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**MEDITERRANEAN ACTION PLAN**

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

Athens, 3-6 October 1989

**REPORT ON  
THE CONTRIBUTION OF MEDITERRANEAN BILATERAL AND  
MULTILATERAL PROGRAMMES  
TO THE OBJECTIVES OF THE MEDITERRANEAN ACTION PLAN**

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## I. INTRODUCTION

### A. Background

1. The Fifth Ordinary Meeting of the Contracting Parties (Athens, 7 - 11 September 1987) invited all the UN agencies, and other Organizations active in the field of bilateral and multilateral aid programmes, to provide the secretariat with information on their relevant programmes. This information was to include, as much as possible, reference to procedures, deadlines, field of application and eventual allocated amounts.
2. This information is meant to be presented as a consolidated report on measures adopted by these organizations during the previous 12-month period concerning the implementation of the Convention and related Protocols, including legislation adopted, designation of responsible services for the protection of the Mediterranean, budgetary resources and cost of programmes which would relate directly to monitoring, research, pollution control, training and public information as envisaged in Article 20 of the Convention.

### B. Objectives

The objectives of this report may be defined as follows:

- (i) to consolidate and summarize the received information on existing bilateral and multilateral programmes relevant to the objectives of the Mediterranean Action Plan (MAP),
- (ii) to update interested countries and donor agencies on the current bilateral and multilateral programmes relevant to MAP,
- (iii) to assist those responsible for marine protection and coastal development, and in particular those responsible for negotiation of bilateral and multilateral environmental programmes in the Mediterranean, on the existing areas of cooperation, potential partners, available resources, and possible sources of co-financing.

### C. The Concept of Mutual Assistance

1. The ultimate goal of the Barcelona Convention, namely the visible reversal in the state of pollution of the Mediterranean requires concrete measures - such as investment in specific action programmes. This investment can come from national sources supplemented by international and regional co-operation and assistance through appropriate bilateral and multilateral programmes.

2. In fact the Mediterranean Action Plan, as embodied in its Convention and all its protocols, is quite explicit in recognizing each individual country as a responsible agent which should undertake all appropriate measures, individually or jointly, to prevent, abate and combat pollution, and to protect and enhance the marine environment of the area (Convention Article 4). Furthermore, the Convention and all its protocols specifically request its signatories to pledge to abide by the concept of solidarity and assistance.

#### D. MAP-Related Activities

The following subject areas (items i to xvi) are arranged in accordance with the MAP structure, and were recommended as suitable for bilateral and multilateral assistance by the meeting on cooperation (Brussels, October 1984). Additional items (xvii to xxv) were included in the Genoa Declaration adopted in 1985:

- (i) Legal Aspects of the Protection of the Marine and Coastal Environment
- (ii) Marine Research and Monitoring
- (iii) Combatting Marine Pollution by Oil and Other Harmful Substances in Cases of Emergencies
- (iv) Port Reception Facilities for Wastes from Ships
- (v) Training in Environmental Management
- (vi) Data Banks on the Marine and Coastal Environment
- (vii) Public Information Programmes Concerning the Protection of the Marine and Coastal Environment
- (viii) Water Resource Management, including Islands and Water-Deficient Coastal Areas
- (ix) Regional Planning of Coastal Areas
- (x) Rehabilitation and Reconstruction of Historic Settlements
- (xi) Collection and Disposal of Liquid and Solid Waste and for the Design and Installation of Water Treatment
- (xii) Aquaculture Projects
- (xiii) Soil Protection in Coastal Areas
- (xiv) Impact of Tourism on the Marine and Coastal Areas
- (xv) Renewable Sources of Energy (particularly solar and wind projects on islands and coastal areas)
- (xvi) Protection of Endangered Marine Animals and Plants in the Mediterranean
- (xvii) Improved Safety of Maritime Navigation
- (xviii) Prevention of Desertification
- (xix) Reduction of Industrial Pollution
- (xx) Reduction of Air Pollution
- (xxi) Prevention and Combatting of Forest Fires
- (xxii) Promotion of New Techniques and Development of Networks of Interested Institutions for the Exchange of Information on the Protection of the Marine and Coastal Environment in the Mediterranean

- (xxiii) Environmental Impact Assessment
- (xxiv) Land-Use Planning in Earthquake Zones
- (xxv) Management of Toxic Wastes

#### E. Multilateral Agencies

1. The interest of the specialized multilateral agencies of the United Nations in the protection of the Mediterranean is best exemplified through their programme of cooperation with UNEP since the inception of the Mediterranean Action Plan.
2. Besides these programmes of cooperation within the MAP programme, the special agencies of the United Nations are also assisting the Contracting Parties of the Mediterranean through a variety of global, regional and country programmes which, though in most instances do not have a specific Mediterranean regional dimension, do tend to obtain and supplement the objectives of the Action Plan.
3. Perhaps the four more obvious examples of multilateral organizations giving explicit recognition to the Mediterranean as a region with regards to the environment are UNEP, through its Regional Seas Programme and Clearing House Unit, the ECE, the World Bank and the EEC.
4. **UNEP's Clearing House** role is to work with requesting governments in the articulation and formulation of their needs and to maintain such links with donor countries so as to facilitate the negotiation of project agreements between the requesting country and the donor. The Clearing-House will undertake such assistance in very close collaboration with the technical units concerned in UNEP, and in particular with the Mediterranean Coordinating Unit.
5. The **Economic Commission for Europe (ECE)** and its Principal Subsidiary Bodies pay particular attention to projects and activities of interest to the Mediterranean countries of the ECE region. Conscious that the ECE has a useful role to play with respect to further development of economic co-operation in the Mediterranean in the light of the Final Act of the CSCE, the Commission at its 44th session took note with satisfaction of the provisions of the Vienna Concluding Document, providing inter alia for the convening of a meeting on the Mediterranean in Palma de Mallorca in 1990 to which the ECE has been invited.

