



ENGLISH EDITION

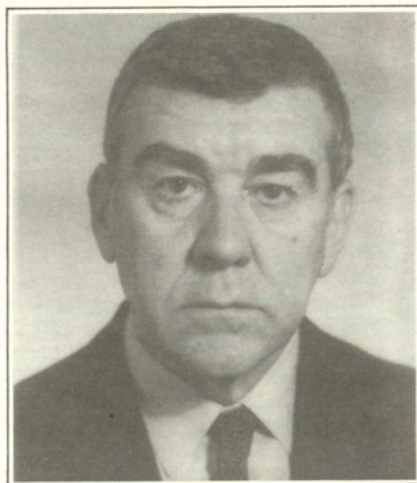
# MEDWAVES

MAP CO-ORDINATING UNIT • NEWS BULLETIN PUBLISHED IN ENGLISH AND FRENCH • SEPTEMBER - OCTOBER 1985 • ISSUE No 2.

«...Sectorial tackling of environmental problems has no chance of success...»

## PLANNING FOR A BETTER ENVIRONMENT

*H. E. Minister Z. Kovačević, President of the Bureau of the Contracting Parties to the Barcelona Convention, talked to MEDWAVES on the achievements and future goals of the Mediterranean Action Plan. Minister Z. Kovačević — ex-Mayor of the City of Belgrade — has a vast experience in matters related to pollution, particularly from land-based sources. From this point of view, his ideas on the Mediterranean Action Plan and pollution management are of particular interest.*



nations not only with expertise and advice but to help them to develop their own abilities, is one of the first priorities.

Today the interrelation between development and the quality of the environment is clear. It has become acceptable to everybody that the high quality of the environment is essential for sound economic development. Therefore its protection cannot be considered as a financial burden only. Of course, physical planning can help give us answers to questions in regard to the relation between economic development and quality of the environment, but it must go hand-in-hand with socio-economic planning.

What we really need is an integrated approach, otherwise any sectorial tackling of environmental problems has no chance for success. Overall physical planning, as a part of the general plans and policies of development of a certain country, is the only possible way of efficiently attacking environmental problems, with utmost importance to be given to the fact that the only sound

approach is prevention. The efforts to correct what has already been done are necessary and important, but we must attack and cure causes and not consequences. Nevertheless it is rather difficult to convince nations struggling with existential problems of survival to devote adequate attention to the protection of their environment. Therefore it must be our common objective and responsibility to help developing nations to tackle these problems offering them new chances instead of putting additional burdens in the form of environmental standards and criteria. In the Mediterranean, we must take into consideration such activities as tourism, which is not only the new input to its pollution, but also a very important and dynamic economic activity and a chance for the developing countries of the southern coast of the Mediterranean basin. Another activity of this nature is aquaculture which could make the Mediterranean Sea a source of new potential in food and economic life.

For the materialization of this potential, political will on the part of the Coastal States must be expressed in a more decisive manner. Now that MAP has reached an advanced stage of institutional, structural and operational maturity the clear and committed political will is needed if the common objectives for a healthier Mediterranean Sea and the ecologically sound development of the region are to be achieved.

It is, more than ever, necessary that the Contracting Parties clearly express their will to benefit from the existing MAP sources and potential by translating their international obligations into national commitments for the long-term welfare of their peoples. ■

**T**HE Mediterranean Action Plan has provided not only a legal framework for a successful co-operation among states with different levels of development, different internal social and political systems and different priorities, but has also provided a very good mechanism to promote and co-ordinate common action and to help nations to build up their own indigenous analytical and management capacities necessary to overcome their environmental problems. These latter are of particular importance taking into account that many countries of South Mediterranean do not have such capacities developed.

Therefore the objective which is already in the process of being successfully achieved, the objective of helping these



# MICROBIAL POLLUTION IN THE MEDITERRANEAN

**P**OLLUTION of the Mediterranean Sea by microbes (bacteria, viruses and a number of fungi) is one of the direct results of the discharge of untreated sewage into the sea. In the Mediterranean, over 90% of municipal sewage is discharged without any treatment. This sewage contains large numbers of microbes, a proportion of which are able to survive in sea water for variable periods, and which can therefore infect humans.

In the Mediterranean, it is easier to acquire infection than is the case in colder seas. Because of the warm temperatures, bathers spend a relatively long time in the water, as well as sunbathing on sandy beaches.

As one of the main recreational amenities along the Mediterranean coastline is the bathing beach, the importance of ensuring adequate seawater quality was recognised from the very beginning of the Mediterranean Action Plan. As part of the Joint Coordinated Programme on Pollution Monitoring and Research in the Mediterranean Sea carried out between 1975 and 1980, a pilot project on Coastal Water Quality Control was jointly developed and coordinated by WHO and UNEP.

