the MAP Focal Points appropriate contacts for the Centre for Historic Sites.

E. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES

The Contracting Parties adopt the following recommendations:

<p>9. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES</p>

a) Prospective analysis of the relationship between Environment and Development

1. To approve the programme budget as it appears in part II.E.9(a) (pages 53 and 54) with respective personnel and operational costs in part II.E. (page 60).
2. To take note of the recommendations of the Working Group of Experts on the future of the Blue Plan (Sophia Antipolis, 10-11 April 1991) (UNEP(OCA)/MED WG.27/1).

b) Coastal planning and management

1. To approve the programme budget as it appears in part II.E.9(b) (pages 55, 56, 57 and 58) with respective personnel and operational costs in part II.E. (page 61).
2. To recommend further to the Co-ordinating Unit of MAP to speed up, in co-operation with the responsible bodies of the country hosting PAP/RAC, the signing of the agreement between the host country and UNEP on their mutual obligations regarding the Centre.

c) Coastal Areas Management Programme (CAMP)

1. To approve the programme budget as it appears in part II.E.9(c) (page 59).
2. Continue work on the four on-going coastal areas management programmes (Bay of Kastela, Bay of Izmir, Island of Rhodes and the Coast of Syria).
3. To approve two more coastal areas management programmes (Fuka-Egypt and Sfax-Tunisia) and start preparation for one new project (Albania).
4. To invite the national authorities concerned and the relevant bilateral and multilateral programmes to support the above coastal areas management programme as practical demonstration areas for the protection of the Mediterranean.
5. To organize consultation meetings relevant to the coastal areas management programme.

II. PROGRAMME BUDGET

SUMMARY

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
A. IMPLEMENTATION OF THE BARCELONA CONVENTION	3111	3143
B. IMPLEMENTATION OF THE LBS PROTOCOL AND THE DUMPING PROTOCOL	330	365
C. IMPLEMENTATION OF THE PROTOCOL ON EMERGENCIES	589	514
D. IMPLEMENTATION OF THE PROTOCOL ON SPECIALLY PROTECTED AREAS AND HISTORIC SITES	347	386
E. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES	1578	1558
F. PROGRAMME SUPPORT COSTS	716	717
GRAND TOTAL	6671	6683

DETAILED SUMMARY (INCLUDING COMPARISON BETWEEN THE BIENNIUMS)

1990 1991 1992 1993 92-93 over
Approved Approved Proposed Proposed 90-91 %
(in thousands of US \$)

A. IMPLEMENTATION OF THE BARCELONA CONVENTION

Activities

1.	Programme approval through decision-making meetings	79	259	26	320	2.37
2.	Programme co-ordination	70	70	59	59	- 15.71
3.	Legal component	90	65	214	30	57.42
4.	Monitoring of marine pollution in the Mediterranean	1037	1028	1240	1200	18.16
	UNEP Counterpart	50	50	50	50	0.00
5.	Information	109	110	163	125	31.51
	<u>Personnel and operational costs*</u>					
-	Co-ordinating Unit (MAP)	469	495	549	549	13.90
	Greek counterpart contribution	400	400	400	400	0.00
-	MED POL Co-operating Agencies	338	352	410	410	18.84

1990 1991 1992 1993 92-93 over
Approved Approved Proposed Proposed 90-91 %
(in thousands of US \$)

B. IMPLEMENTATION OF THE LBS PROTOCOL AND DUMPING PROTOCOL

Activities

6.	Implementation of the LBS Protocol and Dumping Protocol	301	315	330	365	12.82
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C. IMPLEMENTATION OF THE PROTOCOL ON EMERGENCIES

Activities

7.	Prevention and combating pollution from ships:					
	(a) Protocol on emergencies	98	98	184	111	50.51
	(b) Port reception facilities	30	30	10	10	- 66.67

Personnel and operational costs

-	Regional Marine Pollution Emergency Response Centre for the Mediterranean (REMPEC)	343	354	395	393	13.06
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D. IMPLEMENTATION OF THE PROTOCOL ON SPECIALLY PROTECTED AREAS AND HISTORIC SITES

Activities

8.	Protection of the common Mediterranean heritage:					
	(a) Specially protected areas	90	90	78	114	6.67
	(b) Preservation of Historic Sites	52	52	60	63	18.27

Personnel and operational costs

-	Specially Protected Areas Regional Activity Centre (SPA/RAC)	155	155	209	209	34.84
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* Covers also the implementation of the LBS protocol.

