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**MEDITERRANEAN ACTION PLAN**

Meeting of Mediterranean Experts on  
"Agenda 21 for the Mediterranean"

Malta, 11-13 February 1993

**INFORMAL DISCUSSION PAPERS**

UNEP(OCA)/MED WG.63/2  
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MEDITERRANEAN ACTION PLAN

Meeting of Mediterranean Experts on  
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ANNOTATED PROVISIONAL AGENDA

UNEP  
Athens, 1993

## Introduction

Pursuant to the UNCED Conference's adoption of "Agenda 21" in Rio and the decision of the Bureau of the Contracting Parties to the Barcelona Convention taken at the Cairo meeting in November 1992, to convene a meeting of experts to prepare an "Agenda 21 for the Mediterranean," the present meeting has been organized by MAP with the assistance of the Foundation for International Studies, at the University of Malta.

The following annotations to the proposed agenda for the present meeting were prepared by the Secretariat to assist the meeting in its deliberations.

### Agenda Item 1 - Opening of the Meeting

The Plenary Meeting will be chaired by Mr. Salah Hafez, acting on behalf of the President of the Bureau of the Contracting Parties (H.E. Minister Atef Ebeid). It will be inaugurated at 09.00 hours on Thursday, 11 February 1993, at the Foundation for International Studies, University of Malta, by the Prime Minister of Malta, the Hon. Dr. E. Fenech-Adami. Welcoming remarks will be made by the Rector of the University of Malta, by Rev. Prof. Peter Serracino Inglott, by H.E. Mr Gunter Weiss, Ambassador, Head of the Commission of the EC to Malta, Mr Salah Hafez and by MAP Coordinator Prof. Salvino Busuttill. Experts have been invited in their personal capacity to participate in this "brainstorming" meeting. The Contracting Parties have been invited to send representatives.

The meeting shall elect from among the experts and representatives of Governments a chairman, two vice-chairman and a rapporteur.

Chairmen for each of the three sessions have been tentatively selected.

### Agenda Item 2 - Adoption of the Agenda and Organization of Work

The provisional agenda prepared by the Secretariat and appearing in document UNEP(OCA)/MED WG.63/1 and annotated in the present document, will be proposed for adoption by the meeting. It is proposed that Agenda Item 3 (Scientific Assessment of the State of the Mediterranean Environment) be discussed on the afternoon of Thursday, 11 February 1993, while Agenda Items 4 and 5 (Sustainable Development in the Mediterranean and Institutional Issues) be discussed on Friday, 12 February 1993. Saturday morning, 13 February 1993, will be dedicated to the Conclusions and Proposals for a follow-up of "Agenda 21 for the Mediterranean," as it relates to the Agenda Items 3-5.

The meeting will begin at 09.00 hours on Thursday, Friday and Saturday. The proposed schedule includes a daily lunch break from 13.00 to 14.30 hours, and two daily coffee breaks, one in the morning and one in the afternoon.

Simultaneous English-French interpretation will be available for all sessions.

### Agenda Item 3 - Scientific Assessment of the State of the Mediterranean Environment

The chairman of this session will be Mr. S. Antoine. Mr. L. Jetic, Senior Marine Scientist, MAP, will present a background paper (included in UNEP(OCA)/MED WG.63/3). A discussion on Scientific evaluation of the Mediterranean environment will follow.

#### Agenda Item 4 - Sustainable Development in the Mediterranean

Mr. M. Ennabli, President Director General, ANPE, Tunisia, chairman of the session will open the session with introductory remarks. This will be followed by the presentation of a background paper by Prof. E. Scicluna, of the University of Malta (included in UNEP(OCA)/MED WG.63/3) and a discussion on Sustainable Development in the Mediterranean.

During this session a joint presentation will be made by the EC and MAP, and by the country representatives concerned on the national strategies and pilot projects on sustainable development being prepared for implementation in Albania, Egypt, Malta and Tunisia within the Nicosia Charter.

#### Agenda Item 5 - Institutional Issues

Prof. David Attard of the University of Malta, as chairman, will introduce the session on Institutional Issues. Dr. E. Raftopoulos, Legal consultant, MAP, will present a background paper (included in UNEP(OCA)/MED WG.63/3) which will be followed by discussion.

#### Agenda Item 6 - Any other matters

Other issues relevant to the Mediterranean Action Plan which might be brought to the attention of the meeting by the participants or by the Secretariat will be discussed under this agenda item.

#### Agenda Item 7 - Adoption of the Report of the Meeting

A draft report of the meeting will be submitted to the participants for adoption.

#### Agenda Item 8 - Closure of the Meeting

The meeting is expected to be closed by H.E. Prof. Guido De Marco, Deputy Prime Minister and Minister of Foreign Affairs, Malta, at 11.30 hours on Saturday, 13 February 1993.

Additional Information - Lunches, Receptions, Travel and Excursions

1. Lunches will be available for all sponsored participants on Thursday 11 and Friday 12 February, at the Casino Maltese.
2. A shuttle bus will be available for transfers between the Holiday Inn and the Cavalieri Hotels, and the Foundation for International Studies . The buses will leave the hotels at 08.15 and 08.25 hours respectively every day and will return the participants to thier hotels at the end of each conference day.
3. On Thursday, 11 February, there will be a reception at 19.00 hours, given by the Foundation for International Studies, Valletta.
4. On Friday, 12 February, the Hon. Dr. Stanley Zammit, Parliamentary Secretary for the Environment will host a reception at the Casino Maltese at 19.00 hours.
5. On Saturday, 13 February, lunch will be offered by MEDSERV at their head office on Manoel Island followed by a cultural tour of Malta.

## INTRODUCTION

The decision of the Bureau of the Contracting Parties to the Barcelona Convention to convene this meeting is the outcome of the unique initiative to set into motion for the Mediterranean a process for the adoption of those principles elaborated at the United Nations Conference on Environment and Development in Rio de Janeiro and specified in Agenda 21.

This ad hoc meeting of multi-disciplinary experts, chosen on their individual merits, joined by representatives of a number of international and regional Government and Non-Government Organizations, the media and industry, is expected to be of a brainstorming nature where it is anticipated that the proposals and suggestions put forward will form the basis for concrete recommendations and decisions, leading to the formulation of an Agenda 21 for the Mediterranean.

