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Programme**



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**MEDITERRANEAN ACTION PLAN**

Tenth Ordinary Meeting of the Contracting  
Parties to the Convention for the Protection  
of the Mediterranean Sea against Pollution  
and its Protocols

Tunis, 18-21 November 1997

**INFORMATION ON ACTIVITIES FOR WHICH  
EXTERNAL FUNDING IS SOUGHT**

## **INTRODUCTION**

For the first time in the presentation of the budget, there is an extra column which shows amounts to be requested or already secured from external sources. This became necessary as the Mediterranean Trust Fund (MTF) and the European Union's voluntary contribution (EU) were not able to cover all the programmes proposed. In certain cases the requests were covered partially.

This document includes information on all activities for which external funding is sought. It does not include however, activities for which external funding has already been secured. In addition, not all activities presented can be termed projects. For example, in certain cases, funding is sought to cover the organisation of a specific meeting. The order in which the activities appear is the one followed in the programme budget document.

**I. COORDINATION**

**1. PROGRAMME COORDINATION**

*Activity:*

**11th Ordinary Meeting of the Contracting Parties to review and approve the 2000-1 programme budget.**

*Implementing Office:* MEDU

*Background:*

In accordance with the Rules of Procedure of the Contracting Parties, the Ordinary meetings are held every second year with the objective of finalizing and approving the programme budget for the next biennium. Consequently, the Eleventh Ordinary Meeting will be held during 1999 and it will be hosted by Malta. As the host country will not cover the total cost of the meeting, additional funds are required to cover extra costs.

*Required Funds:*

US\$ 80,000 (in 1999)

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*Activity:*

**Fourth and Fifth Meetings of the Mediterranean Commission on Sustainable Development.**

*Implementing Office:* MEDU

*Background:*

In accordance with the Terms of Reference of the MCSD as approved by the Ninth Ordinary Meeting of the Contracting Parties (Montpellier, 1996), the Commission shall hold Ordinary meetings at least once every year up to the year 2000.

As the second meeting of the MCSD was held in May 1997 in Palma de Majorca, the Commission accepted the offers of Monaco and Italy to host the fourth and fifth meetings during 1998 and 1999 respectively. The purpose of the meetings is to review progress achieved and agree on the future programme of the Commission.

If the host countries will not cover the total costs of the meetings, additional funds will be required.

*Required Funds:*

US\$ 100,000 (in 1998 for the Fourth Meeting); US\$ 100,000 (in 1999 for the Fifth Meeting);

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*Activity:*

**Second Meeting of Mediterranean Government designated experts on Liability and Compensation.**

*Implementing Office:* MEDU

*Background:*

In accordance with Article 12 of the Barcelona Convention, the Contracting Parties shall cooperate in order to formulate and adopt an appropriate procedure for the determination of liability and compensation for damage resulting from the pollution of the marine and coastal environment deriving from violations of the provisions of the Convention and its applicable protocols.

The first meeting of the government-designated legal and technical experts was held in Brijuni (Croatia) from 23 to 25 September 1997. One of the conclusions of the meeting was to recommend to the Contracting Parties the convening of a second meeting of the experts in order to undertake a second reading of the Secretariat document on this issue.

Only US \$ 20,000 has been suggested by the Secretariat in the 1998-1999 proposed budget for this second meeting. Therefore, additional funds are required to cover the costs of the proposed meeting.

*Required Additional Funds:*

US\$ 60,000 (in 1998)

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## 2. INFORMATION AND PARTICIPATION

*Activity:*

**Support to MCSD on information and participation.**

*Implementing Office:* MEDU

*Background:*

As stipulated in **Agenda 21**, in sustainable development, everyone is a user and provider of information relevant to this issue. In the Mediterranean region, information should be improved and public awareness of environmental and sustainable development issues should be increased in order to help the public to be more actively involved in the protection of the environment and the Mediterranean natural resources. Therefore, the very small budget allocated for information within MAP programme should be increased in order to meet this challenge.

*Required Additional Funds:*

US\$ 20,000 (in 1998); US\$ 20,000 (in 1999).

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*Activity:*

**Preparation, editing and translation of MAP brochures and reports.**

*Implementing Office:* MEDU

*Background:*

The Contracting Parties at their last meeting in Montpellier, 1-4 July 1996, expressed their determination in supporting activities related to the promotion of environmental awareness in its broad sense. They agreed to the preparation of reports, publications, brochures and information material, outlining the activities of MAP, and to the dissemination of this material to decision-makers, scientists, administrators, students and to the public at-large.

Moreover, through the strengthening of the library and library services at MEDU, the Contracting Parties agreed to providing educational assistance and support to relevant research centres in the region.

*Objectives:*

- to prepare a MAP Annual Report, edit and translate;
- to prepare a State of the Environment biennial report; and
- to prepare the MEDU Library with enhanced PC configuration with CD-ROM for accessing MAP documents.