1990 1991 1992 1993 92-93 over
Approved Approved Proposed Proposed 90-91 %
(in thousands of US \$)

E. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES

Activities

9. Environmentally sound management of the Mediterranean coastal zones:

(a) Prospective analysis of the relationship between environment and development	70	70	165	145	121.43
(b) Coastal planning and management	347	347	390	390	12.39
(c) Coastal zones pilot projects	332	338	488	488	45.67

Personnel and operational costs

- Blue Plan Regional Activity Centre (BP/RAC)	200	200	265	265	32.50
- Priority Actions Programme Regional Activity Centre (PAP/RAC)	216	216	270	270	25.00

TOTAL

4876	5094	5955	5966	19.57
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F. PROGRAMME SUPPORT COSTS*

575	604	716	717	21.54
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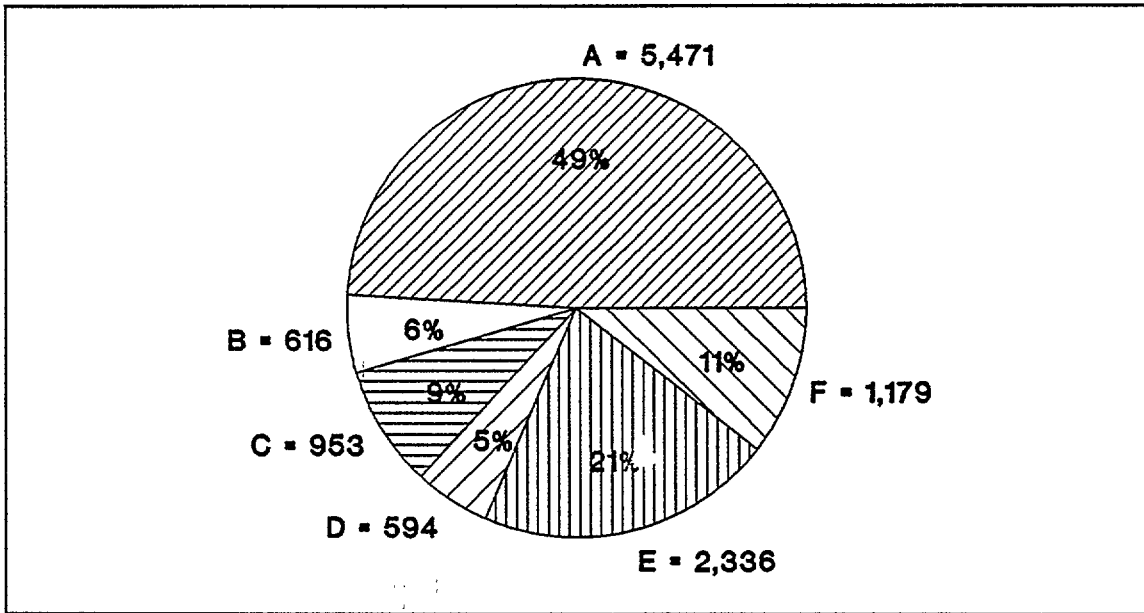
GRAND TOTAL

5451	5698	6671	6683	19.78
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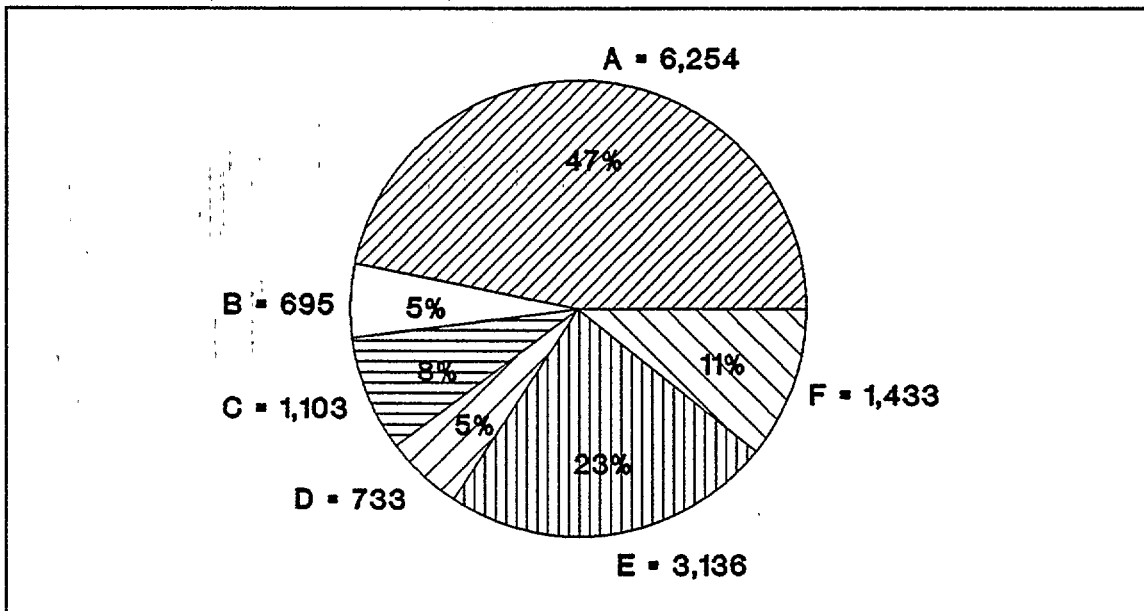
* Programme support costs of 13% apply to MTF expenditures of 5,505,000 US \$ for 1992, and 5,516,000 US \$ for 1993.