This pilot project was carried out by 30 national laboratories in 14 Mediterranean countries, and consisted in the regular monitoring of 700 sampling stations and 160 reference stations in various parts of the Mediterranean coastline. The 700 sampling stations were mostly recreational beaches and shellfish-growing areas. In all, during the course of the pilot project, approximately 12,500 water samples were analysed for the three major bacteria associated with sewage pollution - total coliforms, faecal coliforms and faecal streptococci. These microorganisms are found in human faeces. They are therefore called indicator organisms, as their presence indicates faecal contamination.

During the course of the pilot project, a number of meetings of principal investigators and other experts were convened. At these meetings, the progress achieved in the implementation of the pilot project was discussed, and methodologies for sampling and analyses reviewed. In order to be able to compare

results obtained by the different laboratories and build up a composite picture of the situation, it was considered important that the same methods be used throughout.

Comprehensive guidelines for health-related monitoring of coastal water quality were also produced in 1977 following a special meeting of experts.

The most important aspect of monitoring is the interpretation of results, and after taking all possible aspects into consideration, WHO / UNEP interim environmental quality criteria for Mediterranean coastal recreational waters, shellfish-growing waters and shellfish flesh were produced. It was considered that any seawater or shellfish complying with such criteria, expressed in terms of bacterial numbers per sample, would not present any health hazard.

Following the termination of the pilot project in 1980, the data obtained were thoroughly analyzed, and the water quality checked against the WHO / UNEP interim criteria. It was concluded that most of the recreational water stations were satisfactory during the sampling period, while most of the shellfish areas were not.

The results of the pilot project, only reflect the quality of seawater and shellfish in specific locations on the basis of sampling and analysis carried out between 1976 and 1980. In some quarters, these were wrongly interpreted as applying to the Mediterranean as a whole, which is not the case.

The pilot project on coastal water quality control provided a sound basis for the commencement of a microbial monitoring programme on a regional basis. It served to familiarize a number of Mediterranean laboratories with the requirements of such a programme, and assisted towards the acquisition of equipment and supplies. The training fellowships provided enabled laboratory personnel in a number of developing countries in the region to visit other laboratories and obtain first-hand experience of several aspects of the work involved. Also the large number of meetings convened provided the necessary opportunities for contacts, exchange of experiences, and joint discussion and elaboration of programmes of work.

The actual state of microbial pollution in the Mediterranean Sea as a whole will be known with a greater degree of accuracy when the MED POL Phase II Monitoring Programme becomes operational on a full regional scale. In addition to the three bacterial parameters mentioned above, important ones will also have to be considered. Evidence is accumulating that health hazards associated with bathing are not only these concerning diseases of the human alimentary tract. A number of bacteria and fungi produce infection by contact, and can be picked up from the sand of beaches as well as from seawater. In fact, a number of Mediterranean countries carry out, as part of their own national public health programmes, monitoring of bathing beaches and shellfish-growing areas for a number of pathogenic (i.e. disease-causing) bacteria and viruses which are selected on the basis of local conditions and needs.

The pilot project also assisted towards stimulating national authorities to increase preventive measures to avoid bacterial contamination of coastal areas. Sewage treatment plants are increasing in number, even if slowly. In some cases, effluents are being taken out to the sea with underwater pipelines, thereby decreasing the impact on the coastal zone itself, as the polluting bacteria disperse before they reach it. Public surveillance of bathing beaches has improved. A lot remains to be done, and a significant proportion of the work can only be performed when a clearer picture of the situation emerges as a result of comprehensive and coordinated monitoring on a regional scale.

The length of the Mediterranean coastline is such that it is impossible to monitor it all. One should therefore distinguish between public beaches under the sanitary surveillance of local authorities and other coastal areas where people do not normally bathe.

In the case of shellfish, control can obviously only be limited to culture areas. Wild shellfish should therefore never be collected and eaten raw or insufficiently cooked. This precaution is very important and does not only apply to the Mediterranean sea. ■



## Seminar on Rehabilitation and Reconstruction of Historic Settlements

Split, 22-24 May 1985

**A** Seminar on rehabilitation and reconstruction of historic settlements took place last May in Split, Yugoslavia. Participants from 12 Mediterranean States and representatives of the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and of the International Council of Monument and Sites (ICOMOS) met at the premises of the Regional Activity Center for the Priority Actions Programme (PAP RAC) to discuss the completed national reports and the Synthesis Report, and to consider proposals for the case studies and follow-up action.

The meeting recommended the following principles to be respected in the protection, rehabilitation and reconstruction of historic settlements:

- Protection of the architectural heritage should be conducted by integrated socio-economic, physical and environmental planning.
- Rehabilitation and reconstruction should respect the fact that a historic settlement is an entity, the inhabitants of which and their culture make the most precious part.
- The contemporary doctrine requires a respect of all historic layers including, in addition to cultural and aesthetic values, those of environmental importance as well.
- Rehabilitation and reconstruction sometimes require an emphasis to be placed on particular historic layers, provided they are based on the evaluation of areas or building concerned resulting from detailed study of the existing state of historic and spatial development and of the causes of degradation.