This process will be based on the presentation of informal position papers as subjects for discussion, addressing three main issues:

- i) **Scientific Assessment of the State of the Mediterranean Environment**, with special attention to the factual and potential contribution of MED POL. The floor will also be open for discussion of such issues as atmospheric pollution, making the energy transition, drought and desertification, the quality and supply of freshwater resources, sustainable agriculture, conservation of biological diversity, the transboundary movement of hazardous wastes;
- ii) **Sustainable Development in the Mediterranean**, including the focus on pilot countries for the implementation of national strategies for sustainable development as a follow-up to the Nicosia Charter and Cairo Declaration, specifically Tunisia, Malta, Egypt and Albania.
- iii) **Institutional Aspects:**  
A significant outcome of this meeting could be the formulation of the basis for consideration of the revision of the Barcelona Convention, in view of the emerging geo-political realities and evolving environment/development priorities in the Mediterranean region.

This document consists of the three position papers on the issues to be discussed during the meeting.

## **SCIENTIFIC ASSESSMENT OF THE MEDITERRANEAN ENVIRONMENT**

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### **Mediterranean Action Plan**

The Mediterranean Action Plan (MAP), one of the twelve Regional Seas Programmes of the United Nations Environment Programme (UNEP) is conceived as an action-oriented programme having concern not only for the consequences but also for the causes of environmental degradation and encompassing a comprehensive approach to combating environmental problems through the management of marine and coastal areas. Each regional action plan is formulated according to the needs of the region as perceived by the Governments concerned, taking into account the urgency of the problems and the capacity (financial, manpower, institutional) of these governments and their institutions to tackle the problems in a realistic way. It is designed to link assessment of the quality of the marine environment and the causes of its deterioration with activities for the management and development of the marine and coastal environment (UNEP, 1982).

The initial focus of the action plans was on marine pollution control, an obvious subject of high priority requiring a harmonized regional policy and strategy. However, the common experience of all action plans soon confirmed that poor management and planning of development are at the roots of most environmental problems, and that meaningful and lasting environmental protection is indeed inseparably linked with social and economic development. Therefore, the focus of the action plans was gradually shifting from a sectoral approach toward pollution control to integrated coastal zone planning and management as the key tool through which solutions are being sought (Keckes, 1991). The development of UNEP's Regional Seas Programme demonstrated that the basic concepts formulated at Stockholm can effectively foster regional cooperation among interested States and may benefit from the support of the United Nations system as a whole.

The structure of the action plans follows the framework adopted by the Stockholm Conference, i.e. it consists of 3 basic components: environmental assessment; environmental management; and supporting measures.

Environmental assessment gives emphasis to activities as: baseline studies; research and monitoring of the sources, levels and effects of marine pollutants; ecosystem studies; studies of coastal and marine activities and social and economic factors that may influence, or may be influenced by, environmental degradation. Scientific research has a prominent role as an integral part of the environmental assessment component. Results of scientific

research have been used as a scientific basis for the preparation of assessment documents, legal instruments and common measures for the protection of the region against pollution. Unfortunately, the research performed so far does not seem to clearly indicate the preventive and remedial action necessary to protect the marine environment. The main gaps still consist in the lack of quantitative data on contamination sources, in the poor information on environmental fate of contaminants and in missing link between levels and the effect on biological communities.

### **Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL)**

MED POL was designed as the environmental assessment component of MAP and has been one of its cornerstones. The pilot phase of this programme known as Phase I, was carried out between 1975 and 1980 by more than 200 scientific groups from 84 institutions in 16 Mediterranean countries. National laboratories participating in Phase I were provided with necessary equipment and material for monitoring the quality of the water, sediments and marine organisms; scientists and technicians were trained in standardized analytical techniques; and a network of scientists and institutions was created for ready exchange of results and experience. The first phase of MED POL has provided considerable data and information on various aspects of the pollution of the Mediterranean Sea (UNEP, 1986).

The experience gained in Phase I was the basis for the Long-term Pollution Monitoring and Research Programme, known today as MED POL-Phase II, which was endorsed in 1981. As in Phase I, the overall co-ordination and guidance for Phase II is provided by UNEP. Co-operating specialized United Nations Agencies (FAO, UNESCO, WHO, WMO, IAEA, IOC) are responsible for the technical implementation and day-to-day co-ordination of the work of participating national centres (UNEP, 1986).

Monitoring in Phase-II has been organized on the following four levels: monitoring of sources of pollution; monitoring of nearshore areas, including estuaries; monitoring of offshore areas (reference areas); monitoring of the transport of pollutants to the Mediterranean through the atmosphere. Monitoring of marine pollution is a legal obligation for the Contracting Parties to the Barcelona Convention (UNEP, 1982b). Each State is responsible for setting up a national monitoring programme on the basis of a general Plan whose main components were adopted by all Parties in Cannes in March 1981 and subsequently amended (UNEP, 1981, 1987). MED POL monitoring started in 1983 through the implementation of National Monitoring Programmes and at present 16 Mediterranean countries have on-going programmes and are submitting data. Through this programme contamination/pollution is regularly monitored at hundreds of sampling stations. The National Monitoring Programmes are elaborated with the help of the MAP Co-ordinating Unit at Athens and they define the responsibilities of each of the parties involved, and spell out in a rather precise manner the work programme : location of sampling stations, parameters, frequency of measurements, methods used, laboratories responsible for the analysis of samples, how the data are to be transmitted and the quality assurance programme. One cannot claim that the implementation of the MED POL Monitoring Programme has been progressed in a totally satisfactory way. The various reasons that the states have actively or less actively or even not at all participated in the monitoring programme, were partially identified during the meeting of responsible investigators for monitoring programmes



(Athens, 20-23 March 1989). They are mainly problems having to do with the technical aspects of implementation, political will, dissemination of information or even compatibility of MED POL programmes with on-going national programmes. It became clear during the discussion that if the programmes (current or revised) are continued for a relatively short period of time and if the Co-ordinating Unit continues its efforts as it has up to now, reliable data can be collected for an objective evaluation of contaminant input and the state of contamination for the whole of the Mediterranean area (Joanny, 1990).