COMPARISON OF PROGRAMME BUDGETS BY BIENNIUM

Approved for 1990 - 1991 (in thousands of US \$)



Proposed for 1992 - 1993 (in thousands of US \$)



-
- A = Implementation of the Barcelona Convention;
 - B = Implementation of the LBS Protocol and Dumping Protocol;
 - C = Implementation of the Protocol on Emergencies;
 - D = Implementation of the Protocol on SPAs and Historic Sites;
 - E = Environmentally sound management of the Mediterranean Coastal Zones;
 - F = Programme Support Costs.

PROGRAMME BUDGET

A. IMPLEMENTATION OF THE BARCELONA CONVENTION

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 committees and to be reviewed and approved by the ordinary meetings of the Contracting Parties.

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- 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	26	27
- Joint Meeting of the Scientific and Technical Committee and of the Socio-Economic Committee 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	-	93
- Eighth Ordinary Meeting of the Contracting Parties in 1993 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 recommendations concerning common measures for its protection	-	200

TOTAL

	1991	1992	1993
MTF	259	26	320

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

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Consultants to facilitate co-operation with:	10	10
(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		
- Inter-Agency Advisory Committee (IAAC) meeting to co-ordinate activities on MED POL with UN Agencies	(1)	(1)
- Meeting with Regional Activity Centres' Directors for programming and co-ordination of MAP activities	(2)	(2)
- Training of national officials at MED Unit on MAP programmes and procedures	14	14
- Support to training courses relevant to MAP	35	35

	1991	1992	1993
TOTAL	70	59*	59*

(1) Travel cost included in MED POL Co-operating Agencies.

(2) Travel cost included under the relevant Regional Activity Centres.

* An additional 50 thousand U.S. dollars are budgeted annually for co-ordination and development of the coastal areas management programme.

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

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Assessment of the implementation in the Mediterranean of the Basel Convention on transboundary movements of hazardous wastes and preparation of a draft protocol, if necessary (Consultants) ⁽¹⁾	24	-
- Assistance to four more Contracting Parties to compile their national legislation related to the protection of the marine coastal environment (Consultants)	10	10
- Prepare (UNEP) a draft of appropriate procedure for the determination of liability and compensation for damages from the pollution of the marine environment in conformity with Article 12 of the Barcelona Convention taking account of the work of other bodies on the subject (Sub-contracts)	20	20
- Conference of Plenipotentiaries, to be convened in Athens during 1992, on the protocol on exploration and exploitation of the continental shelf and the sea-bed and its sub-soil	160	-

		1991	1992	1993
TOTAL	MTF	65	214	30

⁽¹⁾ The secretariat to explore the possibility of external resources in 1991.

4. 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

Proposed Budget
1992 1993
(in thousands of US \$)

Monitoring

- Assistance to institutions participating in monitoring programmes, through provision of instruments and supplies (about 80 institutions) (Sub-contracts)	545*	610*
- Assistance to institutions for monitoring of plankton blooms and eutrophication (Sub-contracts)	40	60
- Maintenance of instruments provided to institutions participating in MED POL (spare parts) (about 40 institutions) (Sub-contracts)	40	40
- Consultants to prepare documents on analysis and data processing of MED POL data	30	30

Training and fellowships

- On-job training of participants in MED POL monitoring programme (about 40 participants)	80	80
- Fellowships to participants in MED POL research and monitoring programme in order to present MED POL data at meetings	70	40

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) (Sub-contracts)	70	100
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* An additional 63 thousand U.S. dollars are budgeted annually for monitoring of the coastal areas management programme.

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Assistance to institutions participating in monitoring programmes through purchase and provision of standards and reference materials (about 40 institutions) (Sub-contracts)	20	20
<u>Meetings and training courses</u>		
- Meeting of National Co-ordinators of MED POL	40	-
- Intercalibration programme for institutions participating in MED POL (about 40 institutions) (Sub-contracts)	15	15
- Consultation meeting on MED POL data processing programme and guidance for future work (about 8 participants)	15	15
- Training and Intercalibration exercise (WHO/UNEP) on determination of microbiological pollution (about 15 new trainees each year)	25	25
- Consultation meeting on the evaluation of monitoring programmes (about 8 participants)	20	-
- Training workshop (FAO/IOC/UNEP) on the monitoring of biological effects of pollutants on marine organisms (about 15 participants, two weeks)	40	-
- Training workshop (FAO/IAEA) on the monitoring of chemical contaminants using marine organisms (about 25 participants)	40	-
- Training workshop (WMO/UNEP) on the monitoring and assessment of airborne pollution	25	-
- Consultation meeting on the determination of pathogenic micro-organisms in coastal marine waters (WHO)	25	-
- Training workshop (IAEA/IOC) on the monitoring of chemical contaminants using marine sediments (about 15 participants)	-	25
<u>Research</u>		
- Assistance to institutions participating in research programme, through provision of research grants (about 30 grants to about 25 institutions) (Sub-contracts)	100	130

Proposed Budget
1992 1993
(in thousands of US \$)