- In the rehabilitation of historic settlements it is essential to apply the integrated approach to the architectural heritage ranging from the research and multidisciplinary study of the existing state to the rehabilitation plans and designs, wherein various methods may be decided on (conservation, restoration, recomposition, reconstruction, infills into the old tissue), following the principle which is to reflect the respect for the cultural value in the first place.
- Compatibility of the new and old in historic settlements may be achieved if the new structures are adequately incorporated in the fabric respecting the genuine values of the environment.

As follow-up of this important PAP action, the seminar recommended a number of in-depth studies to be prepared in Algeria, Cyprus, France, Greece, Israel, Italy, Morocco, Syria, Spain, Tunisia, Turkey and Yugoslavia. □

## WHO Workshop on treatment and discharge of industrial wastewaters in the Mediterranean Area

Venice, 10-14 June 1985

**T**HE amount of liquid industrial wastes being discharged into the Mediterranean Sea is increasing considerably. Some of these

wastes contain substances highly hazardous to the marine environment. Others can be hazardous owing to the large amounts discharged. Apart from industrial effluents proper, a number of industries located on urban areas discharge their wastes into municipal sewage systems.

Mediterranean countries are increasing their efforts to reduce this type of pollution and will now combine such efforts on a regional scale through implementation of the Protocol for the protection of the Mediterranean sea against pollution from land-based sources, which was adopted and signed in Athens in May 1980, and came into force in June 1983.

The World Health Organization Regional Office for Europe convened a Workshop on treatment and discharge of industrial wastewaters in the Mediterranean area, as part of its regular budget input into the Mediterranean Action Plan. The workshop was held in Venice in collaboration with the Giunta Regionale del Veneto and attended by 25 experts from 10 Mediterranean countries (Cyprus, France, Greece, Israel, Italy, Malta, Spain, Syria, Turkey, Yugoslavia), including environmental engineers, hydrologists, toxicologists, chemists, biologists and public administrators.

The workshop produced a large number of conclusions and recommendations which will be very useful for the implementation of the Protocol for the protection of the Mediterranean sea against pollution from land-based sources. □

## The Bureau of the Contracting parties meets in Athens

Athens, 14-15 June 1985

**C**HAired by the President of the Contracting Parties, H.E. M. Z. Kovačević, the Bureau of the Contracting Parties to the Barcelona Convention for the protection of the Mediterranean Sea against pollution, met at MAP Co-ordinating Unit, in Athens, to review progress in the implementation of MAP and preparation for the Fourth Ordinary Meeting of the Contracting Parties in Genoa, in September 9-13, 1985.

The Bureau was informed about the documents being prepared such as the Evaluation of the Mediterranean Action Plan in the first ten years, the Assessment of Pollution of the Mediterranean Sea, a draft Declaration on the occasion of the 10th Anniversary of the Mediterranean Action Plan, the Report of the Executive Director on 1984-85 and the Proposed Programme and Budget for 1986-87, etc. and considered administrative and other matters related to the Mediterranean Action Plan operations.

The Bureau members stressed the fact that it is very important, for the future effectiveness of MAP, that the Genoa Meeting be attended at ministerial level; because now that the Mediterranean Action Plan finds itself at the threshold of the second decade, a clear political decision is needed not only to cement the results obtained so far, but also to give an extra push off to the new start. □

## Seminar of Land-use Planning in Mediterranean Earthquake Zones

Cetinje, 27-29 June 1985

**E**xperts from Algeria, Cyprus, Egypt, France, Greece, Italy, Tunisia, Turkey and Yugoslavia, the United Nations Disaster Relief Office (UNDRO) and the United Nations Center for Human Settlements (UNCHS, Habitat) participated in a Seminar organized by the Regional Activity Center for the Priority Actions Programme at the township of Cetinje, in Yugoslavia.

Following a fruitful discussion, the Seminar formulated conclusions and recommendations underlining the following:

- Seismic risk is an element of the Mediterranean coastal environment which must be taken into account in land-use planning as an integral part of national development policies.

- The objective of seismic risk prevention in coastal areas may assist a policy of preventing excessive concentration of population and development activities in coastal areas which is pursued by many governments.

- Such a policy constitutes an important element of the longer-term efforts to reduce pollution of the Mediterranean sea from land-based sources.

- The Mediterranean coastal States have accumulated an extensive expertise in dealing with earthquakes.

- The willingness to co-operate and to exchange experience has been clearly expressed by the meeting and by the international organizations represented.

- Developing countries are relatively more vulnerable to earthquake damage and within each country the poor are more heavily affected.

- Historic centers, which are essential to the Mediterranean identity, are particularly vulnerable to earthquakes and should receive special attention and programmes.