The activities carried out in the framework of the MED POL programme, as is often the case with large international programmes, seem from the outside somewhat esoteric and unreal. Even if results seem for the moment not to match the expectations, one cannot deny the fact that around the Mediterranean Sea an analytical potential was established which, no doubt, can satisfy the objectives set. The efforts undertaken must at all costs be continued for as long as necessary in order to bring about the evaluation of inputs and environmental contamination on the basis of the main parameters. However, optimized monitoring strategies must already be prepared, taking into account the results of the current monitoring activities, but also the general knowledge of the marine environment acquired at the same time. In this connection, the rate of development of environmental contamination is without doubt inferior to what it was feared to be during the previous decade. Thus, as a consequence, the frequency of sampling can be reduced accordingly. On the other hand, full geographical coverage must be sought at least for a while, even at the expense of the number of matrices. Concerning the monitoring of pollution sources, it is necessary to reaffirm the principal role that has been assigned to it. It is only an accurate and global assessment of contaminant inputs into the Mediterranean that will form a solid basis for an effective protection policy, especially for the reduction of inputs. Finally and in order to conclude these thoughts on monitoring strategies, it is interesting to draw a parallel between MED POL monitoring and the activities carried out in connection with the North Sea Task Force (NSTF) in the North Sea. The NSTF in 1993 must draw up a report on the quality of the North Sea (Quality Status Report - QSR), a follow-up on the report published in 1987. In fact, it will be an environmental assessment report which provides for inter alia the formulation of a "co-ordinated scientific programme in the North Sea to provide more uniform and more reliable data and to establish more secure links between inputs, concentration and effects" (excerpt from the Ministerial Declaration, London, 24-25 Nov. 1987 - Annex G). This concept of monitoring was already concealed in MED POL - Phase II which includes a research and a monitoring component, without including formally the drafting of a Quality Status Report (Joanny, 1990).

Only research projects and studies directly relevant to the achievement of the objectives of Phase II were supported and have been carried out by Mediterranean research centres and organizations. By the end of 1992, over 450 research projects have been implemented in the framework of MED POL-Phase II by 150 institutes from 17 Mediterranean countries. An intensive data quality assurance programme has been implemented including intercalibration exercise, provision of standards and reference materials, maintenance of instruments and organization of joint monitoring exercises. In the same period, more than 200 scientists from 18 Mediterranean countries were given short-term training to learn analytical techniques or attended intercalibration exercises and training workshops. Also more than 550 fellowships were awarded to Mediterranean scientists to present results at scientific meetings. Another aspect of assistance programme has been provision of analytical instruments, chemicals, glassware and supplies to participating institutions.

Results gathered through the research component of MED POL have been presented at numerous scientific meetings, published in a large number of scientific papers and in MAP Technical Reports Series (70 volumes by December 1992). Data generated through MED POL are used as the basis for the analysis of the present state of the marine and coastal environment in the Mediterranean and the trends in pollution levels. They also provide the scientific information needed for the formulation of common measures to control pollution, twelve of them already adopted by the Mediterranean countries (Jeftic *et al.*, 1990).

Before the beginning of MED POL, in many Mediterranean States there were no national centres capable of providing the scientific information required for the implementation of the Barcelona Convention and its Protocols. In spite of some initial doubts about its effectiveness, the policy followed by UNEP was to give an equal chance to all participants in MED POL by channeling most of the resources to those who needed them most. Although this approach did not yield the same results in every case, the programme as a whole was more than successful with the general upgrading of the technical/scientific capabilities of the Mediterranean developing countries, the initial collection of reliable data and the creation of a Mediterranean network.

On the other hand, gaps and weaknesses in the scientific outcome of the research projects were inevitable, given the widely differing levels of competence and experience of the cooperating centres and the difficulties inherent to the programme. The concern in the first place was the validity and comparability of the data, and also their geographical coverage, as well as the fact that the programme was scattered over too many projects. It appears that although there has been significant scientific growth and a remarkable improvement in quality of the work carried out, the information so far acquired did not seem to entirely fit the original objective (Halim, 1990).

### **Role of Scientific Research in Management of the Marine Environment and Coastal Zones**

Problems related to the marine environment have not altered greatly in the past two decades, but general perceptions of the main threats and corresponding solutions have markedly changed on the basis of knowledge accumulated during that period (UNEP, 1991). The application of environmentally-sound management practices in coastal and maritime activities is now accepted as the key to safeguarding the marine environment. Governments should take environmentally sound decisions on development and should improve their ability to make rational choices among various options concerning alternative patterns of development and allocation of resources. To achieve this goal, efforts should be made by the Governments and the United Nations bodies and other organizations concerned to identify the most significant activities and the trends of their future development, to evaluate the severity of likelihood of their environmental impact and to find measures to reduce either the risk or the severity of their effects. In many instances there is a need for supporting measures for Governments, especially those of developing countries, to enable them to participate in environmental activities so that in due course they can assume a fuller responsibility.

Regional action plans provide the most suitable framework for an exchange of information and experience, assistance and training, and regional co-operation in

environmental management. Any action in a regional sea should be based on sound and reliable environmental assessment. The collection and, as needed, the development of comparable data and information on a region is usually a first task. A great deal of knowledge is needed to assess the effects of pollutants in the sea, and therefore, environmental assessment should include sound monitoring and research programmes.

Monitoring is an important component of environmental assessment. All monitoring programmes should have precise and focused objectives but unfortunately they are too often an end in themselves instead of being a tool and scientific basis for environmental management (NRC, 1990). Monitoring programmes generate their own momentum, and periodic critical review is needed to ensure appropriate selection of effort and resources. To develop the basis for analysis of geographic and temporal trends, analytical data must be subjected to rigorous internationally accepted quality control procedures. Also it should be assured that methods of sampling and analysis provide sufficient intercomparability (GESAMP, 1990). Monitoring programmes should include regular drafting of "regional environmental assessments". Such reports should include, in addition to the results of the on-going monitoring programmes, elements for the evaluation of the effects of anthropogenic activities on the physics, chemistry, biology and fisheries of a marine region (Joanny, 1990). Monitoring must be backed by the political will to enforce adequate controls and the legal instruments, either national or international, that set acceptable standards of environmental quality, rates of discharge or other agreed targets. A failure of any of these components results at best in ineffective action and at worst in no action at all.