Assessment of pollution

- Printing of Proceedings of the 11th ICSEM/UNEP/IOC Workshop on Mediterranean marine pollution (Sub-contracts) 10 -
- Study of the impact of climate change on Mediterranean coastal zone (Sub-contracts) 40 60

TOTAL

	1991	1992	1993
MTF	1028	1240	1200
UNEP	50	50	50

5. 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

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Preparation and editing of MAP Technical Reports Series (Consultants)	21	21
- Preparation and translation of MEDWAVES (Arabic, English and French) (Consultants)	18	18
- Support for the celebration of the Mediterranean Environment Week (Consultants or Sub-contracts)	10	10
- Librarian (exchange of information, dissemination of information) (Consultants)	10	10
- Preparation of brochures (Arabic, English and French), posters, stickers and press releases	48	10
- Printing and dissemination of MAP, MEDWAVES (including special issue for UNCED 1992) and other documents (Sub-contracts)	56	56

TOTAL

	1991	1992	1993
MTF	110	163	125

B. IMPLEMENTATION OF THE LBS PROTOCOL AND DUMPING PROTOCOL

6. IMPLEMENTATION OF THE LBS PROTOCOL AND DUMPING 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

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
<u>Pilot projects</u>		
- Pilot project on monitoring of cyanides, fluorides and phenols in effluents (Sub-contracts)	25	10
- Pilot project on monitoring of fungicides (Sub-contracts)	30	-
- Pilot project on monitoring of Ti, Be, Co, Tl, Sb, Ag, Mo, V and U (Sub-contracts)	*(1)	-
<u>Assistance</u>		
- Assistance to countries to implement the LBS Protocol	30	100
<u>Assessment of the pollution</u>		
- To prepare documents on assessments of Mediterranean pollution by LBS substances (Consultants)	20	20
- Assessment of airborne pollution in the Mediterranean Sea (Sub-contracts)	20	15
- Assessment of the state of pollution of the Mediterranean Sea by Ti, Be, Co, Tl, Sb, Ag, Mo, V and U	*(2)	*(3)
- Assessment of the state of pollution of the Mediterranean Sea by herbicides and fungicides	5	5
- Assessment of the state of pollution of the Mediterranean Sea by non-biodegradable detergents	5	-
- Assessment of the state of pollution of the Mediterranean Sea by cyanides and fluorides	-	5

Proposed Budget
1992 1993
(in thousands of US \$)

- Assessment of microbial pollution in the Mediterranean Sea - 5

Research

- Assistance to institutions participating in research programmes, through provision of research grants (about 70 grants to about 60 institutions) (Sub-contracts) 180 180

Meetings

- Consultation meeting on the application of chemical tracers of domestic contaminants for marine pollution surveys (IAEA/WHO) (about 15 participants) 15 -
- Consultation meeting on the treatment and discharge of toxic wastes (WHO) - 25
- Training workshop (WMO/UNEP) on collecting emission data for assessing airborne pollution (about 15 participants) - *(4)

TOTAL

	1991	1992	1993
MTF	315	330	365

* This activity will be implemented only if unused MED POL funds are available (⁽¹⁾30; ⁽²⁾5; ⁽³⁾5; and ⁽⁴⁾25).

Personnel and operational costs covering activities 1 to 6

CO-ORDINATING UNIT, Athens, Greece		m/m	Proposed Budget	
			1992	1993
			(in thousands of US \$)	
Professional Staff				
-	Co-ordinator - D.2	12	92	92
-	Senior Programme Officer/ Marine Scientist - P.5/D.1	12	87	87
-	Programme Officer/ Economist - P.4/P.5	12	81	81
-	Programme Officer/ Marine Scientist - P.3/P.4	12	56	56
-	Computer Operations Officer - P.3/P.4	12	56	56
-	Fund Management/Admin. Officer - P.2/P.3	12	(1)	(1)
Total Professional Staff			372	372
Administrative Support				
-	Administrative Assistant - G.6	12	(1)	(1)
-	Senior Secretary - G.4	12	(1)	(1)
-	Data Processing Assistant - G.4/G.5	12	(1)	(1)
Total Administrative Support			-	-
Travel on Official Business			55	55
Office Costs			122	122

		1991	1992	1993
TOTAL	MTF	495	549	549

⁽¹⁾ Paid under Programme Support costs.