The Commission further took note of the encouraging and constructive contribution from the Mediterranean countries as well as from the Economic Commission for Africa (ECA) and the Economic and Social Commission for Western Asia (ESCWA) in enhancing economic co-operation in the Mediterranean. The Executive Secretary of the ECE is further to undertake a study on areas of co-operation already identified in order to lead, where appropriate to an action which fully corresponds to the needs expressed by the Mediterranean countries.

The Executive Secretary of the ECE was also requested to pursue his contacts with the other Mediterranean countries not members of the ECE, on subjects within the competence of the ECE of common interest to Mediterranean countries.

6. The **World Bank** too, through its Environmental Programme for the Mediterranean (EPM), has announced that it is concentrating its resources to complement and reinforce the ongoing efforts of the Mediterranean Action Plan. This it hopes to carry out in conjunction with the **European Investment Bank**. This effort is made up of these elements (a full report by the World Bank is to be submitted by September, 1989):
  - (i) A review of investment needs and priorities of direct relevance to pollution reduction. Such investments mainly comprise those relating to appropriate treatment of urban sewage and other wastes, control of industrial discharges (air, liquid and solid wastes), and other sources including agricultural run-off, and discharge from ships, either at port or at sea.
  - (ii) The review would also take account opportunities to improve the environment through such activities as afforestation to counter erosion and desertification, protection of Mediterranean flora and fauna, and preservation of antiquities.
  - (iii) In the light of investment needs and priority actions, an assessment of roles and responsibilities of public and private sectors, taking into account both the various types of investments needed, and the scope for incentives, regulation and pollution charges, and legal and institutional factors.
  - (iv) Based on the above and, in the light of domestic resource availability and competing needs, the programme would consider and make recommendations regarding the role of international financing, particularly for the poorer members of the Mediterranean community, with attention to additionality of resources, possible grant elements and shifting the financial burden to the sources of pollution.
7. The **European Economic Community's (EEC)** environmental policy is mainly focused at keeping a balance between economic growth and the protection of the environment. The first four-year action programme was followed by second and third programmes, and a new programme, the fourth - to run for six years from 1987 to 1992 inclusive - is now being implemented. The special programmes of relevance to Mediterranean countries include the Strategy and Plan of Action of the Mediterranean Environment (MEDSPA), Community Action in favour of the environment (ACE), and co-operative programmes by the Community and the individual member states with third world countries in the Mediterranean region.

#### F. The Survey

1. It is important to note that this report does not pretend to contain a comprehensive data base on all projects. The informations shown herein is based on replies sent in by responding agencies. The replies vary in detail: some have been very comprehensive with detailed project by project account, while others have been more generic and sketchy.
2. The report is based on the replies given in by the following Organizations and Agencies:

- (i) Economic Commission for Europe (ECE) - United Nations
  - (ii) United Nations Development Programme (UNDP)
  - (iii) United Nations Centre for Human Settlements (UNCHS/Habitat)
  - (iv) United Nations Environmental Programme (UNEP)
  - (v) Food and Agricultural Organization (FAO)
  - (vi) Intergovernmental Oceanographic Commission of UNESCO (IOC)
  - (vii) World Health Organization (WHO)
  - (viii) World Meteorological Organization (WMO)
  - (ix) World Tourism Organization (WTO)
  - (x) International Maritime Organization (IMO)
  - (xi) European Economic Community (EEC)
  - (xii) Arab League Educational Culture and Scientific Organization (ALECSO)
  - (xiii) International Telecommunication Union (ITU)
3. Most of the programmes of the agencies are conducted in co-operation with other agencies, and when this was not indicated in the replies, a certain degree of double-counting could have been introduced.
4. The survey does not include any participation in MAP programmes which are paid for by the Mediterranean Trust Fund.
5. The survey does not cover the global programmes of the international agencies and organizations, which although might be very relevant to the Contracting Parties in terms of some objectives of the Action Plan, cannot be identified with the confines of the Mediterranean Region.
6. As far as could be ascertained from the information received only those projects which were on-going as at the end of 1988 were included in this report.

## **II. Legal Aspects of the Protection of the Marine and Coastal Environment**

1. Appropriate legislation is considered as one of the important measures of the Convention which the Contracting Parties agreed to take in order to abate, combat and control pollution in the Mediterranean. Various programmes explicitly or implicitly provide expertise in the drafting of laws and regulations related to the protection of the coastal and marine environment. What is required are expertise to advise on drafting of national legislation and regulation to implement international agreements and fellowships to train legal officials in areas related to environmental law.
2. The ECE's programme element (09.6.1) concerns the establishment and updating of general rules for the transport of dangerous goods within the framework of the Economic and Social Council's Committee of Experts. Most other sub-programmes dealing directly and indirectly with the environment implicitly aim at assisting policy makers also in this regard.

3. The legal department of **FAO** is now preparing a compendium of fisheries laws and regulations in the various Mediterranean countries.  
It is also assisting the General Fisheries Council for the Mediterranean as well as individual Mediterranean countries on fisheries law.

### **III. Marine Research and Monitoring**

1. More than 200 scientific groups belonging to 83 institutions from 16 countries bordering the Mediterranean participate in the MEDPOL activities. This regional effort gives an indication of the potential for marine research in the Mediterranean.
2. In the framework of existing National Monitoring Agreements, and in consultation with the official National MED Pol Co-ordinator this area requires experts to advise on specific aspects and techniques of monitoring, training for national marine scientists, new analytical instrumentation, marine research vessels and related equipment in order for the institutions to fulfill their task.
3. **UNEP** contributed in part towards the cost of the following Med Pol studies of the MAP:
  - (i) MED I (5102-75-01);
  - (ii) MED V (5102-76-03) project on baseline studies and monitoring of oil and petroleum hydrocarbons in marine waters;
  - (iii) MED VII (5102-76-05) project on coastal water quality in the Mediterranean;
  - (iv) MED XI (5102-76-04) on problems of coastal transport of pollution;
  - (v) MED XIII (5102-76-09) project for biogeochemical studies of selected pollutants in the open waters of the Mediterranean;
  - (vi) Assistance to national institutions in support to the implementation of the MED POL;
  - (vii) Support to the implementation of MED POL phase II;
  - (viii) Support (5102-83-05) to the Regional Activity Centre for the Priority Actions Programme (PAP);
  - (ix) Compendium of projects and institutions concerned with some of the PAP activities (5102-82-01).
4. A **UNDP** country project in Greece (GRE-77-005) gave technical assistance to the Institute of Oceanographic and Fisheries Research.
5. **FAO's** contribution in this sector with regards to national projects is as follows:
  - (i) Feasibility of marine fish farming in Libya.
  - (ii) Managing the biological resources of the Adriatic Sea in Yugoslavia
  - (iii) Assistance in the management and development of marine fisheries in Morocco.
  - (iv) Assistance to the National Office for Fisheries of Tunisia.