- Based on the above general conclusions, the meeting recommended that cooperation should and could be expanded. The Seminar also recommended a number of immediate activities, among which:

- Development of conceptual framework and definition of terms.

- Listing of relevant institutions and projects.

- Exchange of information with a view to establishing a common data base.

- Preparation of a limited number of case studies and arrangements for a review of these studies.

- Consideration of possible initiatives in the field of technical co-operation, training and the exchange of information □







The Co-ordinated Mediterranean Pollution Monitoring and Research Programme

# MED POL

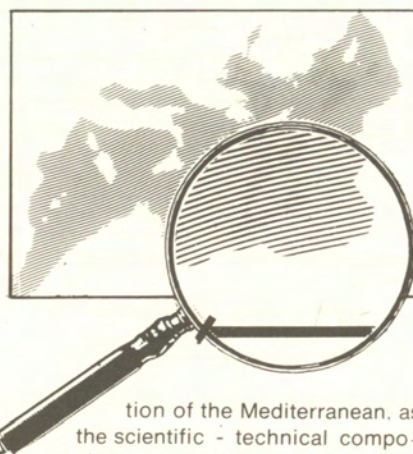
*A large scale scientific operation, reflecting the concerted monitoring and research efforts of 17 mediterranean countries and the EEC undertaken to enhance the living marine resources of the entire «miniature ocean».*

**T**HE adoption by the United Nations Conference on the Human Environment — Stockholm, June 1972 — of the Action Plan for the Human Environment, which included the General Principles for Assessment and Control of Marine Pollution, opened the road for the United Nations General Assembly to establish the United Nations Environment Programme (UNEP) to «serve as a focal point for environmental action and co-ordination within the United Nations System».

The Governing Council of UNEP chose «oceans» as one of the priority areas in which it would focus efforts to fulfil its catalytic and co-ordinating role. While it was recognized that the environment was being deteriorated considerably in many areas of the globe, the Mediterranean region was selected by UNEP as a «concentration area» where it would attempt, through the Regional Seas Programme Activity Centre, to assist the Mediterranean Coastal States in the implementation of an ambitious and consistent action plan, in order to protect primarily their marine environment against pollution and to safeguard their common cultural heritage. This plan was later known as the Mediterranean Action Plan (MAP).

The monitoring of the sources, levels and effects of pollutants in the Mediterranean Sea, as well as the research related to this monitoring has been one of the cornerstones of the entire Mediterranean Action Plan, which was adopted in the Barcelona Intergovernmental Conference of the Mediterranean Coastal States, early in 1975.

The pilot phase of this monitoring and its related research termed «The Co-ordinated Mediterranean Pollution Monitoring and Research Programme» known as MED POL - PHASE I, was initiated in 1974 and formally approved in Barcelona, in February 1975, by the Intergovernmental Meeting on the Protec-



## MED POL - PHASE I

MED POL - PHASE I, being the environmental assessment component of the Mediterranean Action Plan, was principally designed to help Mediterranean Coastal States - Contracting Parties to the Barcelona Convention - develop their capabilities to participate in a full-scale permanent research and monitoring programme; it was also designed to provide continuous information on the actual state of pollution of the Mediterranean sea.

MED POL - PHASE I was carried out between 1975 and 1980 by more than 200 scientific groups of 84 institutions from 16 Mediterranean countries, which were approached and bound by specific contracts to perform specific tasks.

The general objectives of the MED POL - PHASE I, evolved through a series of expert and intergovernmental meetings, were:

— to formulate and carry out a co-ordinated pollution monitoring and research programme taking into account the goals of the Mediterranean Action

Plan and the capabilities of the Mediterranean research centers.

— to assist national research centres in developing their capabilities to participate in the programme;

— to analyse the sources, amounts, levels, pathways, trends and effects of pollutants in the Mediterranean sea;

— to provide the scientific - technical information needed by the Governments of the Mediterranean States and the EEC for the negotiation and implementation of the Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols;

— to build up consistent time-series on the sources, pathways, levels and effects of pollutants in the Mediterranean sea and thus to contribute to the scientific knowledge of the Mediterranean sea.

## SUBJECTS ADDRESSED

The subjects addressed in the pilot phase reflect the concerns of 1975 and the lack of data of those days. The Mediterranean Pollution Monitoring and Research Programme — MED POL — consisted of seven pilot projects approved at the 1976 Barcelona meeting:

MED POL I : Baseline studies and monitoring of oil and petroleum hydrocarbons in marine waters

MED POL II: Baseline studies and monitoring of metals, particularly mercury and cadmium, in marine organisms

MED POL III: Baseline studies and monitoring of DDT, PCBs and other chlorinated hydrocarbons in marine organisms

MED POL IV: Research on the effects of pollutants on marine organisms and their populations

MED POL V: Research on the effects of pollutants on marine communities and ecosystems