*Required Additional Funds:*

US\$ 50,000 (in 1998); US\$ 20,000 (in 1999).

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## II. POLLUTION PREVENTION AND CONTROL

*Activity:*

**Action Plans: Formulation of Action Plans for the reduction of pollution.**

*Implementing Office:* MED POL

*Background:*

According to the provisions of the 1996 LBS Protocol, each Contracting Party should formulate national action plans to address pollution from land-based sources and activities. The action plans should be based on a framework regional strategic plan which is at present being prepared and adopted as well as on national problems and priorities. It is expected that between 1998 and 1999 all countries will have their national plan prepared. US\$ 40, 000 for 1998 and US \$ 40,000 for 1999 are the MTF contribution. It is expected that the process of formulating action plans, which will start in 1998, will intensify in 1999.

*Objectives:*

- To assess the priority environmental issues in each country through consultants' visits;
- To formulate national action plans in cooperation with national authorities.

*Required Additional Funds:*

US \$ 20,000 (in 1999).

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*Activity:*

**Action Plans: Target-oriented research for the control of pollution.**

*Implementing Office:* MED POL

*Background:*

The priorities and timetables for implementing the action plans specified in the LBS Protocol shall be prepared taking into account a number of characteristics of the substances involved. Priority areas relevant to the formulation of action plans, programmes and measures for the gradual elimination of pollution should be supported through target-oriented research.

*Objectives:*

To assist research in the fields of

- characteristics of substances listed in the Annex of the LBS protocol
- control of eutrophication
- methods and techniques for pollution prevention

*Required Additional Funds:*

US\$ 50,000 (in 1999).

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*Activity:*

**Enforcement : Compliance and Enforcement of legislation including capacity-building for systems of inspection.**

*Implementing Office:* MED POL

*Background:*

Based on the amended Protocol for the Prevention of Pollution from Land-based Sources and Activities within the framework of the Mediterranean Action Plan, and following the decision of the Contracting Parties taken at the Extraordinary Meeting held in Montpellier in 1996, there is a need to improve compliance and enforcement of legislation for pollution control resulting from land-based sources and activities.

*Objectives:*

To organise a Consultation Meeting on the assessment of the situation regarding compliance and enforcement as well as the establishment of a regional network, with a view to:

- establishing an informal regional network for compliance and enforcement of legislation for pollution control;
- assessing the conditions within each country regarding (a) determination of the legislative background within which the permitting, compliance and enforcement provisions are formulated, (b) determination of the administrative structure currently used for compliance and enforcement, and (c) determination of the characteristics of the permitting process, compliance practices and results and enforcement organization means and results.

*Required Additional Funds:*

US\$ 50,000 (in 1998).

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*Activity:*

**Enforcement: Design and implementation of national compliance monitoring, including data quality assurance.**

*Implementing Office:* MED POL

*Background:*

The MED POL Phase III period implies that considerable attention should be given to action-oriented activities, while in the past emphasis was placed on the scientific aspect of the monitoring programmes. As was also noticed in other projects, there is a lack of guidelines for remedial actions to be taken when an integrated assessment of the state of pollution, including elaboration of compliance monitoring data, has been made.

*Objectives:*

To organise an expert meeting on the elaboration of guidelines for the integrated assessment of the state of pollution and the necessary remedial actions to be taken with a view to developing guidelines on the integrated assessment of the state of pollution in an entire coastal area and the remedial action to be taken, commencing with (a) regional planning, (b) reclassification of uses, (c) revision of effluent standards, (d) revision of quality objectives, and (e) enforcement system to be established.

*Required Additional Funds:*

US\$ 30,000 (in 1998).

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*Activity:*

**Enforcement: Design and implementation of national compliance monitoring, including data quality assurance.**

*Implementing Office:* MED POL

*Background:*

Through the continued efforts to improve data quality, substantial and evident progress has been achieved by the laboratories through MED POL. However, the results of the recent intercomparison exercises carried out by IAEA/MEL show that accuracy and precision of the analytical results are in many cases still not adequate to provide the solid basis needed for the reliable and continuous assessment of the pollution.

*Objectives:*

Participation of the selected laboratories in the analytical intercomparison exercises;  
Enhanced use of certified reference materials, accurate use of reference methods;  
Intensified individual and group training.

*Required Additional Funds:*

US\$ 40,000 (in 1999)

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*Activity:*

**Enforcement, Implementation and Control: Enhanced direct assistance for selected countries (capacity building programmes).**

*Implementing Office:* MED POL

*Background:*

The 1997 Meeting of the MED POL National Coordinators approved a new approach related to the provision of assistance to the countries for the implementation of the programme. The approach is based on the principle of selecting a limited number of countries each year for the formulation and implementation of a capacity building programme and ensure the full coverage of all countries in four/five years. The capacity building programmes of MED POL Phase III will include, but will not be limited to, training of scientists and technicians for carrying analyses in the labs and data quality assurance, and will deal with all aspects, including managerial, of the implementation and application of the LBS Protocol. It is therefore obvious that, even if the MTF funds (US \$ 130,000 in 1998 and US \$ 120,000) are used for a limited number of countries selected every year, in order to fully implement the capacity building programmes more funds will be needed.