6. The **IOC** through its regular GIPME programme funded through the regular budget and other budgetary sources contribute to the MedPol programme with regard to marine pollution research and monitoring programmes.
7. Research and Training workshops such as on modelling parts of the Mediterranean for monitoring transfer and transport of pollutants are carried out by **IOC's** interregional activities.
8. In co-operation with **WMO**, a Mediterranean Meteorology Emergency Centre is being established in Italy within the framework of the activities of the World Laboratory to make available specialized products relating to emergencies of a meteorological nature. The Centre will also carry out an intensive programme of measurements and studies destined for the protection of the coastal marine environment of the Southern Mediterranean including the study of marine wave fields, of the currents and the diffusion of polluting agents.

#### **IV. Combatting Marine Pollution by Oil and Other Substances in Cases of Emergencies**

1. The possibility of a massive oil spillage in the Mediterranean has always been preoccupying due to such factors as significant oil traffic, increased size of tankers sailing in the region, the development of new oil terminals, as well as offshore exploration and exploitation.
2. The Regional Oil Combatting Centre in Malta, set up since 1976 by the Contracting Parties, provides advice or arranges for advice to be given, to develop national capabilities to deal with cases of emergencies.
3. Operational intervention to salvage ships is available through costly private companies, and not on a country-to-country basis as foreseen by the Protocol on Emergencies. There is further need of supplies and equipment to be placed at the disposal of developing countries at their request in case of emergency, expertise to advise in cases of emergencies, fellowships to train specialists in the use of appropriate equipment, and modern naval and aerial means of intervention
4. **UNEP** contributed towards the cost of MED XII project (5102-76-06) for the MAP's Regional Oil Combatting Centre for the Mediterranean.
5. **WMO**, through the Commission for Marine Meteorology, is developing a co-ordinated global system for the provision of meteorological support in response to marine pollution emergency operations. This system will include at least one component for the Mediterranean and will be developed and operated in co-ordination with IMO and UNEP.

## **V. Port Reception Facilities for Wastes from Ships**

1. Statistical prospects indicate that the volume of oil traffic in the Mediterranean will be increasing in the years to come. Since the technology of oil transported by sea is still unsatisfactory, and since it is these technological deficiencies (apart from accidents) which cause the greatest pollution, this problem requires an adequate and immediate attention.
2. Results of two **UNEP/IMO** and **EEC/UNEP** projects on the availability of port reception facilities in Mediterranean completed in 1979 concluded that some US\$ 145 million was required to be spent in providing waste oil and oil-ballast reception facilities in Mediterranean ports to the standard called for by the 1973 MARPOL Convention.
3. Following the adoption of the Genoa Declaration at the Fourth Ordinary Meeting of the Contracting Parties, the **EEC** has embarked on a programme to re-fit and make operational all its fixed port reception facilities. Pilot projects in Yugoslavia (Rijeka), and Greece (Patras) have already been approved. Further projects in Tunisia (Tunis-La Goulette) and Egypt (Port Said) are also being prepared. The financial contribution for three of the projects (Yugoslavia, Tunis and Egypt) amounts to 600.000 ECU, whilst that for Greece is 168.000 ECU.
4. The **EEC** is also financing the equipment on board the ECOMAR (the floating reception facility at Rijeka) for the combatting of accidental marine pollution.
5. A policy decision to re-fit and make operational all its fixed port reception facilities was made by Algeria in 1986.

## **VI. Training in Environmental Management**

1. There is a general awareness among Contracting Parties that while environmental problems in the Mediterranean have increased in complexity, there is a relative lack of professional resources which can deal with these problems and prevent their occurrence.
2. The kind of professionals needed in the area of environmental problems require training which will help them understand and manage multidisciplinary relationships shared by scientists and technologists, on the one hand, and the political decision makers on the other. Environmental management training (including the use of Environmental Impact Assessment) has today to be supplemented with the trained use of the modern technology including satellite and remote sensing data collection for coastal management.
3. The **ECE** will hold a Seminar on Economic Implications of Low Waste Technology in The Hague (Netherlands), 16 to 19 October 1989. It will also organize a Symposium on Improved Irrigation Practices to Preserve and Protect Water Resources and Increase Crop Yields in Avignon (France), 25 to 29 September 1989.

4. The **UNDP** is financing a regional environmental management training centre for the Mediterranean situated in Malta and which is to be executed by Unesco (\$200,000).
5. **UNESCO** has various training programmes in the area of environment and development of coastal areas and islands in the Mediterranean. Comprehensive country projects with regional participation of experts are being undertaken in Greece (Castoria), Italy (Otran), and Yugoslavia (Losinj island).
6. **UNESCO** is also undertaking a European regional project with the EEC's Erasmus post-graduate studies programme in providing exchange of students in Greece, France Italy and Spain in the area of environmental management of coastal zones and islands in the Mediterranean.
7. The **EEC** has financed four training programmes in the area of management of water treatment plants.