Scientific research is seen as a means to reduce present uncertainties for facing management decisions and to secure links between inputs, concentration and effects. That is, scientifically-based hazard assessment of contaminants and other stresses is essential to correct management decisions and an end-result of the monitoring. However, the role of research per se should be clearly related to regional priorities whilst recognizing the need for continued fundamental research. In research, special attention should be given to the field of biological effects studies in order that research efforts lead to optimization of monitoring programmes (Joanny, 1990). Equally important is the economic analysis of damage to natural resources and human health but difference in approaches and languages of natural sciences and economics may lead to misunderstandings or even misguided decisions and therefore improved communication and understanding between both disciplines is needed (GESAMP, 1990). The persistent view that science can be divided into pure and applied branches is counter-productive and tends to widen the gap between scientific research and management. Sectoral approaches to science make rational management difficult but more importantly foster the development of narrow sectoral specialists at a time when holistic, integrated views are most urgently needed.

Largely as a result of concerted international efforts, the current knowledge of the state of contamination of the Mediterranean Sea is now much better than it was a decade ago. The Mediterranean Action Plan, the first of UNEP's Regional Seas Programme has, through the MED POL component, coordinated a large-scale international study of marine contamination since 1976, with the support of the governments of eighteen coastal member states, the EEC and the specialized agencies of the United Nations (FAO, UNESCO, WHO, WMO, IAEA, IOC). The study has permitted the identification of a series of priority pollutants and the formulation of assessment documents which, in some cases, have already led to proposals for control and abatement measures. It has also permitted the formulation and

implementation of a long-term monitoring and research programme (MED POL-Phase II) which has been helping member states to evaluate their own pollution problems, measure the effectiveness of the control and abatement measures taken and allow long-term regional trend studies to be conducted.

Perhaps the most important long-term task of MED POL-Phase II is strictly related to the implementation of the Land-based Sources Protocol. This Protocol foresees the formulation and the adoption by the Contracting Parties of common measures (guidelines, standards, criteria) for substances listed in Annex I (black list) and Annex II (grey list) of the LBS Protocol.

In-depth assessment studies, including concrete recommendations for measures to be taken by the Contracting Parties were completed for microbial pollution (UNEP/WHO, 1985; UNEP/WHO, 1987), mercury (UNEP/FAO/WHO, 1987), cadmium (UNEP/FAO/WHO, 1989), petroleum hydrocarbons (UNEP/IOC, 1988), used lubricating oils (UNEP/UNIDO/WHO, 1989), organotin compounds (UNEP/FAO/WHO/IAEA, 1989), organohalogen compounds (UNEP/FAO/WHO/IAEA, 1990), organophosphorus compounds (UNEP/FAO/WHO/IAEA, 1991), persistent synthetic materials (UNEP/IOC/FAO, 1991), radioactive substances (UNEP/IAEA, 1991) and pathogenic microorganisms (UNEP/WHO, 1991). Similar assessment studies are being prepared on other subjects.

By October 1991, the Contracting Parties to the Barcelona Convention adopted the following twelve common measures: microbial quality of bathing waters and shellfish waters; mercury; cadmium; organotin compounds; organohalogen compounds; used lubricating oils; organophosphorus compounds, persistent synthetic materials; radioactive substances and pathogenic microorganisms.

MED POL-Phase II, being the scientific component of MAP, will continue to play an essential role in providing the scientific rationale behind the actions mentioned above as well as in the continued updating of the list of substances contained in the Protocol.

Results obtained so far have confirmed the view that the Mediterranean as a whole is still a healthy sea. However, the coastal waters of the Mediterranean which are of primary importance for the population, tourism and exploitation of living resources, have been degraded by pollution in many places. Sewage, industrial waste, tar and trash are the most frequent causative agents.

Equally important, this large scale scientific operation, reflecting the concerted monitoring and research efforts of 18 Mediterranean countries and the EEC (programmed and co-ordinated by the UNEP's MAP Co-ordinating Unit in Athens), is proof of the determination of the Mediterranean States to take steps towards the identification, prevention and control of the pollution of their marine and coastal environment.

## RECOMMENDATIONS

The main recommendations that come from the above considerations, as well as from evaluations of the MED POL programme performed so far are presented below:

- the monitoring objectives should be reviewed and modified to allow for improved utilisation of monitoring results in management and decision making process of the sustainable development;
- integrated monitoring and research should include regular preparation of regional environmental assessments;
- for the Mediterranean, as for the North Sea, sub-regions must be identified, grouping several countries around a specific marine entity;
- it is necessary to stress again the basic importance of monitoring of sources of pollution, because of its ability to help in focusing monitoring efforts;
- the Quality Assurance activity must remain a priority task, but with the aim of encouraging laboratories to consider it as important as the analysis itself;
- a biological effects monitoring programme should be prepared and implemented within the framework of MED POL;
- training of scientists and technicians from developing countries should continue as one of the important objectives of MED POL;
- work concerning the collection of information on land-based sources of pollution and implementation of activities for the control of such pollution should be continued and strengthened;
- study of implications of climatic changes on coastal areas should continue in order to assess the environmental problems associated with the potential impact of expected climatic changes on marine environment and on adjacent coastal areas and to assist governments in the identification and implementation of suitable policy options and response measures which may mitigate the negative consequences of the expected impacts;
- all national and international research efforts leading to an improvement of the marine environment general knowledge must be strongly encouraged to allow optimisation of monitoring programmes.

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## STRATEGIES FOR SUSTAINABLE DEVELOPMENT

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*Humanity has the ability to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.*<sup>1</sup>

### PART ONE

#### Introduction

The purpose of the paper and accompanying presentation is to show that in spite of two decades of concern with the environment, the positive achievements attained so far have been drowned by the enormous environmental damage committed by man in his frenetic search for economic development. This process is expected to continue world-wide and more so in the countries bordering the Mediterranean as can be attested from the Mediterranean Action Plan's own future scenario study, the Blue Plan.<sup>2</sup>

The international community through its UN Conference on Environment and Development (UNCED) and accompanying summit in Rio last June has shown that it is prepared to carry out the institutional changes necessary to carry out its new mandate towards Sustainable Development as reflected in its Agenda 21. The Mediterranean community has yet to show its resolve in this regard. Through their pioneering work on the Barcelona Convention and related protocols the Mediterranean governments have given the world a regional seas programme blue print. Will the same governments once again take the lead and show the world how a sustainable development programme could be carried out successfully at the regional level?