*Objectives:*

- To formulate capacity building programmes for all countries in need through visits of experts;
- Organization of training and purchase of instruments and material.

*Required Additional Funds:*

US \$ 170,000 (in 1998); US \$ 120,000 (in 1999).

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*Activity:*

**Implementation and Control: Assistance for the implementation of adopted action plans.**

*Implementing Office:* MED POL

*Background:*

In addition to the regional strategic action plan to address pollution from land-based pollution which is expected to be adopted in 1997, starting from the beginning of 1998 each country will start formulating national action plans. It is therefore expected to have a number of national action plans ready to be implemented in 1999. The Secretariat will assist the countries in need in the implementation of the various aspects (technical, scientific, legal, managerial) of their plans.

*Objectives:*

- To identify national priority action;
- To assist each country through experts, consultants and specific projects in the implementation of the action plans.

*Required Additional Funds:*

US \$ 100,000 (in 1999).

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*Activity:*

**Implementation and Control: Capacity building (training and fellowships) and data quality assurance.**

*Implementing Office:* MED POL

*Background:*

Since the beginning of MED POL, scientists participating in the programme have benefited of individual and group training courses for improving their capacity to analyse pollutants in the marine environment as part of the data quality assurance programme. Scientists have also been given travel grants to attend MED POL-related Meetings, Seminars and Workshops to present their data and results and to exchange views with the scientific community of the region. With the beginning of new Phase of MED POL, the need for fully reliable data is becoming even more important in view of the close link with the implementation of the provisions of the LBS Protocol. As a result, there is a need to concentrate efforts in the implementation of a full-scale data quality assurance programme and for this the US \$ 60,000 for 1998 and the US \$ 60,000 for 1999 should be complemented by additional sources.

*Objectives:*

- To organize a full-scale data quality assurance programme (training, visits, assistance in the use of instruments);
- To provide scientists participating in the programme with travel grant to attend MED POL related Meetings, Seminars, Workshops.

*Required Additional Funds:*

US \$ 40,000 (in 1999).

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*Activity:*

**Implementation and Control: Target-oriented research on assessment of pollution.**

*Implementing Office:* MED POL

*Background:*

Monitoring is the basic assessment tool used in the MED POL programme. New forms of monitoring are initiated within MED POL Phase III such as compliance monitoring, temporal trend monitoring of chemical contaminants and monitoring of biological effects of pollutants on marine organisms. Research is still required on certain aspects of this work to enable comparability of data and proper evaluation of the data.

*Objectives:*

To assist research in the fields of

- biomonitoring techniques and marine species
- suitability of sediments for temporal trend monitoring

*Required Funds:*

US\$ 40,000 (in 1999)

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*Activity:*

**Coordination: Meeting of MED POL National Coordinators.**

*Implementing Office:* MED POL

*Background:*

Meetings of the MED POL National Coordinators are an essential guide to the implementation of the Programme. It will be necessary to hold such a Meeting in 1999 to review the process of implementation of the LBS Protocol in view of the expected adoption of the regional strategic action programme and the formulation of the national action plans, and to approve the MED POL activities for the next biennium.

*Objectives:*

- To review the MED POL activities carried out during the biennium including the implementation of the Dumping and LBS Protocols;
- To identify and approve activities for the next biennium including a plan for the implementation of the LBS Protocol.

*Required Additional Funds:*

US \$ 40,000 (in 1999).

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*Activity:*

**Coordination: Government-designated Experts Meeting on the Implementation of the LBS Protocol.**

*Implementing Office:* MED POL

*Background:*

As a follow up to the expected adoption of the regional strategic action plan and the formulation of national action plans, a Meeting of experts will be necessary to review the progress in the implementation of the process, to identify the possible problems and to propose the priority activities for the next biennium.

*Objectives:*

- To review the progress in the implementation of the LBS Protocol;
- To propose priority action for the biennium 2000-2001.

*Required Funds:*

US \$ 60,000 (in 1998).

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*Activity:*

**Implementation of monitoring activities supported by remote-sensing for the surveillance and control of oil pollution.**

*Implementing Office:* ERS/RAC

*Background:*

Despite the fact that since 1983 oil dumping in the Mediterranean Sea has been illegal, due to the high impact on its delicate environment as well as for its damage on touristic and fishing resorts and industries, it is estimated that around 330,000 tons of oil are intentionally and illegally dumped in it each year, and some figures show that as much as 1,000,000 tons may be dumped each year.

In this connection, ERS/RAC intends to implement a monitoring activity, based on remote-sensing techniques, for two main purposes:

- a/ surveillance and prevention;
- b/ intervention in case of accidents.