Expenditures to be covered by Greek Counterpart contribution to the MAP Programme

	m/m	Proposed Budget	
		1992	1993
(in thousands of US \$)			
Administrative support			
- Information Assistant - G.5	12	19	19
- Senior Secretary - G.4	12	19	19
- Senior Secretary - G.4	12	17	17
- Research Assistant - G.4	12	13	13
- Bilingual Typist - G.4	12	15	15
- Bilingual Typist - G.3	12	15	15
- Bilingual Typist - G.3	12	15	15
- Telephone Operator/Receptionist - G.3	12	15	15
- Clerk/Driver - G.2	12	15	15
- Clerk - G.2	12	13	13
- Caretaker - G.2	12	13	13
- Temporary Assistance		20	20
- Overtime		10	10
Total Administrative support		199	199

Office costs

- Equipment:			
Expendable equipment		5	2
- Rental and maintenance of premises:		86	89
- Sundry:			
telephone, telex and postage		110	110
Total Office costs		201	201

TOTAL

	1991	1992	1993
Gr.Counter.	400	400	400

MED POL CO-OPERATING AGENCIES

	m/m	Proposed Budget 1992 1993 (in thousands of US \$)	
Professional Staff			
- WHO Senior Scientist - MAP Co-ordinating Unit (Athens) - P.5	12	86	86
- FAO Senior Fishery Officer - MAP Co-ordinating Unit (Athens) - P.5	12	86	86
- IAEA Maintenance Engineer (ILMR) (Monaco) - P.3	12	80	80
Total Professional Staff		252	252
Administrative Support			
- WHO Secretary - WHO/EURO (Copenhagen)- G.4		13	13
- WHO Secretary - MAP Co-ordinating Unit (Athens) - G.5	12	19	19
- FAO Secretary - MAP Co-ordinating Unit (Athens) - G.4	12	18	18
- IAEA Laboratory Assistant - ILMR (Monaco) - G.5	12	38	38
- WMO Temporary Assistance - WMO/HQ (Geneva)		8	8
Total Administrative Support		96	96
Travel on Official Business			
- WHO (Athens)		12	12
- FAO (Athens)		12	12
- WMO (Geneva)		8	8
- IAEA (Monaco)		24	24
- IOC of UNESCO (Paris)		6	6
Total Travel		62	62

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.

	1991	1992	1993
TOTAL	352	410	410

C. IMPLEMENTATION OF THE PROTOCOL ON EMERGENCIES

7. PREVENTION AND COMBATING POLLUTION FROM SHIPS

a) Protocol on emergencies

Objective

To strengthen the capacities of the coastal states in the Mediterranean and to facilitate co-operation among them in order to intervene in case of emergencies and 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.

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- To assist countries in preparation of national contingency plans and bilateral or multilateral agreements (Consultants)	8	8
- To assist countries in the preparation of projects for the acquisition of response equipment which would be presented to possible sources of international financing (Consultants)	8	8
- To assist REMPEC in adapting to the region predicting models and decision support system (Consultants)	6	-
- Publication of a regional atlas for accidental marine pollution, preparedness and response (Sub-contracts)	-	10
- Meeting of operational focal points for the evaluation of the implementation of the programme of activities of REMPEC and preparation for a future medium term programme	40	-
- Training course on chemical pollution preparedness and response	50	50
- Training course on oil pollution preparedness and response	50	-

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Training course on response to accidental pollution resulting from offshore oil exploration or production operation (in cooperation with the oil industry)	-	13
- Technical assistance to States in the organization of national training courses (about 35 participants)	6	6
- Assisting States which so request in organizing joint response exercises	6	6
- Assistance to countries in case of emergency	10	10

	1991	1992	1993
TOTAL	98	184*	111*

* An additional 36.5 thousand U.S. dollars are budgeted annually for the coastal areas management programme.

b) Port reception facilities

Objectives

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.

Activities

Proposed Budget
1992 1993
(in thousands of US \$)

- Fellowships for Training course on port reception facilities	10	10
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TOTAL

	1991	1992	1993
MTF	30	10	10

Personnel and operational costs

REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR THE
MEDITERRANEAN (REMPEC)
Co-operating Agency IMO

	m/m	Proposed Budget 1992 1993 (in thousands of US \$)	
Professional Staff			
- Director - P.5	12	82	85
- Technical Expert - P.4	12	74	76
- Chemist - P.3	12	62	65
- Engineer - P.2	12	(1)	(1)
Total Professional Staff		218	226
Administrative Support			
- Information Assistant - G.6	12	21	22
- Senior Secretary/Admin. Assistant - G.6	12	19	20
- Clerk/Secretary - G.4	12	15	16
- Clerk/Typist - G.3	12	13	14
- Caretaker/Docs. Reproducer - G.3	12	13	14
Total Administrative Support		81	86
Travel on Official Business		21	21
Office Costs		75	60
TOTAL	MTF	354	393
		395	393

(1) On secondment from the government of France.

* This figure includes US \$ 20,000 for the purchase of INMARSAT equipment and the upgrading of the communication facilities of REMPEC.

**D. IMPLEMENTATION OF THE PROTOCOL ON SPECIALLY PROTECTED AREAS
AND HISTORIC SITES**

8. PROTECTION OF THE COMMON MEDITERRANEAN HERITAGE

a) Specially Protected Areas

Objective

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.