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<sup>1</sup>World Commission on Environment and Development, *Our Common Future*, Oxford University Press, New York, 1987, p.8.

<sup>2</sup>MAP, (BP/RAC) *The Blue Plan*, Athens 1989. Published in book form as Michel Grenon & Michel Batisse *Futures for the Mediterranean Basin: The Blue Plan*, O.U.P., 1989.



## State of the World

According to FAO, nearly one-fifth of the world's arable land will be destroyed by the beginning of the next century solely by water erosion resulting from deforestation.

*During the twenty years since the first Earth Day in 1970, the world lost nearly 200 million hectares of tree cover, an area roughly the size of the United States east of the Mississippi River. Deserts expanded by some 120 million hectares, claiming more land than is currently planted in China. Thousands of plant and animal species with which we shared the planet in 1970 no longer exist. Over two decades, some 1.6 billion people were added to the world's population - more than inhabited the planet in 1900. And the world's farmers lost an estimated 480 billion tons of top soil, roughly equivalent to the amount of India's crop land.<sup>3</sup>*

## State of the Mediterranean Region Forests

Until the more recent extensive deforestation process in Latin America, the Mediterranean forest system had been the leading example of mass degradation brought about by human action. The combined action of clearing, over-grazing, and excessive use of wood as fuel and building material has caused extensive devastation, estimated as high as 95 percent. In the south and east of the Mediterranean historians describe huge forests where now lie barren deserts.

In the worst trend scenario, forest degradation in the Mediterranean regions - caused by population pressures, leading to increased over-exploitation of fuel wood and the clearing of marginal woodland, as well as by the other factors namely fires, over-grazing, erosion and disease - will reduce the present wooded area by a quarter by the year 2000, and possibly by half in the year 2025. Roughly these forest-area loss figures add up as follows: fires 12m ha., clearing 6m ha., over-grazing 3m ha., and fuel-wood removals 1m ha.

## Soil Erosion

The above factors will heighten the effect of desertification from the south. Furthermore, run-off will increase, removing soil and silting up dam reservoirs. At present around half the land in the Mediterranean regions is prone to erosion because it lacks sufficient plant cover, the erosion rates being much higher. An overall average of some 15 t/ha of soil are lost per annum. In critical areas the loss can reach 200 t/ha per annum. Based on these estimates, it is indicated that some Mediterranean regions would lose 1 percent of their "agricultural land capital" each year due to water erosion alone.

## Urbanisation

Of course the soil is also threatened directly by the urbanisation pressures on arable land. The *additional* population foreseen in the cities south and east of the Mediterranean basin in 2025 would be equal to the *current* population of the cities in the north. If we consider

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<sup>3</sup>Brown, L.R. et al. *State of the World*, Norton, New York, 1991, p.3.

the coastal regions only, we find that the present urban population there will double by the year 2025, most of it in the south and east of the basin. As a result urbanised areas would grow very steeply: by 2025 they would increase 20 times in Libya, 9.5 times in Egypt, 8 times in Algeria, and 6 times in Morocco, Tunisia, and Turkey. The implications for the contracting of arable land are enormous. Already for example in Egypt, the crop land per capita is shrinking at 2 percent per annum. A significant drop in food self-sufficiency in the Mediterranean regions (which has already fallen from 60 to 30 percent in some forty years) appears unavoidable in the short and medium term.

### **Water Resources**

A third factor is the effect which the increased urbanisation is having on water draw-off rates along the coast. The present water consumption in the coastal regions could go up by as much as 350 percent by the year 2025. In many areas excessive pumping is already leading to a lower level of ground-water table, causing contamination by the infiltration of sea-water. This phenomenon of soil salinisation is affecting many countries including the Maghreb countries, Malta, Syria and Greece. Some of the known areas being threatened are: Egypt - 32 percent of its Mediterranean coastal area, Tunisia - 5 percent, Algeria - 3 percent, Morocco - 1 percent.

### **The Coast**

The coastal areas of the Mediterranean are the stage where all the actors in the development and environment scenario are playing their roles. It is itself a very scarce resource sought after by conflicting development and recreational needs: industry, tourism and yachting, harbour facilities, fishing, sea-water desalination, sites for the thermal power-stations, sewage-treatment facilities. It is also the habitat for specific flora and fauna, river deltas, saline soils, submarine aquifers, coastal dunes. In any respect, the coast line (with its surrounding areas) is itself so fragile and vulnerable, with the damage from degradation being often irreversible. Nowhere is the interaction and feedback between development and environment so complex and acute.

### **Is There Hope?**

It was not the intention of the Blue Plan to paint a catastrophic picture of the Mediterranean to such an extent as to push the respective countries into an immobile state of helplessness. On the contrary, the fact that the study considers various scenarios based on different strategies taken by the countries individually and in co-operation with each other is proof enough that there are both better and worse development strategies to be taken. But the best scenarios in whichever sector may consider all presuppose affirmative action being taken. Many examples abound, but generally, in the moderate and alternative scenarios, physical planning and environment policies are better incorporated into the decision-making process and development plans. Preference is given to systematic solutions: water-saving irrigation, low-pollution manufacturing processes, energy efficient technologies, management and protection of water-sheds, economical urban transport, re-use of products... the list is endless.

The hope for the Mediterranean lies in the drawing up of a strategy or strategies for sustainable development at the national and regional levels. The principles and practice of such strategies may be found in the recent literature on the subject. However, these are now embodied under one report: UN's Agenda 21, which has been finalised and approved by governments spanning the five continents.<sup>4</sup>

The idea of sustainable development, it must be said, is not new. Social scientists and governments in developing countries had been feeling all along that development which could not be sustained over the long term was bad, not just because it damaged the environment, but because it made the goal of a long lasting improvement in the quality of life so difficult to achieve.

### **Sustainable Development: The Concept**

The concept of sustainable development is referred to by different names by different organisations.