MED POL VI: Problems of coastal transport of pollutants

MED POL VII: Coastal water quality control



In addition to the above seven pilot projects, the following related projects were also added to broaden the scope of the programme or to provide the necessary support, but not all of them were fully implemented:

MED POL VIII: Biogeochemical studies of selected pollutants in the open waters of the Mediterranean

MED POL IX: Role of sedimentation in the pollution of the Mediterranean Sea

MED POL X: Pollutants from land-based sources in the Mediterranean

MED POL XI: Intercalibration of analytical techniques and common maintenance services

MED POL XII: Input of pollutants into the Mediterranean Sea via the atmosphere

MED POL XIII: Modelling of marine systems

MED POL - PHASE I was originally founded and co-ordinated by UNEP in co-operation with other Specialized Agencies of the United Nations family: FAO, WHO, UNESCO, IOC, WMO and IAEA who contributed in experience, services and kind for the successful completion of MED POL - PHASE I.

As a result, national laboratories participating in the programme were provided with necessary equipment and material for monitoring the quality of the waters, sediments and marine organisms in the Mediterranean; scientists and technicians were trained in standardized analytical techniques; and a network of scientists and institutions was created to allow for ready exchange of results and experience.

So far one can safely say that the first phase of MED POL has provided considerable data and information on various aspects of the pollution of the Mediterranean sea. It also brought to light, as a result of direct practical experience, the essential requirements for a cohesive long term regional programme, including remedial adjustment measures at both technical and administrative levels.

In 1978, the first comprehensive assessment of pollution loads reaching the Mediterranean sea from coastal sources was completed. It provided important information during the negotiation of the Protocol on control of pollutants from land-based sources. The assessment revealed that the present domestic waste (sewage) disposal practices may be the most important factor influencing adversely the quality of the coastal waters and that land runoff, rivers in particular, contribute most significantly to the pollution load of those waters.

The activities of MED POL pilot phase

that started in 1975 came to their end in 1980. The experience gained through them allowed UNEP to prepare, a proposal for a Long-term Pollution Monitoring and Research Programme — known today as MED POL - PHASE II — which was endorsed by the Second Meeting of the Contracting Parties to the Barcelona Convention, convened at Cannes in March 1981.

## MED POL - PHASE II

The specific objectives of MED POL - PHASE II are designed to provide, on a continuous basis, the Parties to the Barcelona Convention with:

- information required for the implementation of the Convention and the Protocols;

- indicators and evaluation of the effectiveness of the pollution prevention measures taken under the Convention and the Protocols;

- scientific information which may lead to eventual revisions and amendments of the relevant provisions of the Convention and the Protocols and for the formulation of additional protocols;

- information which could be used in formulating environmentally-sound national, bilateral and multilateral management decisions essential for the continuous socio-economic development of the Mediterranean region on a sustainable basis;

- periodic assessment of the state of pollution of the Mediterranean Sea.

The Long-term Pollution Monitoring and Research Programme (1981-1990), known as MED POL - PHASE II, has made good progress. By mid-1985 seven Mediterranean countries had signed an agreement with UNEP and are implementing their national monitoring programmes; another seven have programmes in preparation, with plans to implement them in 1986. At hundreds of sampling stations around the Mediterranean, sources, levels, pathways and effects of pollutants are regularly monitored. In addition, by the end of 1984, there were also 102 research projects being carried out by 62 institutions in 16 Mediterranean States through which an intensive scientific research is carried out to provide a better understanding of processes and phenomena involved in the complex mechanisms of pollution.

## RESULTS

Data generated through MED POL are used as the basis for the analysis of the present «state of health» of the Mediterranean and of the trends in pollution levels. They also provide the scientific information needed for the formulation of rational measures to control pollution.

Two in-depth assessment studies, including concrete recommendations for measures to be taken by the Contracting Parties were completed. One deals with the microbial quality of the coastal recreational waters, shellfish and shellfish growing waters, the other with the problem of mercury and its relevance to the quality of seafood in particular. Similar assessment studies are being prepared on other subjects, in particular on pollution by petroleum hydrocarbons, chlorinated hydrocarbons and other heavy metals.

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 now in force, foresees the formulation and the adoption by the Contracting Parties of common guidelines and, as appropriate, of standards and criteria for the listed substances, necessary for the implementation of the Protocol.

MED POL - PHASE II, being the scientific component of MAP, will 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 for exploitation of living resources, are degraded by pollution in many places. Sewage, industrial waste, tar and trash are the most frequent causative agents.

However, this large scale scientific operation, undertaken to enhance the living marine resources of the entire «miniature ocean» and reflecting the concerted monitoring and research efforts of 17 Mediterranean countries and the EEC - efforts programmed and co-ordinated by the UNEP's MAP Co-ordinating Unit based in Athens - is the best 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. ■



## International Regional Conference on the Pollution of the Mediterranean Sea

*Split, 2-5 October 1985*

**T**HE intensive urbanization of settlements, the development of industry and the ever increasing use of chemicals in agriculture have resulted in an enormous increase of the amount of polluted waste waters that flow into seas. As a result, the water pollution control as well as the techniques and technology applied for the treatment and disposal of these waste waters become especially interesting and important. In addition, due to the shortage of freshwater resources in some Mediterranean countries, problems concerning the possible reuse of treated waste waters are equally important in the Mediterranean region.