*Required Funds:*

US\$ 20,000 (in 1998); US\$ 20,000 (in 1999)

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*Activity:*

**Implementation of monitoring activities based on remote-sensing supporting trend monitoring.**

*Implementing Office:* ERS/RAC

*Background:*

As agreed on the occasion of the Meeting of MED POL National Coordinators (Delphi, 20-23 May 1997), the MED POL monitoring programme will strongly benefit from the support provided by remote sensing techniques, in particular with reference to the analysis of trends and the selection of the monitoring stations.

As a matter of fact, in order to select the location of appropriate stations for the detection of contaminant trends, the knowledge of the ecological dynamics in a specific coastal area as well as of its seasonal and annual patterns is necessary, in particular for evaluating how wide is the area which is (statistically) under, or not, the influence of a specific discharge.

In this context, it could be very useful the support of dynamic information derived from satellite data. As a matter of fact, satellite sensors could provide spatial and temporal patterns relevant to some sea surface parameters (such as temperature, chlorophyll-like pigments, suspended matter) which are directly influenced by river discharges - as well as by plant or coastal runoff in general - sea dynamics, seasons, biology productivity, etc..

The integration of information provided by satellite with other environmental information could further contribute to the designing of an efficacious trend monitoring programme, in particular, as regarding the selection of the monitoring stations.

*Required Funds:*

US\$ 35,000 (in 1998); US\$ 35,000 (in 1999)

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*Activity:*

**Preparedness and response to marine pollution by ships.**

*Implementing Office:* REMPEC

*Objective:*

The main objectives of the project are to develop the capacity of the Mediterranean coastal states to effectively respond to accidental marine pollution, and to support their capacity-building and institutional-strengthening programmes. The Projects comprise the following three components:

Component A: "Implementation of a comprehensive regional training programme" aims at the training of a substantial number of government, or alternatively industry personnel designated to take part in accidental marine pollution response activities on both preparatory and operational levels, in their respective countries. It comprises the training of three levels of response personnel (i.e. decision makers, supervisors/on scene commanders and first level spill responders) as well as at the training of trainers (instructors) who are expected to ensure the sustainability of future training programmes in their respective countries. It covers response to accidental pollution by both oil and other hazardous substances. In addition to theoretical courses, the programme also includes practical courses and exercises.

The programme has been conceived as a medium-term programme 4 (four) year duration, covering a total number of 34 training activities. At the end of the programme, it is expected that approximately 750-800 persons will be trained in different fields and at different levels of involvement in accidental marine pollution response activities.

Component B: "The development of environmental sensitivity maps for oil spill response" as part of the oil spill contingency planning process in Central-Western Mediterranean countries (Morocco, Algeria, Tunisia, Malta, Greece, Italy, France and Spain), using an international core group of experts and a correspondent local institution of expertise in each country, aims at:

- a/ identifying adequate local institutions in each country which would be involved in the preparation of these maps and which will gain from the project expertise to develop and update environmental sensitivity maps;
- b/ identifying 2 (two) sites per country which are considered at high-risk and would benefit from detailed sensitivity maps;
- c/ setting up a network of institutions and experts within the region to enable countries to sustain their own preparation and updating of sensitivity maps;
- d/ establishing the GIS network for the preparation of sensitivity maps;
- e/ training individuals in the operation of the GIS and the manipulation of digital geo-referenced data, who would subsequently be able to prepare and update environmental sensitivity maps.

*Required Funds:*

US\$ 425,000 (in 1998); US\$ 403,000

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Component C: "Study of salvage and towing capacities in the Mediterranean Region" aims at promoting the integration of salvage and emergency towing services into national, subregional and regional preparedness and response systems. Its specific objectives are:

- a/ to assess and analyse the availability of salvage and emergency towing capacities currently existing in the Mediterranean region and operated by both public and private sectors;
- b/ to evaluate present and future needs for these types of services within the region, on the basis of actual and forecast density and maritime traffic, existing records of maritime casualties, specific meteorological and geographic features in the region, and the existing risks; and
- c/ to propose, as appropriate, measures that need to be taken in order to make emergency towing and salvage services readily available in all (or only specific) parts of the Mediterranean, taking into account in particular financial aspects of operating such services.

*Required Funds:*

US\$ 182,000 (in 1998).

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### III. PROTECTION OF BIOLOGICAL DIVERSITY

*Activity:*

**Planning and Management: Expert Meeting to evaluate the three action plans for the conservation of species adopted within MAP.**

*Implementing Office:* SPA/RAC

*Background:*

Three action plans (AP) for the conservation of threatened species (monk seal, marine turtles and cetaceans) have been adopted within the framework of the Mediterranean Action Plan. These APs provide a periodic evaluation of their implementation to be carried out, particularly at the level of meeting of experts. With the only exception of a meeting of experts for the evaluation of the implementation of the AP for monk seals, since the adoption of the APs these meetings have not been held, mainly because of lack of funding. The issue was brought to the attention of the Third Meeting of the National Focal Points of SPA, which recommended the organisation of a meeting of evaluation for the three Action Plans.