#### **VII. Data Banks on the Marine and Coastal Environment/**

#### **VIII. Promotion of New Techniques and Development of Networks of Interested Institutions for the Exchange of Information on the Protection of the Marine and Coastal Environment in the Mediterranean**

1. The 1984 Extraordinary Meeting of the Contracting Parties several delegations called for the strengthening and harmonization of the information exchange activities. Since then more technical data, bibliographies and newsletters have been produced. However, still more needs to be done. Equipment, expertise and training on the use and transmission of such data bases is required.
2. The **ECE's** sub-programme on methodological development and harmonization of environment and related statistics (12.5) deals with relevant indicators of member countries but also promotes bilateral and multilateral projects in the field of environmental statistics.
3. The Compendium of Low-and Non-Waste Technology, containing some 160 monographs of environmentally sound technology prepared under the auspices of the **ECE**, has been entrusted by the Commission to the Geneva-based International Environmental Bureau of the International Chamber of Commerce for further action.
4. In the field of information, **FAO** in collaboration with **IOC/UNESCO** and the UN produces a bibliographic data base that covers the world literature on the science, technology and management of marine and freshwater environments.
5. **FAO** has since 1970 been producing a database of fish catches and landings. The printed yearbook is distributed to all governments.
6. **FAO** published an updated version of the identification sheets for Mediterranean fish.

7. **WHO** has a project in Morocco in connection with the establishment of a training centre for the water technicians and sanitary engineers.
8. **ALECSO** has a programme whose aim is to create a network of information and action programmes among the arab countries of the Mediterranean for the protection and development of the region.
9. Telecommunication Facilities are taking an increasing important role in the co-operation effort between group of countries. In the scope of activities called for by MAP, the **UNDP/ITU MEDARABTEL Project** (RAB/83/011 and RER/85/003), since its inception in 1974 and up to its last phase successfully accomplished by the end of 1987, contributed largely to providing 13 Arab and European countries bordering the Mediterranean with modern telecommunication facilities resulting in automated telephone dialing, telex service and television programme exchanges between them.

#### **IX. Public Information Programmes Concerning the Protection of the Marine and Coastal Environment**

1. The Contracting parties have agreed to "endeavour to inform the public as widely as possible of the significance and interest of the protected areas and of the scientific knowledge which has been gained from the programmes of the Coordinating Unit and Regional Activity Centres. Such information should have an appropriate place in education programmes in schools and on the media. For this to succeed, joint production of films on the marine and coastal environment, as well as exchange of television material are required.
2. **UNEP's** project (3103-86-03) for Arab States assists on an environmental information centre. Another project (3103-86-09) is the **UNEP/al Ahram Regional Media Programme** in Egypt.

#### **X. Water Resource Management, including Islands and Water-Deficient Coastal Areas**

1. Water shortage is endemic in some Mediterranean countries, with near-crisis features observed in some areas during certain periods of time. The lack of fresh water imposes constraints to economic and social development of coastal areas and islands. The long-term objective of any project in this area is to assist interested Contracting Parties in managing efficiently their scarce water resources.
2. The **ECE** sub-programme 05,5 provides a platform for inter-governmental co-operation in the field of water management. In April 1989 the ECE adopted a Charter on Ground-Water Management. Recommendations to ECE Governments were endorsed on dam safety with particular emphasis on small dams. A code of conduct on accidental pollution of transboundary inland waters is being elaborated as is a concept on responsibility and liability

regarding transboundary water pollution. Work is currently under way to develop an ecosystem approach to water management as well as to promote optimal water management of small catchments.

3. A **UNDP** regional project which refers to the 1982/86 cycle (RAB-80-011) recently terminated concerned water resource management in the Arab region.
4. **WHO's** projects in the area of water resource management are being implemented in Albania, Algeria, Egypt, Israel, Malta, Morocco, Syria and Tunisia.
5. The **EEC** programme for the efficient management of water resources including the treatment and re-use of water in France, Greece, Italy and Spain - 500.000 ECU.
6. Working Groups on Hydrology were established within the WMO Regional Associations VI (Europe) and I (Africa) to deal with requirements for hydrological networks and forecasting, application of hydrometeorological data to environmentally sound management of water resources, hydrological aspects of the World Climate Programme and the use of remote-sensing techniques for precipitation assessment.

#### **XI. Regional Planning of Coastal Areas/**

#### **XII. Land Use Planning in Earthquake Zones**

1. Supported by the results of the Blue Plan, many Mediterranean countries are now aware that some of their coastal zones have nearly reached full saturation levels and are therefore anxious to learn how to manage their coastal areas more rationally. Training and expertise are required in carrying out regional planning of coastal areas. Assistance in this area is required in order to assess the present use of the coastal areas and consequences arising from it and to plan and implement more rational alternatives.
2. A specific and relevant aspect of coastal planning for the Mediterranean concerns the earthquake zones. A regional project, developed by PAP/RAC in collaboration with UNDRO, HABITAT, and UNESCO, with UNDP support in financing and execution. The project is being hosted and co-financed by Italy.
3. A Seminar on Prediction of Earthquakes held in Lisbon (Portugal) in November 1988 recommended that follow-up action be taken within the framework of **ECE**. The Commission at its 44th session requested the Senior Advisers to ECE Governments on Science and Technology to convene an ad hoc meeting of experts to formulate concrete proposals in particular on the possibilities of:

- i) establishing a network of appropriate bodies at national level in the field;
  - ii) setting up of test sites;
  - iii) convening of an international meeting of experts on earthquakes prediction, monitoring facilities and techniques in the USSR in 1991.
4. The **ECE's** sub-programme on integrated settlements and related current trends and policies includes an element (08.1.3) specifically on human settlements problems in southern Europe. Furthermore, its sub-programme on economic development, problems and prospects in the ECE region contains a project on the development and migration in southern Europe. This project (01.2.2) is carried out in collaboration with the UN Fund for Population Studies (UNFPA).
5. The **UNCHS** country projects on human settlements planning and management during 1985-1987 have been as follows:
  - (i) Algeria with four projects:(ALG/80/013) contributing towards research programme of CNERIB; (ALG/82/026), (ALG/84/FO1) and ALG/86/018) for the planning of Chlef.
  - (ii) Libya (LIB/76/X72) and (LIB/82/XO5) for the strengthening of regional physical planning.
  - (iii) Tunisia (TUN/85/FO1) and (TUN/86/009) for the mapping of regional archeological sites.
  - (iv) Cyprus (CYP/82/007) and (CYP/81/007) regarding the Nicosia Master Plan and the plans for other towns respectively.
  - (v) Yugoslavia (YUG/79/104) regarding the preparation of physical plans for 20 communes of Montenegro. The study is relevant for other earthquake-effected zones.
  - (vi) Turkey (TUR/83/021-FO2) provides a pilot scheme on integrated low-cost urban housing in Batikent and Ankara.
6. These country programmes are financed by the UNCHS or by UNDP or even through Funds-in-Trust.
7. **UNEP's** contribution to the African member states regarding integrated approaches to environment and development included the African Conference on Environment (2101-82-03).
8. **UNEP's** country project in Cyprus (2102-85-01) on strengthening of institutional capabilities for environmental planning and management for development.
9. **UNESCO's** projects in this area are:
  - (i) Rational and ecologically sound development of small Mediterranean islands with special reference to the island of Minorca in Spain
  - (ii) Integrated planning and management of coastal areas with special reference to the Aeolian island archipelago, Italy
  - (iii) Seismic risk mitigation in the Mediterranean region (SC/TER)

10. The **EEC** is contributing financially to first phase of the integrated management programme of the Kastela Bay (Yugoslavia).
11. **ALECSO's** contribution to the study of integrated management of coastal areas for the years 1988 and 1989 is 15,535 Dollars.
12. **ALECSO** also supports the Arab countries' contribution in the field of earthquake risk management - 12,845 Dollars during the bi-annual period 1988/89.

### **XIII. Rehabilitation and Reconstruction of Historic Settlements**

1. The tension existing between the requirements of protection of historic heritage and the demands of contemporary life is very real for most Mediterranean towns. Besides funds there is a dire need of scientific know how and exchange of experiences in this unique area of rehabilitation and reconstruction of historical sites.
2. With the adoption of the 100 historic centres of interest in the Mediterranean by the Contracting Parties, the need for experts and training will be more underlined. The criteria and proposed list has been prepared by the International Council of Monuments and Sites (ICOMOS) and has been approved at the Fifth Ordinary Meeting of the Contracting Parties (Athens, September 1987). Furthermore, officials responsible for historical sites have met in Marseilles (France), June 1989 to accept the guidelines and form the necessary network. Marseille will be hosting the project.
3. **UNESCO** through its Science sector and MAB has a programme of training in the area of ecologically sound rehabilitation of Mediterranean historic settlements. At present it is undertaking a project in Rhodes, Greece.

### **XIV. Collection and Disposal of Liquid and Solid Waste and the Design and Installation of Water Treatment Plants/**

#### **XV. Management of Toxic Wastes/**

#### **XVI. Reduction of Industrial Pollution**

1. Projects in this area are intended to help achieve the goals of the Protocol for the Protection of the Mediterranean Sea against pollution by decreasing the amount of liquid and solid waste discharge in the sea directly or through coastal rivers. Industrial pollution and the management of toxic wastes are also treated under this section.
2. Assistance in this area may include the provision of experts and training on the appropriate technologies for the management and maintenance of treatment plants and solid waste collection and disposal programmes.
3. An inventory of treatment plants in Mediterranean coastal cities, carried out in 1985 by the Intermunicipal Secretariat for the protection of the Mediterranean, Barcelona, is available.

4. The **ECE's** sub-programme on chemicals (03.4) deals specifically with environmental and resource issues in the chemical industry.
5. The **ECE's** sub-programme 05.4 includes several elements on low- and non-waste technology and re-utilization and recycling of wastes
6. The **ECE's** programme 06.5 on Electric Power and the Environment two programme elements include:
  - (i) Methods of purifying waste water from thermal power stations, and
  - (ii) Implications of climatic changes induced by carbon dioxide (CO<sub>2</sub>) for electricity production using nuclear and fossil-fuel-fired plants.
  - (iii) The various ECE activities under programme 05 on Environmental and Water Problems are undertaken with a view inter alia to promote prevention and control of industrial pollution.
7. Another **ECE** project (13.4.1) deals with the protection against air and water pollution from the iron and steel industry.
8. An **ECE** Seminar on Waste Water Management will be convened in Munich (Federal Republic of Germany) in May 1990. ECE Government rapporteurs are currently elaborating a draft outline for a report on Water Quality Objectives and Criteria as well as on Protection of Lakes and Reservoirs against Eutrophication (programme elements 05.5.5 to 05.5.7).
9. Under the auspices of ECE, work is streamlined and strengthened in the area of Low-Waste Technology and Waste Management (05.4). Policies, strategies, practices and technologies for recovery, recycling and re-utilization of industrial wastes (05.4.2) are being reviewed and recommendations drawn up. A work plan on hazardous waste management has been approved for implementation at a future date. The relevant programme elements deal with hazardous waste management legislation (05.4.4), regulations, names and standards for hazardous-waste facilities (05.4.5), status-of-the-art technology in hazardous waste management (05.4.6) and Policies and strategies for hazardous waste management (05.4.7).
10. **ECE** work on the project "Environmental Planning and Management: Air Pollution" (RER/87/010) is continued with the financial support of UNDP. The focus of the project is on technologies for air pollution abatement, with sub-programmes on low emission combustion processes (lead country: Yugoslavia), by-product utilization and disposal (lead country: Malta), flue gas treatment and fuel treatment.
11. A **UNDP** regional project (RER-82-002) which is of interest to twelve European countries, six of whom border the Mediterranean is the control of production of toxic chemicals in the environment (\$500,000).