The consideration and analysis of such problems on a modern, up-dated scientific basis as well as the transfer of experience among the scientific and professional staff working on solving problems of that nature are the basic aims of a Conference to be held in Split, Yugoslavia, from October 2 to 5, 1985.

This Conference, under the title «International Regional Conference on Pollution of the Mediterranean Sea» is organized by the Yugoslav Association for Water Protection and sponsored by the International Association on Water Pollution Research and Control, London, the UNEP Regional Seas Programme and the Co-ordinating Unit for the Mediterranean Action Plan, the World Health Organization, Copenhagen, and the Co-ordinating Committee for the Environment, Territorial Management, Housing and Public Facilities, Belgrade.



## Meeting on pollution effects on marine ecosystems

*Blanes, 7-11 October 1985*

**T**HE effects of rising pollution in the marine environment have become a cause of increasing concern, mainly due to its possible repercussions on our health, economic welfare and enjoyment of a healthy environment. These effects of pollution on marine ecosystems are being studied by many scientists in the Mediterranean within the framework of the MED POL Programme. More specifically they study, among other subjects, the consequences of accumulation of persistent toxicants in sea-food, the effects of some pollutants, such as heavy metals, on the physiological functions, behaviour, nutrition, reproduction, etc. of marine biota and the changes in the structure of marine communities and ecosystems. As a consequence of pollution, a group of biological species may disappear from the ecosystem and thus the whole ecological balance is disturbed.

With the aim to bring together scientists from related fields, to discuss their results and to find common solutions to their research problems, FAO and the Co-ordinating Unit are organizing jointly a meeting from 7-11 October 1985 hosted by the Centro de Estudios Avanzados de Blanes (CEAB) in Blanes, Spain.

## WHO/UNEP Consultation meeting on the correlation between coastal water quality and health effects.

*Follonica, 21-25 October 1985*

**O**NE of the major objectives of the Mediterranean Action Plan is to improve the quality of bathing beaches in the region, so as to ensure that the millions of local inhabitants and tourists, for whom bathing forms the main recreational activity during summer, suffer no adverse health effects through contact with polluted water. Similarly, as a large amount of shellfish is consumed throughout the region, it is important to ensure that both the areas in which the shellfish are grown and the shellfish themselves remain unpolluted.

Interim Mediterranean environmental quality criteria for coastal recreational waters, shellfish-growing waters and shellfish have been developed by WHO and UNEP within the framework of the Action Plan. The criteria for bathing waters have been recommended the basis of national legislation in Mediterranean countries. Work on the further development of the other interim criteria is continuing.

Final criteria, however, depend on the conduction of epidemiological studies to determine the exact relation between the quality of sea water and health effects on bathers and on consumers of shellfish. A number of such studies have been carried out during recent years, both in the Mediterranean and elsewhere. Coverage, however, is still not complete, and a continued study must be carried out.

The purpose of the consultation meeting which is being convened jointly by WHO and the Co-ordinating Unit within the framework of MED POL - PHASE II, with the collaboration of the CNR (Consiglio Nazionale delle Ricerche), Pisa, Italy, is to produce a meaningful project proposed for such epidemiological studies, including guidelines on how they should be carried out.

A number of problems are involved. Apart from bacteria which have to be ingested to produce adverse health effects, there are a number of others which can produce infection by contact. Such infection can also be acquired from the sand of the beach itself apart from the seawater. One important factor to be considered is the fact that at the seaside infection can also be the result of eating improperly-preserved food, and before attributing any disease to polluted seawater, all the facts have to be investigated.

## International Course on control of coastal pollution

*Barcelona, 4-14 November 1985*

**T**HE Intermunicipal Center for the protection of the Mediterranean Sea of the Municipality of Barcelona has been actively developing a programme of co-operation with other Mediterranean municipalities in defense of our sea.

The Center is organizing an international course for the benefit of technicians from municipalities to consider the role for coastal towns in combatting pollution, assist technicians with an operational manual on developing low-cost programmes, and encourage inter municipal co-operation.

The course is co-sponsored by the Co-ordinating Unit, by the Ministry of Public works and Housing (General Directorate for Environment) of Spain, and the Generalitat de Catalunya.



## DOCUMENTS • BOOKS

*The following documents have been published recently and are available at request:*

### **Bibliographies of the marine environment - Mediterranean**

As part of their unceasing effort to provide technical information, which may contribute to the protection of the marine environment, the United Nations Environment Programme (UNEP) and the Food and Agriculture Organization (FAO) published the second volume of the «Bibliography of the marine environment» in the UNEP / FAO series of Regional Seas publications «Directories and Bibliographies». The first volume in the series was the «Selected Bibliography on the Pollution of the Mediterranean Sea», published in 1981.