- *Agenda 21* - Many officials may refer to this principle as Agenda 21 in view of the Rio report wherein the principle is embodied. Particularly relevant, are chapters 10 and 17 dealing with the integrated approach to the planning and management of land resources; the protection of oceans, seas and coastal areas, and the rational management of their living resources, respectively.
- *Rational Development* - This is the stock phrase found in many UNESCO documents dealing with the subject of man and the environment, as may be seen from its successful Man and the Biosphere programme.
- *Development and Environment* - was in fact the title chosen for the Rio Conference. Two decades of experience after the pioneering Stockholm conference on the environment, have taught the world that development and environment are so much intertwined that they could not possibly be discussed separately. The Mediterranean Action Plan (MAP) too, felt that the subject merited study and as a result, launched the Blue Plan with the explicit objective to report on the prospects for economic development and environment of the Mediterranean region for the next 40 years.
- *Integrated Coastal Management and Planning Programme* - During the early days of the MAP, the Contracting Parties wanted quick solutions to their more pressing problems and therefore set up the Priority Actions Programme (PAP) with a list of not less than 10 priority areas. But with time it was increasingly felt that they could not neglect one crucial area: the problems related to the integration of the various programmes into one coherent management plan. The drawing up of a "Common Methodological Framework for Integrated Planning and Management of the Mediterranean Coastal Areas" as a principle activity of the PAP, had this explicit objective.

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<sup>4</sup>United Nations Conference on Environment and Development (UNCED) *Agenda 21*, Rio de Janeiro, June 14, 1992.

- *Coastal Area Management Programme (CAMP)* - The growing interest by many Mediterranean countries in the application of the above methodological framework to specific coastal areas (chosen as pilot projects) together with the request of the Executive Director of UNEP, Dr. Mostafa K. Tolba in 1987 on the relative need of re-focusing MAP's activities to integrated coastal zone planning and management saw the growing significance of the MAP's Coastal Area Management Programme. The Contracting Parties of the Barcelona Convention endorsed the programme at their 1989 and 1991 meetings. Accordingly, four CAMPs are being implemented (Syrian Coast, Kastella Bay, Izmir Bay, Island of Rhodes), while three others are in the preparatory phase (Egypt, Albania, Tunisia). The request by Algeria and Morocco to have CAMPs in their countries have already been accepted by the Contracting Parties. Moreover, it is understood that both Israel and Malta will shortly be making a formal application to the Contracting Parties for CAMPs in their countries.

## PART 2

For such sustainable development strategies to be successful, the governments of the Mediterranean need to:

- have a clearer understanding of the relationship between development and environment;
- adopt an integrated approach to the planning and management of their coastal resources;
- reflect this approach more fully in their legislation, regulations, development planning, and economic and social policies;
- apply appropriate techniques and procedures for the integrated analyses of data on land and marine resources and uses (remote sensing and GIS);
- assessing economic, social and environmental impacts, risks, costs and benefits through prospective studies, modelling, carrying capacity studies and EIAs;
- participate in the setting up of networked information systems, such as data banks, monitoring programmes, and environmental data observatories;
- strengthen and develop the policy making and decision making structure, together with the planning and management procedures and methods, through capacity building;
- **review and, where appropriate, revise the mandates of institutions (national and regional) that deal with coastal land and marine resource management to include explicitly the interdisciplinary integration of environmental, social and economic issues.**

### PART 3

Part 1 of this paper has referred to some of the many examples of the effects which development with rapid growth, but neglectful of the environment has had on resources of the Mediterranean. Governments need no convincing of the unsustainability of such types of development strategies. What they seek to know more about, are success stories of well-balanced types of development which not only respects the environment but which can show that "it pays".

Countries from the south especially need to know how they can respect the environment while reducing their *food* deficits and increase self-sufficiency - through erosion control and better irrigation programmes, and environmentally-safe productivity boosts to agriculture. Traditional *industrial sectors* need to be shown that simple and cheap ways of disposing of toxic waste may be found, that clean *technologies* are more cost efficient, that alternative sources of *energy* are not just theoretical alternatives to the dwindling supplies of fuel-wood.

Marine and land (especially coastal) resources have multiplicity of uses and purposes which are many times in conflict with one another. In turn these uses interact with one another as we have seen in part one of this paper. And yet due to the narrow specialisation of technical and professional people, the division of labour even at the decision making level, have all favoured the piecemeal approach to problem solving. This approach as applied to resource use in the coastal zones of the Mediterranean as elsewhere could never reflect fully the scarcity of natural and depletable resources in the decision making. It is only through harmonised techniques, approaches, and processes that appropriate choices could be made.

#### **Institutional Issues**

Although a separate session will address the institutional issues involved, it is appropriate to mention them briefly here, as the present topic of discussion leads to them. The experience with CAMPs over the last three years has taught us that the contracting parties in accepting UNEP's executive director's recommendation in refocusing the MAP's activities towards the integrated planning and management of the Mediterranean basin should have studied concurrently the institutional and budgetary implications arising from these initiatives. It was not right and proper that this central and all encompassing initiative be shifted on two components, which though each working in fields related directly to the subject of environment and development did not have the powers to co-ordinate the programme.

This problem begs the other central question. Was the Co-ordinating Unit, when given this onerous role of dealing with the socio-economic aspects, equipped with the professional staff in the same degree that the MAP rightly equipped itself initially when given the scientific role of monitoring and undertaking research related to pollution of the Mediterranean waters?

These considerations lead to other basic questions which it is suggested, this meeting should address: Should changes, always within the framework of the Barcelona Convention, lead to a strengthening of MAP so as to enable it to fulfil the role of a sustainable development agency and/or an overall "Mediterranean Authority" which could, through

appropriate mandates of the Contracting Parties, manage the Mediterranean environment through a commonly agreed policy and/or plan to which national governments and all administration could attune their sustainable development policies and strategies? It is obvious that the activities emanating from the Barcelona Convention or its related protocols need to be updated to the realities of our times. Present day realities must take cognisance of the Blue Plan results, the Rio summit and conference, the newly born UN Commission for Sustainable Development, the joint World Bank/EIB programme for the Mediterranean: METAP, the EBRD, and the EC's programmes on Sustainable Development and the Nicosia Charter for the Mediterranean. It is no longer a question of marginal touches here and there, but a comprehensive zero-based budgeting exercise. New political realities demand special mechanisms which will have the authority to co-ordinate effectively.

Should not, as the Secretary General of the UN, hinted recently at the last CSCE session, chapter VIII of the UN Charter be used - as, I believe, Malta has suggested - to create, for the first time, a regional Mediterranean UN entity which can be inspired and regulated, at least in its initial dispositions, from and through an expanded Barcelona Convention with terms of reference encompassing not only environment but social and economic interactions within the overall development process? Is not this the authentic spirit of the message of Rio? Can not the Mediterranean lead the world in this regard? Can we have the courage so to proceed?