12. Two **UNDP** country projects in the treatment and re-use of water are in Malta (MAT-78-006) and in Albania (ALB-87-001).
13. A **UNDP** country project in Algeria (ALG-80-009) concerns the management of solid wastes.
14. **UNDP's** regional project in Europe is intended to enhance the water quality of the river Danube.
15. **WHO** is undertaking projects in the following countries as described:
  - (i) Albania - wastewater treatment
  - (ii) Albania - industrial toxicology
  - (iii) Algeria - solid waste disposal
  - (iv) Algeria - technology transfer for urban and industrial liquid waste disposal
  - (v) Cyprus - solid waste disposal
  - (vi) Egypt - waste collection and disposal
  - (vii) Egypt - waste stabilization ponds
  - (viii) Libya - solid waste disposal
  - (ix) Malta - development of a national monitoring system for industrial waste disposal
  - (x) Syria - solid wastes disposal
  - (xi) Tunisia - solid wastes disposal
  - (xii) Turkey - solid wastes management
  - (xiii) Turkey - sewerage and sewage treatment in urban areas
  - (xiv) Yugoslavia - waste disposal
  - (xv) Yugoslavia - environmental protection related to the development of large scale mineral exploitation
16. The **EEC's** programmes in the Community are the following:
  - (i) A campaign for the retrieval of used oil (France) 42.500 ECU.
  - (ii) The collection of used batteries in Reggio Emilia (Italy) 40.000 ECU.
  - (iii) Treatment of waste (Italy) 137.400 ECU.
  - (iv) The recycling of urban solid waste (Italy) 115.000 ECU.
17. The **EEC** is contributing about 300.000 ECU to two sewage treatment installations (pilot projects) in Algeria (Zeralda) and in Yugoslavia (Trogir).

## **XVII. Aquaculture Projects**

1. Aquaculture has a special significance in the Mediterranean, because of the very limited potential for capture fishery development and steadily increasing demand for sea food in the countries of the region. Projections made by FAO/UNDP/UNEP indicate that there is a great potential for aquaculture production. To achieve the desired increases, a high degree of regional co-operation, mobilization of national resources and external support are required.

2. A regional aquaculture project (MEDRAP) developed in the framework of the Action Plan and financed by the UNDP with the support of FAO and other countries including the EEC, was completed in December 1986. For MEDRAP phase II **UNDP** has earmarked US\$ 3,200,000 (April 1989 - March 1993). The Italian government has agreed in principle to finance a US\$ 5 million programme for the development of aquaculture in the Mediterranean (AQUAMED) which is designed to be complementary to MEDRAP II (duration 3 years).
3. **UNDP** and the government of Libya have agreed to finance a FAO executed cost-sharing project on marine fish farming in Libya, starting with the construction of an intensive culture system for sea bass and sea bream (US\$ 2,600,000 plus LD 1,670,000 for a duration of 4 years).
4. A **FAO/UNDP** country project in Greece (GRE-85-002) assisted in the development of marine and inland aquaculture.
5. **UNESCO** has a project of training in the field of aquaculture management and the environment in the Mediterranean

#### **XVIII. Soil Protection in Coastal Areas /**

#### **XIX. Prevention of Desertification**

1. The lack of adequate soil protection in many of the Mediterranean coastal areas together with the expanding desertification process in the Southern parts of the region will be expanding the excessive food shortage in the Mediterranean for the years to come. Expertise and training is required to understand the status and trend of the process, together with the better management of the scarce resource. The implementation of a plan of action in combatting the threatening desertification requires co-operative programmes between countries.
2. The **ECE** sub-programme 02.3 on economic and technical issues in agriculture includes such element as: land use, soil fertility, water and crops as well as agriculture and environment.
3. **UNEP** funded in part a scientific round table on climate and drought in Africa for that region (4102-84-01).
4. **UNEP** also supports NGO's network to combat desertification through project (6201-86-02).
5. **UNEP** in conjunction with UNESCO (MAB) contributes toward funding of a project (6201-78-01) on arid lands in Tunisia. Also with UNESCO is project (6201-85-03) on desertification control in Southern Tunisia.
6. Other **UNEP** projects are (6201-81-01) assisting the Tunisian government in creating awareness in respect of desertification controls at Bir Lahhar Perimitre, and (6201-86-01) which provides assistance on pilot project for the creation of a seed bank and promotion of revegetation activities in Southern Tunisia.

7. The **UNDP** has earmarked a regional project on land-use practices and for the protection of surface and ground water.
8. **FAO** is cooperating with PAP/RAC in the preparation and execution of a project on an inventory and network of soil erosion measurement for environmentally sound land management. In the framework of this collaboration joint missions were undertaken to Mediterranean countries. Spain is hosting the present phase and, by agreement, EEC (Corène methodology), ISRIC (Glasod), University of Amsterdam and ACSAD along with various institutes in Mediterranean countries are currently participating in mapping and measuring exercises.
9. **WMO**, through the World Climate Programme, has several activities related to drought and desertification. Through the Commissions on Climatology and Agriculture, Rapporteurs are appointed to review development in this area and propose actions that could be taken in order to mitigate the impact of droughts and desertification.

## **XX. Impact of Tourism on the Marine and Coastal Areas**

1. Contracting Parties are seeking alternative development strategies to manage better the ever increasing demands made by tourism on Mediterranean coastal areas and islands and in turn on the tourist industry itself.
2. The **UNDP** has earmarked a regional project of training and exchange of information on tourist development in the Mediterranean.
3. **UNESCO** is conducting a programme of training in the area of tourism and the environment in the Mediterranean.
4. At present the **WTO** is providing assistance on tourism planning in the following Mediterranean countries:
  - (i) Cyprus - this is a six month UNDP technical cooperation project with the aim of preparing a comprehensive tourism development plan. (\$80,000)
  - (ii) Greece - a technical cooperation project with a US\$15,000 budget resulted in a draft project document on winter sport tourism planning in Arcadia and Evritania provinces with a proposed budget of US\$110,000. Environmental considerations are part of the project
  - (iii) Malta - a sectoral support mission was fielded in May 1987 and resulted in a draft project document for the formulation of a tourism master plan. The proposed budget is US\$172,000 and environmental considerations form an important part of the Plan.

### **XXI. Renewable Sources of Energy (particularly solar and wind projects on islands and coastal areas)**

1. Projects in this area are expected to contribute to the building up and strengthening of national and regional institutions active in the development and deployment of technologies in for harnessing renewable sources of energy.
2. A regional programme proposal developed by the Action Plan in co-operation with UNDP, national experts and consultants has been completed.
3. The **ECE** Project on Energy Efficient Buildings, aimed at improving energy efficiency and solar applications, especially in **ECE** member countries in the Mediterranean region, was launched in 1988 with the financial support of **UNDP**.