*Objectives:*

- To assess the degree of implementation of the different provisions/recommendations of the APs;
- to assess the effectiveness of the APs in triggering the initiatives undertaken;
- to examine the possibility of amending the APs, in light of the new information available and the evolution in the status of the species concerned;
- to make recommendations for the further implementation of the APs.

*Required Additional Funds:*

US\$ 10,000 (in 1998)

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*Activity:*

**Exchange of experience and strengthening of national capabilities: Training sessions on the scientific and technical aspects of the conservation of the natural common heritage.**

*Implementing Office: SPA/RAC*

*Background:*

Since the protection and management of natural heritage requires specific competencies, the improvement of national capabilities of Mediterranean countries in this field is among the main objectives set out by MAP Phase II. The organisation of training sessions and courses will contribute to reach this objectives.

*Objectives:*

- To organise training sessions on SPA management and species conservation in accordance with the recommendations of the Second Meeting of the National Focal Points of SPA;
- To support the participation of specialists from the southern Mediterranean countries in training courses organised by NGO's, IGO's and national organisations.

*Required Additional Funds:*

US\$ 10,000 (in 1998)

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*Activity:*

**Public Information: Production of specific material for public awareness and information (movable exhibition) on the value and conservation of biological diversity.**

*Implementing Office:* SPA/RAC

*Background:*

To improve the efficiency of the implementation of the conservation measures, MAP Phase II recommends to develop education and information programmes to raise public awareness and participation. Particular target groups (fishermen, people connected with protected areas, decision makers, etc..) should be addressed.

*Terms of Reference:*

The main action to be carried out within the framework of this activity is to prepare material for a movable awareness and information exhibition on the value of habitats and populations and the threats affecting them.

*Required Additional Funds:*

US\$ 10,000 (in 1999)

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#### **IV. INTEGRATING ENVIRONMENT AND DEVELOPMENT: SUSTAINABLE MANAGEMENT OF COASTAL ZONES**

*Activity:*

**Implementation of CAMPs in Morocco, Israel, Malta, Algeria, Lebanon and Slovenia.**

*Implementing Office:* MEDU

*Background:*

Within the framework of the CAMP programme, six projects are being implemented. Due to the limited resources allocated for this activity in the 1998-1999 budget (only US \$ 85,000 for 1998 and US \$ 20,000 for 1999), additional outside sources of funds are necessary in order to be able to continue a smooth implementation of the six projects.

*Required Additional Funds:*

US\$ 100,000 (in 1998); US\$ 100,000 (in 1999).

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*Activity:*

**Implementation of CAMPs (consultants, consultations, meetings, training, sub-contracts).**

*Implementing Office:* PAP/RAC

*Background:*

In **1998**, PAP/RAC activities will range from preparatory to completion activities in several Mediterranean countries. Preparatory activities include the feasibility studies as the basis for drafting the Agreement between MAP and host countries. The expected activities in relevant countries are as follows:

- Implementation of activities in Israel;
- beginning of implementation activities in Malta;
- Elaboration of Feasibility Studies for Lebanon, Algeria, Morocco;
- Preparation of Agreement for Lebanon, Algeria and Morocco.

**In 1999**, it is expected that CAMP activities will be implemented as follows:

- Implementation of activities in Malta:
- Beginning of implementation in Lebanon, Algeria, and Morocco:
- Elaboration of Feasibility Study and Agreement for Slovenia.

*Required Additional Funds:*

US\$100,000 (in 1998); US\$100,000 (in 1999).

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Activity:

**Planning of Activities to be implemented in CAMPs (preliminary studies, consultations, meetings).**

*Implementing Office:* ERS/RAC

*Background:*

This activity refers to the analysis of local requirements of those Mediterranean countries where a CAMP will be established.

Through the consultation with local experts and meetings, as well as the accurate analysis of the existing bibliographic material, the ERS/RAC will gather all the preliminary information necessary to understand the approach to be followed for its intervention in the CAMP.

Moreover, this activity envisages also the evaluation of already available material, specialised studies, maps, both topographic and thematic, satellite images, aerial photos, in-field data and so on, in order to more precisely define terms, time, and the specific task of the ERS/RAC involvement.

*Required Funds:*

US\$ 20,000 (in 1998); US\$ 25,000 (in 1999)

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*Activity:*

**Implementation of CAMPs ( Technical assistance to local counterparts, consultations, meetings).**

*Implementing Office:* ERS/RAC

*Background:*

This activity is a direct consequence of the previous one, as a matter of fact, on the basis of what is established during the planning activities, the ERS/RAC will implement its interventions in the framework of the on-going CAMPs, taking into account that its main purpose remains that of fostering and improving the proper use of satellite tools among the concerned Mediterranean countries through specifically addressed technical assistance activities and capacity building.

*Required Funds:*

US\$ 30,000 (in 1999).