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- To assist countries in the establishment of at least 50 new protected areas through the approved guidelines (1985-1995) (SPA-RAC/IUCN) (Consultants)	10	12
- To assist countries to develop their legislation related to protected areas (SPA-RAC/IUCN) (Consultants)	10	10
- Meeting of experts on environmental legislation concerning Specially Protected Areas and endangered species (SPA-RAC/IUCN)	-	38
- Meeting of experts on the definition of 50 new specially protected areas of particular importance because of their scientific, aesthetic, historical, archeological, cultural or educational interest (SPA-RAC/IUCN)	30	-
- To assist countries to develop specially protected areas of cultural interest (SPA-RAC/IUCN) (Sub-contracts)	10	15
- To implement the Action Plan on the conservation of the Mediterranean Marine Turtles approved in 1989 (SPA-RAC/IUCN) (Consultants)	5	7
- To promote the application of the Action Plan on the conservation of the Mediterranean Monk Seal approved in 1987 (SPA-RAC/IUCN) (Consultants)	5	6

Proposed Budget
1992 1993
(in thousands of US \$)

- Meeting of experts on Mediterranean cetaceans * -
- To assist participants in training courses relevant to Specially Protected Areas 8 26

TOTAL

	1991	1992	1993
MTF	90	78**	114**

* Financing expected in 1991 from the "Associazione Europea Arte, Scienza e Spettacolo".

** An additional 32 thousand U.S. dollars are budgeted annually for the coastal areas management programme.

b) Preservation of Historic Sites

Objective

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

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Assist (UNESCO/Atelier du patrimoine/PAP-RAC) in co-operation with the authorities responsible for the coastal historic sites, designated through the MAP procedures, to develop co-operative programme in the field of stone degradation and protection of underwater archaeological sites, including shipwrecks (SPA-RAC/IUCN) (Consultants)	10	15
- Promote (MAP/Atelier du patrimoine) co-operation among the authorities responsible for the historic sites, the list of which remains open, and develop a work programme on the above mentioned fields (Sub-contracts)	20	28
- Meeting on vulnerability of historic sites	20	-
- To assist (PAP/RAC/Atelier du patrimoine) participants in training courses	10	20

TOTAL

	1991	1992	1993
MTF	52	60	63

Personnel and operational costs

SPECIALLY PROTECTED AREAS/REGIONAL ACTIVITY CENTRE (SPA/RAC),
Salamambo, Tunis. In association with IUCN

	m/m	Proposed Budget 1992 1993 (in thousands of US \$)	
Professional Staff			
- Director	12	30 ⁽¹⁾	30 ⁽¹⁾
- Expert	12	(2)	(2)
- Expert	12	50	50
- Data Researcher	12	40	40
Total Professional Staff		120	120
 Administrative Support			
- Administrative Assistant	12	12	12
- Bilingual Secretary	12	10	10
- Driver	12	5	5
- Clerk/Driver	12	(2)	(2)
- Finance Officer	12	(2)	(2)
- Cleaner	12	(2)	(2)
- Caretaker	12	(2)	(2)
Total Administrative Support		27	27
 Travel on Official Business		20	20
 Office Costs		42	42

		1991	1992	1993
TOTAL	MTF	155	209	209

⁽¹⁾ Partly paid by host country.

⁽²⁾ Paid by host country.

E. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES

9. ENVIRONMENTALLY SOUND MANAGEMENT OF THE MEDITERRANEAN COASTAL ZONES

a) Prospective analysis of the relationship between Environment and Development

Objective

To assist in preparing national, coastal or sectoral scenarios in the Mediterranean countries in keeping with the results and methodologies of the Blue Plan; to gather and process socio-economic, and environmental data and data relating to the appropriate technologies for the entire Mediterranean region, its coastal areas and coastal strip; to provide for the authorities concerned the instruments and methods of forward-looking work as applied to the sustainable development of the coastal regions, on the basis of the experience and achievements of the BP/RAC.

Activities

Proposed Budget
1992 1993
(in thousands of US \$)

Studies-prospective and systemic

- Improvement and updating of studies at the Basin level	10	10
- Contribution to national scenarios	5	5
- Development of prospective methods to the coastal level	6	6
- Concrete implementation in the context of geographical projects	9	9
- Joint meeting of experts and Focal Points	30	-

Data and information base*

- Update, improvement and distribution of socio-economic and environmental data	15	15
- Implementation of environmental indicators	5	5
- Meeting of experts involved	-	10

Training in prospective and systemic analysis

- Training workshops on site (10-15 people, 1 per year)	15	15
- Regional Seminars (20-30 people) in Sophia Antipolis (1 per year)	30	30
- Preparation and publication of a practical manual on the use of prospective tools	15	15

Proposed Budget
1992 1993
(in thousands of US \$)

Communications and exchange of information

- Preparation and publication of six fascicles	10	10
- Preparation and publication of a brochure on the Blue Plan	10	10
- Documentation distribution to Focal Points and Experts	5	5

TOTAL

	1991	1992	1993
MTF	70	165**	145**

* Regular updating of Blue Plan data base will require matching funds from outside sources.

** An additional 60.5 thousand U.S. dollars are budgeted annually for scenarios in the coastal areas management programme.

b) Coastal Planning and Management

Objectives

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.