The International Mediterranean Congress on New and Renewable Energy Resources (Antalya, Turkey, November 1988) at which the ECE secretariat was represented, provided an opportunity to present the findings of the ECE Symposium on New and Renewable Sources of Energy (held in 1987) and its recommendations for the development and use of NRSE. The Mediterranean countries attending the Congress showed interest in this information and in establishing closer co-operation in NRSE in the Mediterranean region.

4. A joint Euro-Arab **UNDP** programme with the World Bank as principal consultants will study the connection between energy supply, use and the environment.
5. **FAO/UNDP** projects on "Development of integrated rural energy systems" are being conducted in Yugoslavia and Greece; while another project on "heating of greenhouses by solar energy" is being implemented in Turkey.
6. **WMO**, through the World Climate Programme, supports development of national climatological data bases (CLICLOM) necessary for solar and wind energy prospecting and development and several expert missions and seminars have been arranged. A Commission for Climatology Working Group on Energy and regional rapporteurs follow the development and advise on programme activities.

### **XXII. Protection of Endangered Marine Animals and Plants in the Mediterranean**

1. Marine mammals in the Mediterranean are being increasingly threatened to the point (in some cases) of extinction. Many plants on islands and coastal areas are facing a similar fate. In view of the migratory habits of many marine fauna and biotopes co-operation between countries is essential to the success of conservation and management of these species. Co-financing of costs for newly established marine protected areas is required.

2. The Regional Activity Centre for Specially Protected Areas in Tunis is developing the criteria and a list of recommended areas for protection in the Mediterranean. The **Genoa Declaration** requires that by the year 1995 such fifty new areas are protected. It also requests specific programmes for the Mediterranean monk seals and sea turtles.
3. Work is under progress under the auspices of the **ECE** on approaches, methods and techniques for monitoring flora, fauna and their habitats (05.6.1) as well as on the assessment of the status of rare, endangered and migratory species in Europe (05.6.2). A group of designated experts met in La Laguna (Spain) from 16 to 21 January 1989 to prepare a European Red List of Threatened Animals and Plants together with recommendations for their application on national and international levels as well as a conceptual framework on species of particular conservation concern in Europe. A study of the relationship between economic activities and conservation of flora, fauna and their habitats is under preparation (05.6.3).

A seminar was jointly sponsored by the ECE Timber Committee and the FAO European Forestry Commission and in co-operation with FAO's Committee on Mediterranean Forestry Questions - *Silva Mediterranea*, in Italy in September 1988 on the products of the Mediterranean forest, at which special attention was given to the production and marketing of cork, resin, mushrooms, honey and other edible products, fodder, etc. as well as wood. It concluded that these products have the potential to make an important contribution to the livelihood of rural populations and efforts should be strengthened to encourage their production.

4. **UNEP's** regional project (6105-82-01) for Africa executed by FAO assists in the publication of a quarterly bulletin *Nature et Faune* on wildlife, national parks and wildland conservation and management in Africa.
5. **UNEP's** project (5103-85-06) contributes to the study of the biological requirements and establishment of critical habitats for the monk seals *Monachus monachus*. The countries included in the programme are Turkey, Yugoslavia, Greece, Algeria and Morocco.
6. The **EEC's** contribution to the protection of natural sites totals around 818.273 ECU as follows:
  - (i) Restoration and protection of St. Lucie island (France) - 36.640 ECU.
  - (ii) Restoration of mountain lake in Corsica (France) - 29.313 ECU.
  - (iii) Integrated Management Plan for the natural resources of Asinara (Italy) - 55.000 ECU.
  - (iv) Management of sandy coastal zone at Fondi (Italy) - 150.000 ECU.
  - (v) Integrated management of natural site at Calblanque (Spain) - 100.000 ECU.
  - (vi) Protection of marine reserve at Tabarca - Alicante (Spain) - 29.000 ECU.
  - (vii) Management of marine parks - a case study of the Sporades Islands (Greece) - 270.000 ECU.

7. The EEC's contribution to programmes aimed at the conservation of endangered species is slightly less than one million ECU's and is distributed as follows:
  - (i) Programme for the protection of the monk-seal in Italy - 83.062 ECU.
  - (ii) Establishment of a marine reserve for the protection of the monk-seal in the North Sporades (Greece) - 192.000 ECU.
  - (iii) Programme
  - (iv) Programme for the protection of the monk seal at Cabo Gata (Spain) - 75.000 ECU.
  - (v) Protection of the otter in Italy - 41.000 ECU.
  - (vi) Protection of the "Gizani" fish around the island of Rhodes (Greece) - 15.750 ECU.
  - (vii) Programme for the re-implantation of the Thuya of Barbarie in Murcia (Spain) - 45.000 ECU.
  - (viii) Protection of the Mora turtle in Murcia (Spain) - 45.000 ECU.
  - (ix) Monitoring and protecting the Caretta turtle at Zakynthos and the Peloponnese (Greece) - 225.628 ECU.
  - (x) Re-introduction and protection of the "Cyprinodontide" fish in Murcia (Spain) - 20.000 ECU.
  - (xi) Re-introduction of the "Grande Sabine" in Murcia (Spain) - 21.000 ECU.
  - (xii) Monitoring of "l'herbier de posidonies baie" of Porto Conte (Italy) - 211.595 ECU.
  
8. The EEC is also contributing towards the international action plan to save the sea turtle - 62.557 ECU, while in Turkey it is assisting in the monitoring programme of sea-turtle reproduction in Turkey - 43.000 ECU.

### **XXIII. Improved Safety of Maritime Navigation**

1. Improved technology is making it possible for the monitoring and better management of maritime navigation leading to greater safety and less maritime pollution from accidents. Expertise, training and equipment for the establishment of traffic services centres is required for the Mediterranean region.
  