The Mediterranean needs today the same type of visionaries which gave birth, with boldness and foresight, to the programmes that have been with us over the last decade and a half and which no doubt served us well during this period. The Mediterranean needs new mandates and strengthened institutional arrangements which hopefully will serve us and the generations yet to come.

**THOUGHTS AND PROPOSALS FOR  
POSSIBLE INSTITUTIONAL DEVELOPMENTS  
IN THE BARCELONA CONVENTION**

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**The Barcelona Convention After Rio: A Procedural Approach to its Development**

The 1976 Barcelona Convention and its four related Protocols - the 1976 Dumping Protocol, the 1976 Emergency Protocol, the 1980 Land-Based Sources (LBS) Protocol and the 1982 Specially Protected Areas (SPA) Protocol - comprise the legal framework of the Mediterranean Action Plan.

It is pertinent, however, that the Barcelona Convention and the regulatory environmental regime it has established, be viewed in the light of the principled directions of the Rio Declaration and the implementation of Agenda 21. It is worth stressing that the very text of the Barcelona Convention does not sufficiently reflect the component of the Mediterranean Action Plan which deals with the integrated planning of the development and management of the resources of the Mediterranean Basin, which in turn is highly relevant for any exercise of bringing the Barcelona Convention system closer to the Rio reality. In fact, the integration of development, environmental protection, and physical planning was kept beyond any explicit legal consideration to the effect that the legal norms based on an understanding of the relationship between environmental law and development law, on the one hand, and the institutional structure for their prescription and implementation, on the other hand, are missing. Furthermore, the institutional structure of the regime, only partly provided for by the Barcelona Convention, should not only be formally arranged as a whole but, more importantly, be adequately complemented by new institutions which will constructively improve its implementation and give effect, within its regime, to the "sustainable development" objective.

The more effective implementation of the concept of common heritage in the Mediterranean, already indicated in the Preamble of the Barcelona Convention, as well as of the principles concerning inter-generational equity, liability for environmental harm, common but differentiated responsibility, the relationship between environment and world trade, the "polluter pays" principle, the precautionary principle and peace and security, included in the Rio Declaration, could be procedurally approached in the context of the Barcelona Convention system. That implies that the present institutional structure of the latter, as it appears in the text of the Barcelona Convention and in other less formal texts, should be discussed so that the strategy outlined in Agenda 21, for combatting a range of identifiable problems that affect marine environment and development, will be effectively carried out in the Mediterranean context.



The need to pursue the protection and sustainable development of the marine and coastal environment and its resources and give effect to the above mentioned guiding principles, requires the examination of two questions: First, the possibility of formalizing and improving the functions of the present institutional structure; second, the possibility of developing new institutional dimensions.

The provisions of the Barcelona Convention which are relevant and should be re-examined are included in Articles 13, 14, 18, 20, 21 and 22. In addition, the elaboration of new provisions (Annex or Resolution), could be considered stating the functions of the Bureau, the two Committees as well as setting up an independent Legal Committee and an Arbitration Office for environmental disputes.

## **Improving the Functions of the Present Institutional Structure**

### **1. The Bureau**

The Terms of Reference of the Bureau are presently contained in Annex I of the Refocusing Document (UNEP(OCA)/MED IG.1/Inf.4). Its competence needs to be formalized, its Terms of Reference be carefully recast, and new provisions should be proposed to the Meeting of the Contracting Parties. Presently, its Terms of Reference unduly emphasize the co-ordinating quality of this body which may create confusion with the functions of the Co-ordinating Unit. At the same time, a number of crucial issues remain obscure:

- Recommendations to the Meetings of the Contracting Parties for admission of New Members to the Barcelona Convention system.
- Responsibility for the execution of the Recommendations of the Meetings, so that all the necessary measures ensuring the effective and reasonable execution by the MAP are taken.
- Representation of the Barcelona Convention system externally and development of relations with other relevant international organizations and bodies.
- Recommendations to the Meetings of the Contracting Parties of all reports and Proposals from the organs of the Barcelona Convention system.
- Elaboration and Proposal of policies, vis-a-vis International Economic Organizations and other regional action plans.

### **2. The Scientific and Technical Committee**

The Terms of Reference of the Scientific and Technical Committee, as well as of the Socio-Economic Committee, as contained in Annexes II and III of the Refocusing Document (op.cit.), should also be reconsidered. Should these Committees continue to deal only administratively with matters within the fields of their competence and mainly preparing the Meetings of the Contracting Parties? Or should they also be

vested with advisory functions within the field of their competence and provide assessments of the state of scientific knowledge on the relevant issues and prepare scientific assessments on the effect of the measures taken in the implementation of the Barcelona Convention system? Furthermore, should not the main task of the Socio-Economic Committee be the implementation of sustainable development projects? In the context of these questions, the competence of these Committees needs to be discussed and formalized, and new provisions should be articulated accordingly. In fact, the advisory competence of other comparable committees included in recently constituted instruments (e.g. the Subsidiary Body for Scientific and Technical Advice provided in Article 9 of the Convention on Climate Change or the Subsidiary Body on Scientific, Technical and Technological Advice provided in Article 25 of the Convention on Biological Diversity) may be instructive in this regard.

### **3. The Regional Activity Centres**

The Terms of Reference of REMPEC and of the Regional Activity Centres, as provided in Annexes IV-VIII of the Refocusing Document (op.cit.), should also be re-examined so that their co-ordination will be improved and the terms and conditions of their internal operation (e.g. procedures for recruitment, salaries, etc.) be laid down in a uniform manner. It is also important that the Host Country Agreements, concerning the Regional Activity Centres and REMPEC, should be prepared or reconsidered so that uniform terms and conditions be laid down.

In the light of the above suggestions, the formalization of the competence and functions of the Bureau, the Committees, and the Regional Activity Centres could be carried out either by an Annex to the Convention, as provided in Article 17 of the Barcelona Convention, or by a Resolution by the Meeting of the Contracting Parties.

## **Developing Legal Mechanisms**

More emphasis should be laid upon the implementation of the legal procedures of the Barcelona Convention and the establishment of a standing legal body. It is proposed that attention be paid, respectively, to the means for making operable the peaceful settlement of disputes through arbitration, and to the creation of a legal mechanism functioning on a permanent basis.