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
1) <u>Priority action "Integrated planning and management of Mediterranean coastal areas"</u>		
- Identification, evaluation and development of tools and techniques of integrated coastal zone management (Consultants)	12	10
- One Arab (French speaking) consultant to assist in the implementation of coastal zone planning and management tools in Arab countries (Consultant)	5	20
- Application of GIS for integrated environmental management (Consultants)	-	7
- Assistance to national institutions in the preparation of planning and management tools (Sub-contracts)	8	8
- Expert Meeting on natural resource management (10 participants)	20	-
- Workshop to assess the results of GIS application in Mediterranean countries (12 participants)	20	-
- Workshop on development of tools and techniques of integrated coastal zone management (25 participants) (jointly with the Blue Plan)	-	20
- Two training courses on GIS application (10 participants)	15	15
2) <u>Priority action "Application of environmental impact assessment (EIA) in the development of Mediterranean coastal zones"</u>		
- Preparation of EIA documents and studies in selected countries (Consultants)	10	10
- Regional training course on application of EIA (15 participants) (Training)	-	30
- Three national training courses on application of EIA (20 participants each) - two in 1992 in English, one in 1993 in French (Training)	20	10

	Proposed Budget	
	1992	1993
(in thousands of US \$)		
3) <u>Priority action "Water resources development for Mediterranean islands and isolated coastal areas"</u>		
- Preparation of training course documents on aquifer modelling in the Mediterranean and on water resources conservation (Consultants)	10	10
- Preparation of one training course on aquifer modelling and one on water resources conservation (20 participants each)	30	30
4) <u>Priority action "Rehabilitation and reconstruction of historic settlements"</u>		
- Assistance to interested countries in the application of the methodology of the rehabilitation process of Mediterranean historic settlements (Consultants)	10	10
- Four national workshops on the application of the methodology of the rehabilitation process of Mediterranean historic settlements (each year one in French in an Arab country and one in English - 25 participants each) (Training)	30	30
5) <u>Priority action "Land-use planning in earthquake zones"</u>		
- Within the implementation of CAMPs, the results will be used of the PAP project "Mitigation of Seismic Risk in the Mediterranean Region" which is implemented as a UNDP project SEISMED, and assistance will be given in the formulation of the follow-up of SEISMED	-	-
6) <u>Priority action "Soil erosion mapping and measurements"</u>		
- Assistance to national experts in the implementation of the pilot project (Consultants)	10	5
- Two expert meetings to evaluate the results of the pilot project, one for mapping and one for monitoring (8 participants each) (Consultants)	15	-
- One expert meeting to prepare the final documents on the pilot-project results (10 participants) (Consultants)	-	10
- Preparation of the final documents on the pilot-project results and on the follow-up (Consultants)	-	10
- Assistance to national institutions in the implementation of the pilot project (Sub-contracts)	30	-

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Workshop to present and evaluate the pilot-project results (20 participants) (Training)	-	35
7) <u>Priority action "Solid and liquid waste management, collection and disposal"</u>		
- Preparation of training course documents on solid waste management, and training course documents on liquid waste management for small and medium-size Mediterranean towns (Consultants)	10	10
- Training course on solid waste management for small and medium-size Mediterranean towns in French (15 participants)	30	-
- Training course on solid waste management for small and medium-size Mediterranean towns in English (15 participants)	-	30
- Two national training courses on reuse of urban wastewater in Mediterranean areas, one in English (1992) and one in French (1993) (20 participants each)	10	10
8) <u>Priority action "Development of Mediterranean tourism harmonized with the environment"</u>		
- Preparation of Carrying Capacity Assessment (CCA) for tourist establishments (one in 1992, and one in 1993) (Consultants)	10	10
- One expert meeting to evaluate the applied methodology of CCA (Consultants)	10	-
- Preparation of guidelines for CCA and workshop documents	20	-
- One workshop on the application of CCA (20 participants)	-	30
9) <u>Priority action "Environmental planning and management of aquaculture in Mediterranean conditions"</u>		
- Assistance to and cooperation with the UNDP (Tunisia) project on Mediterranean aquaculture, using the project results in the application of CAMPs (Consultants)	5	5

Proposed Budget
1992 1993
(in thousands of US \$)

10) Priority action "Mediterranean co-operative network in renewable sources of energy"

-	Assistance in the application of renewable sources of energy in CAMPs (Consultants)	20	25
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11) Meeting of National Focal Points

	30	-
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TOTAL

	1991	1992	1993
MTF	347	390*	390*

* An additional 214 thousand U.S. dollars are budgeted annually for the coastal areas management programme.

c) Coastal Areas Management Programme (CAMP)

Objective

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 scenarios), 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.

Activities

	Proposed Budget	
	1992	1993
	(in thousands of US \$)	
- Consultants to assist in preparation and implementation of documents and activities resulting in the implementation of coastal areas management programme and preparatory activities for follow-up	175	175
- Assistance to institutions participating in coastal areas management programme approved by the Contracting Parties (Sub-contracts)	249	249
- Consultation meetings relevant to each coastal area	64	64

	1991	1992	1993
TOTAL	338	488	488

Note: The above programme is broken down annually as follows:

PAP 214; Med Pol 63; Scenarios 60.5; REMPEC 36.5; SPA 32; Data 32; and the Co-ordinating Unit 50.