The bibliography in the second volume, which amounts to 2772 entries, is compiled largely from the Aquatic Sciences and Fisheries Abstracts (ASFA) bibliographic database using selection criteria based on the subject classification for the years 1978-84.

Approximately ten percent of the entries listed were submitted independently by Mediterranean Scientific Institutes. The classification of entries was performed by FAO which was also responsible for the actual publishing. pp. 151. Entries are published in their original language.

### **Marine Environmental Centres - Mediterranean**

By the UNEP / FAO series of Regional Seas Publications «Directories and Bibliographies» has been recently published the third edition of the «Marine environmental centers».

The need for more complete information on institutions which could actively participate in UNEP Regional Seas Programme was obvious since the Programme's early days. UNEP in close cooperation with a number of international, intergovernmental and non-governmental organizations supported, then, the publication of general regional and specialized directories of marine research centers.

The first and second editions of the Directory of Mediterranean Marine Research Centers were published in 1976 and 1977 as loose leaf volumes by UNEP. The information contained in those editions is now considerably outdated. Besides they do not conform to the format of the Institutions Register of the Aquatic Sciences and Fisheries Information System (ASFIS) nor are they in a form which is readily accessible as a computerized data base.

The newly published directory of the «Marine environmental centers - Mediterranean», which covers 147 institutions of 17 countries in the Mediterranean was compiled under the auspices of a UNEP financed project as a product of ASFIS. As it is stated, every effort has been made by the Secretariat of UNEP and FAO to contact all institutions included in previous editions of the Directory as well as some new ones, who were invited to verify the information before printing. pp. 302. Entries are published in the language of the country the centers belong to and in English or French.

## ASPECTS

### *Implementation is activated solely by political will*

Ten years have elapsed from the days when the Mediterranean coastal States were «deeply concerned about the alarming state of the environment in the Mediterranean, due to deliberate or unintentional neglect which has aggravated environmental pollution in this part of the world...» This is how the Mediterranean Action Plan, in one of its preambular paragraphs, expresses in early 70's, the anxieties, worries and concerns, of the peoples and the States around the Mediterranean basin «about the threat posed by the pollution» to their marine environment.

For ten years, co-operating in a large scale scientific effort to deal with the pollution in their common sea, the Mediterranean coastal States have been paying for research and monitoring of the pollution, for building up pollution combating mechanisms, for specific personnel training, for the accumulation of data, new scientific information etc. In order to be in the position to effectively investigate marine pollution and study its trends in the Mediterranean Sea and develop the scientific means which might help bridge «the demands of development with the need to protect and improve the quality of the Mediterranean environment, with a view to the optimal utilization of its potentialities», as MAP puts it in its preambular paragraphs.

Indeed, all these costly and time consuming comprehensive efforts of 17 Mediterranean Countries and the EEC, with dozens of scientific institutions participating in it, hundreds of experts contributing their hard work in the field and in the laboratory and with thousands of sea-water samples analysed and examined - all integrated into the Mediterranean Action Plan - have come up with some concrete technical answers which open wide the path towards implementing the pollution abating effort in the Mediterranean region; but obviously implementing is a technical process while the moving force of real action is the political initiative and decision;

And here we stand now.

Walking in the Conference Room of the Palazzo Tursi in Genoa - where the Fourth Ordinary Meeting of the Contracting Parties to the Barcelona Convention is to be held - the Mediterranean Coastal States Representatives will recall how «Conscious of the economic, social, health and cultural value of the marine environment in Mediterranean Sea» were in Barcelona, in 1975, and they will find themselves standing on the interface between the satisfaction of the unquestionable MAP accomplishments of the past decade and their responsibilities laid in the years ahead; however, deep inside them, they will know that key-words for the solution of the problem are «setting criteria» and «applying common standards», if they are to fully implement the Protocols of the Barcelona Convention; and as we said it, implementation may act in the technical field but it is activated solely by political will.

So, Genoa will show if Mediterranean Coastal States Representatives «fully aware of their responsibility to preserve this common heritage... for present and future generations» make optimal use of the MAP standing potential, and will reach the proper decision by translating their already expressed political will for the protection and the improvement of their common marine environment into enlightened political action.

*The Editor*

### **Bulletin of the Priority Actions Programme**

The Bulletin No 2 (April-June 1985) has been issued by the PAP Regional Activity Center in Split.

It contains information on on-going and planned activities, list of meetings, publications received, etc.

#### **- ROCC INFO**

Bulletin No 15 of the Regional Oil Combating Centre for the Mediterranean Sea (UNEP / IMO) has been issued.