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*Activity:*

**Integrated Coastal Area Management (ICAM): Development of policies and strategies for coastal planning and sustainable management of coastal areas including training courses.**

*Implementing Office:* PAP/RAC

*Background:*

The activities relevant to the ICAM will cover two main issues: a) Formulation of strategy and development of methodology; and b) Assistance to countries in implementing the methods and instruments of ICAM, as follows:

- a) Strategy and methodology:
  - Urban and regional environmental auditing;
  - Local Agenda 21;
  - Strategic environmental assessment;
  
- b) Assistance to countries including preparatory activities, module formulation, and implementation of training courses (regional and national) for:
  - Environmental Impact Assessment (EIA);
  - Carrying Capacity Assessment for tourism;
  - Integrated Coastal Area Management (ICAM);
  - Geographic Information System.

The assistance also includes sending missions and specialized working teams to particular countries, with the aim of: solving special problems within the implementation of ICAM; preparing planning and other documents, project and investment proposals, etc.

*Required Additional Funds:*

US\$ 66,000 (in 1998); US\$ 173,000 (in 1999).

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*Activity:*

**Systemic and Prospective Activities: Overall Mediterranean prospective, development of prospective tools and preparation of fascicles.**

*Implementing Office:* BP/RAC

*Background:*

Backbone of Blue Plan's activities, together with the Observatory function, the systemic and prospective approach requires continuous updating and upgrading, a fundamental preliminary and preparatory work for the further elaboration of the Fascicules series. Moreover, an important research activity is going on around the world on more efficient tools and we need to continuously improve our knowledge and expertise in order to be more realistic in our analysis and in the elaboration of future images/scenarios. The requested additional budget is a marginal but important one. Specific tools such as structural analysis, matrix and 'actors game' need to be adapted and applied through the practical exercises at national and local (CAMP) levels. In addition to the 'tools' activity, analysis and prospective approach need to be pursued for main Mediterranean issues such as tourism, agriculture, industry, energy, transport, population, water, forest, and so on, and this in parallel with the updating of the database and indicators activities.

*Required Additional Funds:*

US\$ 20,000 (in 1998); US\$ 20,000 (in 1999).

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## V. INTEGRATING ENVIRONMENT AND DEVELOPMENT: SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES

*Activity:*

**Water Resources Management: Development of DSS for water resources management including organisation of expert meetings.**

*Implementing Office:* PAP/RAC

*Background:*

In the past years, PAP/RAC developed a wide basis of methodological documents aimed at the management of water resources, relevant training modules, and instruments needed for creating special practical actions. In the next biennium, PAP/RAC is intending to prepare practical Decision Support Systems (DSS) for integrated management of water resources. These systems include utilization of the latest management techniques and computer models, especially the GIS models, which have been significantly developed by now in PAP/RAC. Special attention will be paid to integrating systems into coastal planning techniques, environmental assessment, strategic environmental assessment, establishment of data basis banks, risk assessment, and other key components of DSS within water resources.

These activities should result with practical DSS in the management of water resources, which would enable the local and national decision-makers, as well as other users, more simple, responsible and safer management of these resources, including: water supply management, water demand management, water conservation management, etc. The implementation of this activity envisages also organizing of expert meetings, at which a basic methodology, the concept and basic elements of DSS would be defined, and groups of experts would work together and harmonize their outputs. At the same time, the preparation of a training module for education of experts at various levels has been envisaged, namely: from longer training courses intended for sectoral experts to shorter 1-day training modules intended for decision-makers at the highest level. Also, implementation of pilot projects has been envisaged on which the prepared DSSs for usual problems appearing in the management of water resources in the Mediterranean would be applied and tested. Finally, PAP/RAC will offer assistance to the interested Mediterranean countries which are encountering with urgent problems related to the utilisation of water resources, which would be in a form of shorter missions or organizing expert group work on the preparation and development of water resources, water basins and coastal area management plans.

*Required Additional Funds:*

US\$ 167,000 (in 1998); US\$ 166,000 (in 1999).

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*Activity:*

**Implementation of a multidisciplinary approach for the assessment of land resources in arid lands (water, soil, vegetation) and of their suitability to proper exploitation.**

*Implementing Office:* ERS/RAC

*Background:*

On the basis of the activities successfully carried out by the ERS/RAC in the framework of the CAMP for Fuka-Matrouh, the Centre intends to present to other Mediterranean countries the multidisciplinary approach implemented there and assist them in applying it or any other similar approach.

The main purpose of such an activity is to improve the benefit of the work carried out by its application in other arid lands with similar concerns, in order to provide valid support for properly planning their management.

The activity is based on the integrated use of remotely sensed data and conventional ones (in-field measurements, laboratory analysis, etc.). This methodology - as in the case of the CAMP for Fuka Matrouh - has been found to be very useful in terms of time and cost-effectiveness, especially in areas and not very affected by anthropologic pressures.