### **1. The Concept and Function of a Legal Committee**

Turning to the latter, it should be stressed that the possibility of the establishment of a Legal Committee was initially raised by the Executive Director as early as 1987. In his Report (UNEP/IG.74/3, 30 June, 1987, at 13:00), he proposed the establishment under the auspices of the Co-ordinating Unit, of a Committee of Legal and Policy Experts, representing all Contracting Parties. As is stated in this Report, the task of this Committee will be to "prepare a full Report on policies, processes and rules which significantly affect the environmental behaviour of the Contracting Parties at national and international levels," "the elaboration and the presentation of a possible Draft Convention on the Settlement of Environmental Disputes, possible Models for Bilateral

Agreements of the Protection of the Marine Environment," "and an attempt to promote the establishment of a Code of Environmental Conduct for the Protection of the Marine Environment of the Mediterranean." The Executive Director also raised the point that this Committee could operate as "an authoritative adviser to the Contracting Parties" on all issues of international environmental law which affect the quality of their co-operation within the framework of the Barcelona Convention system.

Agenda 21, Chapter 17, consistently makes the point that a centralized system should be developed to provide for information on legislation and advice on implementation of legal agreements concerning marine environmental and development issues. The corresponding lack of such a system in the Barcelona Convention is obvious and the development of an institutional mechanism to that effect should be discussed.

In light of this, the establishment of a LEGAL MECHANISM as a permanent body has its own merits. Law is an important management tool and, so far, has not been institutionalized in the context of the Barcelona Convention system. It should be pointed out that a great deal of the discussion concerning the applicability of the Barcelona Convention system and its specifications (e.g. Common Measures), as well as the degree of compliance by the Contracting Parties, is clearly due to the lack of any mechanism for providing legal advice and support to the Contracting Parties. Law itself is the primary instrument for translating policy decisions into designs for action, and institutions provide the means whereby the designs can be realized.

The development of a LEGAL MECHANISM within the framework of the MAP should be pursued by the establishment of a LEGAL COMMITTEE which will be entrusted with two kinds of functions: First, it will provide a "support" service to the Contracting Parties; second, it will offer its expert service to the Meetings of the Contracting Parties with regard to issues concerning the development and implementation of the Barcelona Convention system. More specifically:

- (i) The LEGAL COMMITTEE, within the framework of its support services to the Contracting Parties, could:
  - Improve the effectiveness of national legislation and administration for the management of marine environmental and development issues.
  - Encourage the adoption of more sustainable development-oriented laws.
  - Promote the application of law as a means of effecting sustainable development in the framework of the MAP.

The output of this support service would be:

- Legislative Information.
- Legal Studies and Guidelines on critical areas of sustainable development in the framework of MAP.

- Technical assistance to the Contracting Parties on related legal and institutional matters.
  - Training of government administrators and lawyers in legal and regulatory techniques.
- (ii) The LEGAL COMMITTEE, within the framework of its advisory services to the Meetings of the Contracting Parties, could:
- Advise on the legal and institutional developments of the Barcelona Convention system and promote the relevant international environmental laws.
  - Offer its legal advice to the Organs of MAP.
  - Consider revisions, amendments or development of new Protocols if so requested by the Meeting of the Contracting Parties.
  - Issue a biennial State of Environmental Law Report focusing on the Mediterranean.
  - Assist the Contracting Parties in the legal implementation of the Barcelona Convention system.
  - Consider ways and means for making evidence of sustainable development laws more readily available.
  - Prepare reports about violations of the Barcelona Convention system after investigating complaints from groups, individuals or states.

It is important that the members of the LEGAL COMMITTEE, unlike the other Committees of MAP, should form an independent body of five to seven members. This is required due to the undisputable political sensitivity of the legal advice, assistance and control which fall within the proposed scope of activities of the LEGAL COMMITTEE. Its members should be proposed by the Contracting Parties, be elected by the Meeting of the Contracting Parties, on the basis of the principle of equitable geographical distribution, for a fixed term and be financed by the Mediterranean Trust Fund. Once they form a body, they should act impartially and independently as an ad hoc mechanism.

## 2. Establishing an Arbitration Office for Environmental Disputes

The question of implementing the provision for the peaceful settlement of disputes through arbitration hinges on two issues: the availability of funds and the availability of structures.

- (i) Arbitration is an extremely useful mechanism in addressing questions about competing uses for scarce resources and resolving problems of conflicting values. In fact, international environmental disputes may arise over the underlying issues of science and technology, as well as over conflicting views on applicable principles and norms.

Making Article 22 (2) and Annex A of the Barcelona Convention operable would strengthen the effectiveness of the international environmental regime established therein. For this purpose, the establishment of an Arbitration Office for Environmental Disputes could be considered with a view to providing facilities for arbitration of environmental disputes between the Contracting Parties. Such an office could be administered by a body composed of one representative from each Contracting Party and chaired ex officio by the MAP Co-ordinator. Its premises, library and small staff could be in the premises of the Co-ordinating Unit. It would maintain a Panel of Arbitrators designated by the Contracting Parties and by the chairman of the Office. The recently established "International Court for Environmental Protection of the Mediterranean Sea," an international, independent, non-governmental and non-profit organization, could also be considered as a possible instrument providing facilities for arbitration in cases of disputes arising between a Contracting Party and a company or individual.

- (ii) Availability of funds is an important factor in making possible the peaceful settlement of international disputes. The lack of legal expertise or funds may be a serious impediment for the interested Parties if they want to enter into arbitration or implement an arbitration decision. In Arbitration, it is not only the cost of the arbitrators and of the maintenance of the tribunal that the parties bear, but also the costs of agents, counsels, experts, witnesses, the preparation of memorials and counter-memorials, etc. The total can be considerable.

The establishment and operation of the above mentioned Arbitration Office should be financed by the Mediterranean Trust Fund. Moreover, the Mediterranean Trust Fund should provide, in the form of financial assistance, a special chapter in the budget for expenses which may occur in connection with the arbitration procedure. For each request for financial assistance a possible procedure could be that the MAP Co-ordinator would establish a Panel of Experts composed of three persons of the highest judicial and moral standing which would 1) examine the application, 2) recommend to the MAP Co-ordinator the amount of financial assistance to be given and the types of expenses for which the assistance may be used.