2. The EEC is developing the pilot phase of this action (COST 301) for which the Contracting Parties expressed unanimous support in a resolution adopted at the Genoa Meeting.
  
3. WMO, through its Regional Association VI (Europe), is developing a proposal for a harmonized common system of marine forecast areas for the Mediterranean. This should lead to improved marine forecast services and thus enhanced safety of navigation in the area.

#### **XXIV. Reduction of Air Pollution**

1. The environmental problems associated with the potential impact of expected climatological changes caused partly by greenhouse gases which have accumulated in the atmosphere may prove to be among the major environmental problems facing the marine and adjacent coastal areas in the near future.
  2. The Mediterranean Action Plan, together with the other UNEP regions, has set up a its own task team charged with the preparation of studies on the possible impact of climatic changes on the ecological system.
  3. Within the framework of **ECE**, the Executive Body for the Convention on Long-range Transboundary Air Pollution carried out a number of activities under its work plan which have a bearing on the Mediterranean region, including:
    - (i) specific regulatory instruments, including a 1985 Protocol on the Reduction of Sulphur emissions or their Transboundary Fluxes by at least 30 per cent, and a 1988 Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes;
    - (ii) monitoring of air pollutant emissions, transport and deposition (through the "Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe", EMEP);
    - (iii) exchange of information on technologies for air pollution abatement;
    - (iv) assessment and monitoring of air pollution effects on human health and the environment, including international co-operative programmes concerning effects on forest (with an expert panel on Mediterranean forests), freshwaters, agricultural crops, materials and monuments. The Working Group on Effects established by the Executive Body also plans to take up effects on the marine environment.
- Under the Senior Advisers to **ECE** governments on Environmental and Water Problems, the Working Party on Air Pollution Problems has established task forces on heavy metal emissions and on toxic organic pollutants (sub-programmes 05.3.2.2 and 05.3.2.4).
4. A **UNDP** country project in Greece (GRE-83-004) concerned with the combatting and control of air pollution in the city of Athens. This project was being conducted with **WHO**.
  5. **UNDP's** regional project concerns the control of air pollution from industrial sources.
  6. Within the **WMO** Background Air Pollution Monitoring Network (BAPMON) there are about 20 monitoring stations in the Mediterranean which collect data on background concentrations of atmospheric constituents needed for assessing transport and deposition of harmful substances and possible effects on climate.

7. More than 20 technicians from Mediterranean countries attended the **WMO/UNEP** training courses on background air pollution measurements held annually in Budapest, Hungary.
8. Problems on climate changes related to hydrology and water resources are considered by the Working Group on Hydrology of the **WMO** Regional Associations VI (Europe) and I (Africa).

#### **XXV. Prevention and Combatting of Forest Fires**

1. The Genoa Declaration taken by the Contracting Parties include the specific decision to "intensify effective measures to prevent and combat forest fires" which are causing so much concern in the Mediterranean region,
2. The **UNDP** has included a new regional project for the European IPF countries which will assist in the management of Mediterranean forest fires.
3. The Joint **FAO/ECE/ILO** Committee on Forest Working Techniques and Training of Forest Workers approved the draft of a document being prepared by Spanish experts with assistance from other south European countries on afforestation techniques, and agreed to its completion and publication in 1989. It also approved plans for the biannual publication of a Forest Fire Newsletter, and instructed its reactivated team of specialists to draw up proposals for a seminar on forest fire prevention and consider other activities to implement the recommendations of previous seminars on forest fires, held in Poland and Spain.

#### **XXVI. Environmental Impact Assessments**

1. In the **Genoa Declaration**, the Contracting Parties adopted a decision to "apply Environmental Impact Assessment (EIA) as an important tool to ensure proper development activities". An EIA process is often described as an assessment of how - positively or negatively - a project affect various impact indicators. PAP/RAC is presently updating a set of working guidelines useful to experts in the Mediterranean.
2. The **ECE's** sub-programme 05.2 on environmental impact assessment treats the subject in great detail, including frameworks, methodology, criteria, and promotion. A draft framework agreement on Environmental Impact Assessment in a Transboundary Context is being elaborated.
3. The **ECE** sub-programme 06.5 concerning the environmental impact of electric power stations includes the impact of fluidized-bed thermal power stations on the environment.
4. Although not strictly tied to EIA the project supported by the **UNDP** is intended for the training in environmental planning and management (\$300,000).
5. **WHO** is conducting environmental health impact assessment in Turkey.



## RECOMMENDATIONS

1. This report has shown that the information on programmes on the environment in the member states of the MAP, especially where they concern co-operative programmes between them, but also with multilateral agencies, are not presently being reported on a continuous basis. It is not very clear as to which specific years these programmes have been operational and what budgetary allocations were made in each instance. Without this information one cannot judge the size and extent of each programme.
2. It is important that this information starts being collected on a more standardized basis at least bi-annually. Each programme should be given a self-explanatory code number, but should also retain the multilateral agencies' code number for easy cross-reference.
3. The real objective behind such an exercise is to increase the flow of technical and financial cooperative projects and programme for the clean-up of the Mediterranean. The next natural step would call for the introduction of a brokerage service - as has been successfully undertaken by UNEP in its Clearing House Programme.
4. In view of MAP's limited resources such an undertaking should only be considered after having successfully built an information network of the current bilateral and multilateral programmes.
5. Considering the UNDP/ITU MEDARABTEL Project's main objective was to link main capitals and major cities of member states with modern telecommunications facilities between them, it is recommended further to carry out a detailed study in each country with a view to proposing a plan of action as appropriate, to achieve such a network. If accepted by the forthcoming meeting of the Contracting parties, the ITU is willing to undertake this study with UNDP, ECE, ESCWA and ECA.
6. Technology by itself will not successfully result in the availability of needed information on current bilateral and multilateral projects and programmes in the Mediterranean. It is only a useful tool. It is the countries themselves who need to make the effort to ensure that the information is collected and pooled in a meaningful manner so as to assist the Contracting Parties and the international agencies move nearer to the objectives of the Mediterranean Action Plan.