Thus it will be possible to achieve a twofold objective, that is, on the one hand, to foster the capacity-building of the concerned countries through the direct involvement of their researchers and experts in the implementation of the activities, and on the other hand, to provide to planners and decision makers of the interested countries, a useful support for their planning and management tasks.

*Required Funds:*

US\$ 15,000 (in 1998)

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*Activity:*

**Participation in the implementation of an Information System for water management, by establishing a network of remote-sensing Centres in order to share data and results from already carried-out and/or ongoing activities relevant to the subject.**

*Implementing Office:* ERS/RAC

*Background:*

Water resources availability depends on a number of factors (environmental and anthropologic) and on their mutual relationships.

Climatic conditions, soil conditions, morphology, land use, hydrographic network, natural vegetation coverage are only some of the land features to be taken into account, together with human pressure, for their direct or indirect effects on water resources. Therefore, sustainable management of water resources should be based on homogeneous and reliable information on such land features, as well as on the main concerns linked to water resources' present and future exploitation from both a global and a local point of view.

In this connection, proper measures should be taken in order to consider the entire water cycle by monitoring reservoirs and water recharge, to study suitable water indicators, as well as to define water costs and to foster public information so that water waste and contamination can be avoided.

To acquire this kind of information, it is possible to rely on the integrated use of the most advanced techniques able to handle both conventional and Earth Observation data, as well as to provide a continuously up-dated evaluation of water resources' availability, as for their different components and uses.

It is also very useful to be able to rely on the implementation of a suitable network with close contacts between multidisciplinary groups of actors and an effective link between organisations working in the field of water management and - particularly for ERS/RAC - remote sensing Centres.

Remotely-sensed information could be profitably used, possibly in integration with conventional one, in order to provide geographically referenced information, specially in the form of various topologies of maps:

- digital terrain models,
- soil maps,
- land cover maps,
- meteorological maps,
- hydrographical maps,
- pluviometric maps.

Their combination could allow, among other applications, the spatial evaluation of the average vulnerability to erosion, which is an important element in land characterization.

Moreover, remotely-sensed information could provide an effective support in the carrying out of multitemporal analysis on landform, land cover and land use, as well as in the assessment of natural vegetation and in the analysis of tectonic lineaments.

*Required Funds:*

US\$ 20,000 (in 1998); US\$ 20,000 (in 1999)  
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*Activity:*

**Soil Protection: Expert meeting and assistance to countries.** "Mediterranean Cooperative Project on Mapping and Measurement of Erosion Processes in Mediterranean Coastal Areas - Phase II"

*Implementing Office:* PAP/RAC

*Background:*

The first phase of the project has been implemented in the period of 1990 - 1994, with some additional mapping in 1995 - 1996. Spain is acting as the host country of the project, DGCONA - General Directorate for the Conservation of Nature of the Spanish Ministry of Environment as the responsible host institution. FAO is participating in the project providing scientific and professional support. In the first phase of the project mapping and measurement exercises were implemented in Tunisia, Turkey and Spain in selected erosion affected areas. The results of the first phase were practical results in these countries and a common consolidation methodology developed and tested in different conditions. The common methodology was presented in the Guidelines discussed at several workshops attended by experts from all Contracting Parties. The developed methodology has been adopted and evaluated as cost effective, feasible and applicable in Mediterranean conditions and recommended for implementation in all Mediterranean countries.

The second phase of the project, to be prepared during 1997 and implemented in the 1998 - 1999 period, envisages mapping and measurements of erosion processes in several Mediterranean countries not participating in the first phase. The expected results will be used for definition of measures related to conservation of endangered areas/mitigation of and protection from erosion induced processes to be formulated in management projects.

The countries interested to participate in the second phase are: Albania, Bosnia and Herzegovina (requesting erosion protection in areas affected by the war), Croatia, Israel, Malta, Slovenia and Turkey (in other erosion affected area). It should be noted that FAO/AGL has included its participation to the second phase of the project in its regular programme.

The training course on mapping of erosion processes applying the Guidelines and developed consolidated methodologies (held in Murcia, Spain, September 26 - 29, 1997) reconfirmed the applicability of the project and interest of the above mentioned countries, institutions and agencies in its implementation.

*Required Additional Funds:*

US\$ 120,000 (in 1998); US\$ 120,000 (in 1999).  
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*Activity:*

**Aquaculture: Ecologically sound integrated management of aquaculture.**

*Implementing Office:* PAP/RAC

*Background:*

PAP/RAC has been entrusted by FAO the coordination of the EAN network (Environmental and Aquaculture) which was created after the closing of the Mediterranean Regional Aquaculture Project. Initially, activities for this network have been funded through MTF but this has not been possible in the recent years due to budget restrictions. This activity should continue as it defines the management framework of aquaculture which is becoming an important coastal activity which should be taken into consideration in ICAM.