It is expected that the host countries of the programme will contribute matching funds for the implementation of the programme.

Personnel and operational costs

BLUE PLAN/REGIONAL ACTIVITY CENTRE (BP/RAC) Sophia Antipolis, France

	m/m	Proposed Budget 1992 1993 (in thousands of US \$)	
Professional Staff			
- President		-	-
- Director ⁽¹⁾		-	-
- Scientific Adviser ⁽²⁾	6	55	55
- Technical Expert	12	70	70
- Computer Specialist ⁽³⁾	6	30	30
Total Professional Staff		155	155
Administrative Support			
- Data processing Assistant	12	35	35
- Data collection Assistant	6	30	30
- Senior Secretary ⁽¹⁾	12	-	-
- Bilingual Secretary ⁽¹⁾	12	-	-
- Administrative Assistant ⁽¹⁾	12	-	-
Total Administrative Support		65	65
Travel on Official Business		20	20
Office Costs		25	25

	1991	1992	1993
TOTAL	200	265	265

⁽¹⁾ Salary paid by host country.

⁽²⁾ Part of Salary paid by host country.

⁽³⁾ Half time by host country.

Personnel and operational costs

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

	m/m	Proposed Budget 1992 1993 (in thousands of US \$)	
Professional Staff			
- Director	12	35	35
- Co-ordinator of Pilot Projects	12	25	25
Total Professional Staff		60	60
Administrative Support			
- Bilingual Secretary	12	18	18
- Bilingual Secretary	12	17	17
- Bilingual Secretary	12	17	17
- Bilingual Secretary	12	17	17
- Administrative Assistant	12	17	17
- Finance Assistant	12	17	17
- Temporary Assistance		8	8
Total Administrative Support		111	111
Travel on Official Business		23	23
Office Costs		76	76

TOTAL

	1991	1992	1993
MTF	216	270	270

F. 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.

TOTAL

	1991	1992	1993
MTF	604	716	717

III. SOURCES OF FINANCING (in thousands of U.S. dollars)

It is proposed to finance the programme budget as follows:

A.	<u>Resources</u>	<u>1992</u>	<u>1993</u>
-	Mediterranean Trust Fund (see page 65)	4,025	4,629
-	EEC Voluntary Contribution (see page 65)	569	554
-	Greek Counterpart Contribution (see page 65)	400	400
-	UNEP Environment Fund (see page 65)	50	50
-	Bank interest (estimated)	330	330
-	Unpaid pledges (5,322 due ⁽¹⁾ , less 1,800 required for 1991)	3,522	-
		<hr/>	<hr/>
		8,896	5,963
	TOTAL for the biennium	14,859	
B.	<u>Programme Budget</u>	<u>1992</u>	<u>1993</u>
	Grand TOTAL (see page 27)	6,671	6,683
	TOTAL for the biennium	13,354	
C.	<u>Balance to reserve</u>		
	(to start 1994 activities)		1,505

(1) See report of the Executive Director, UNEP(OCA)/MED IG.2/Inf.3

D. Expected Counterpart Contributions in Cash/Kind to MAP Projects
(in thousands of U.S. dollars)

	<u>1992</u>	<u>1993</u>
France (BP/RAC)	280	280
France (REMPEC)	30	30
Yugoslavia (PAP/RAC)	150	150
Malta (REMPEC)	20	20
Tunisia (SPA/RAC)	50	50
World Bank	500	500
FAO (MED POL)	96	96
WHO (MED POL)	100	100
WMO (MED POL)	22	22
IAEA (MED POL)	98	98
UNESCO/IOC (MED POL)	50	50

**IV. PROPOSED CONTRIBUTIONS TO THE MEDITERRANEAN TRUST FUND FOR
1992 - 1993 (in U.S. dollars)**

Contracting Parties	%	1992	1993
Albania	0.07	2,818	3,240
Algeria	1.05	42,263	48,605
Cyprus	0.14	5,635	6,481
EEC	2.50	100,625	115,725
Egypt	0.49	19,723	22,682
France	37.97	1,528,293	1,757,631
Greece	2.81	113,103	130,075
Israel	1.47	59,168	68,046
Italy	30.08	1,210,720	1,392,403
Lebanon	0.07	2,818	3,240
Libya	1.97	79,293	91,191
Malta	0.07	2,818	3,240
Monaco	0.07	2,818	3,240
Morocco	0.28	11,270	12,961
Spain	14.99	603,348	693,887
Syria	0.28	11,270	12,961
Tunisia	0.21	8,453	9,721
Turkey	2.25	90,563	104,153
Yugoslavia	3.23	130,008	149,517
Sub-total	100.00	4,025,000	4,629,000
EEC Voluntary Contribution		569,423	554,323
Host Country		400,000	400,000
UNEP Environment Fund		50,000	50,000
TOTAL		5,044,423	5,633,323