In the framework of the 1998-1999 programme, special attention will be paid to the elaboration of the GIS use in selecting locations for aquaculture. To this end, very successful guidelines have been developed in cooperation with IFREMER (France). a new system should comprise the GIS technology, as well as methodology of its use in the marine part of the coastal area. Training modules and the methodology for implementation of concrete operations related to selecting of aquaculture localities will be elaborated, demonstration projects will be implemented, and support offered to specific countries.

*Required Funds:*

US\$ 100,000 (in 1998); US\$ 120,000 (in 1999).

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## VI. INTEGRATING ENVIRONMENT AND DEVELOPMENT: SPECIFIC ACTIVITIES

*Activity:*

**State of Environment and Sustainable Development in the Mediterranean.**

*Implementing Office:* BP/RAC

*Background:*

Upon request from the Contracting Parties, a preparatory study/feasibility study for the design of a report on the State of Environment and Sustainable Development in the Mediterranean (to be distributed at the Tunis meeting) has been prepared, structured along: rationale, motivations and approach; why such a report; synthesis of major issues, stakes and priorities; on what to focus in such a report and how; inputs partners and public concerned; by whom and to whom; type and periodicity; monographic and/or systematic; annotated table of contents.

Our intention is to produce, on behalf of UNEP/MAP and in close cooperation with RACs and other concerned partners (EC, EEA, METAP, NGOs, etc.), at least a draft report for the next Meeting of the Contracting Parties in 1999. Obviously the requested budget to look for is a minimum to start with and more funds will be necessary. The above feasibility study, once comments from representatives of the Contracting Parties are received and incorporated, will be used for fund raising, hopefully more than just US\$ 50,000 a year, for the preparation of such an important report including consultancies for specific studies, for analysis, reporting, editing and the necessary working sessions, but not including translation (not yet).

*Required Funds:*

US\$ 50,000 (in 1998); US\$ 50,000 (in 1999).

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*Activity:*

**Support to MCSD working groups: Workshops and related publications (studies, recommendations).**

*Implementing Office:* BP/RAC

*Background:*

As clearly specified in MCSD documents related to working groups on priority issues, a series of limited working sessions and major workshops need to be organised throughout the biennium.

As direct support centre for three subjects (Sustainable Development Indicators, Sustainable Tourism, and Management of Urban/Rural Development) and indirect for one (Free Trade Zone and Environment), not mentioning the follow up of previous subjects (Water Demand) and cooperation on others, the requested and necessary budget to look for, in cooperation with MEDU, the Task Manager and Workshop Hosting Country, is estimated at about US\$ 150,000 per year, allowing for the organisation of two workshops and a series of limited working sessions. Obviously, the number and the size of the Working Sessions and the Workshop will be adapted to the financial support that will be obtained. It is important to recall here the fundamental role and outputs of these workshops as they first and foremost concern specific subject specialists who can go through an in-depth analysis and come out with relevant strategic recommendations addressed to 'horizontal' decision-makers.

*Required Funds:*

US\$ 150,000 (in 1998); US\$ 150,000 (in 1999).

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*Activity:*

**Tourism: Elaboration of strategies for sustainable tourism related to MCSD priorities.**

*Implementing Office:* PAP/RAC

*Background:*

Support to the MCSD Working Group, involving the integration of environment and development, will be focused on sustainable tourism development. The envisaged activities are as follows:

- Elaboration of development strategies for sustainable tourism;
- Elaboration of the Carrying Capacity Assessment (CCA) as an implementation instrument;
- Marine Reserves as tourism development *generator*;
- Code of conduct for tourism.

*Required Additional Funds:*

US\$ 24,000 (in 1998); US\$ 39,000 (in 1999).

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*Activity:*

**Solid Wastes Management: Workshop on the selection, and on the manner of financing of the construction, operation and maintenance of solid waste collection and treatment.**

*Implementing Office:* PAP/RAC

*Background:*

Environmental protection must be included in the framework of the development strategy of particular areas. Solid waste should be considered not only as a source of the pollution, but also as a possible secondary raw material.

Two workshops are proposed to take place , one in 1998 the other one in 1999.

At the Workshop on Solid Waste Management in 1998, representatives of the Mediterranean countries would exchange knowledge and experiences about the past and planned way of solving the problem of collection, treatment and final disposal of solid waste. Strategies, criteria and standards which would enable a selection of the most convenient way of collection, treatment and final disposal, considering also recycling of solid waste, would be discussed starting from the following principles:

- prevention of waste;
- maximal recycling and reuse of materials; and
- safe disposal of any waste which cannot be recycled or reused.

At the Workshop in 1999, experiences would be exchanged related to costs and ways of financing and maintenance of the plant construction and objects for collection, treatment with or without recycling, and final disposal of solid waste.

Economic and fiscal instruments will be discussed with special reference to costs of the final disposal which depend upon the standards used, selection of the way of treatment and disposal, as well as upon other factors, such as soil related and social costs.

*Required Funds:*

US\$ 15,000 (in 1998); US\$ 35,000 (in 1999).

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