It contains:

Editorial

ROCC News

Communications with ROCC

Collision between M/C «PATMOS» and «CA-STILLO DE MONTE ARAGON» on March 21st, 1985 in the Strait of Messina

News in brief

Acknowledgement

Regional cooperation agreements, existing or foreseen, for combatin accidental marine pollution

Coming courses and lectures

Future activities: coming meetings - experiments - events

## ERRATA CORRIGENDUM

Readers may have noticed an error on the front-page of *Medwaves* No 1, English edition. The figure two hundred million tourists should read one hundred million.

*MEDWAVES* is published bimonthly by the Co-ordinating Unit for the Mediterranean Action Plan in English and French. It is intended as an informal news bulletin and does not necessarily reflect the official view of MAP or of UNEP.

News articles and interviews may be freely reprinted with or without reference to *MEDWAVES*. However signed communications should be reprinted only with permission from the author.

If you would like to propose an article on a subject related to marine science, please address to: Yannis Troumbis, Editor, *MEDWAVES*, Co-ordinating Unit of the Mediterranean Action Plan 48 Vas. Konstantinou Ave., 11635 Athens Greece. Tel. (00301) 723 6586. Telex 222 611 MEDU-GR





# I believe, women have played an important role

**MW:** Ms Baccar, you have been serving the idea of a clean and healthy Mediterranean Sea for long years. What can you say about the Mediterranean Action Plan, today?

**HB:** I can say that we have good reason to be optimistic. Obviously, during the first ten years of its life, there would have been some gaps which are still to be filled, but on the whole I believe that MAP has succeeded in its task.

Indeed, back in 1975 some may have thought it utopian to try and assemble around a table representatives of the Mediterranean countries, given the problems that everybody knows. Today this is a reality. The reality of the Mediterranean Action Plan in its different facets: pilot projects for the Evaluation of the state of Health of the Mediterranean, the Blue Plan, the Priority Actions Programme, the Specially Protected Areas Programme. Of course, this last element of the Mediterranean Action Plan has suffered a certain delay in its implementation. However, I believe that we have good grounds to be optimistic with the progress achieved so far and that the Mediterranean countries should continue pooling their efforts in order to save the Mediterranean.

**MW:** As a woman elected to the Bureau of the Contracting Parties do you have a particular viewpoint as regards the Mediterranean Action Plan?

**HB:** I was elected as member of the Bureau at the last meeting of the Contracting Parties. This is the second time that a representative of Tunisia is elected member of the Bureau, perhaps because Tunisia was one of the countries which at Stockholm started the ball rolling on the Mediterranean Action Plan. We were one of the Southern countries which, along with 2 or 3 Northern countries, asked UNEP — newly created then — to give priority to the problems of the Mediterranean Sea, because we were aware of the fact that our sea was in a bad state of health and that we ought to pool our efforts as soon as possible in order to protect it and to try and solve the problems of its degraded environment. I have followed these problems first and foremost because I love the Mediterranean, having been born very close to it. I have been active in studying them long before the Stockholm Conference. Therefore, I believe that my election to the Bureau of the Contracting Parties is perhaps a recognition of the efforts undertaken by my country to safeguard the Mediterranean and to protect the environment as a whole.

*Ms H. Baccar is a lady of high position in the Administration of her country, Tunisia, and a pioneer in the movement for a clean and healthy Mediterranean Sea. Having witnessed MAP inception, she has followed actively its steps from the day of its initiation, in Barcelona, 1975 until now and has contributed to the efforts made for a constructive cooperation among the Mediterranean Coastal States. Today, as a Member of the Bureau of Contracting Parties, she gives us a particular MAP image seen with the eyes of a distinguished lady, long-devoted to the clean Mediterranean sea vision.*

**MW:** The number of women researchers and officials, representatives to the various meetings is constantly growing. Which do you think might be the probable consequences for the protection of the environment?

**HB:** Throughout the development of the Mediterranean Action Plan we have witnessed the increase in the number of women, high civil servants who have represented their governments to the various meetings in the context of the Mediterranean Action Plan. At the level of delegations from Southern as well as Northern countries there has always been a considerable number of women. This is especially true for the delegations of the North African countries bordering the Mediterranean. I myself have many times represented Tunisia at various meetings. Therefore, I believe that we, women, have played an important role in the effort to protect the Mediterranean as administrators for the follow-up of the Mediterranean Action Plan.

**MW:** Your country is hosting two regional projects, the Mediterranean Regional Aquaculture Project (MEDRAP) and the Regional Activity Center for the Specially Protected Areas. Does this reflect an opening toward the other Mediterranean countries?

**HB:** Indeed, Tunisia is the host country for these two regional projects, the MEDRAP, the aquaculture project, and the Regional Activity Center for the Specially Protected Areas. I think Tunisia was not selected at random; rather the choice was based on the long standing interest that our country has shown in the protection of the environment. For a young developing country like ours, which bases its economy primarily on the exploitation of its natural resources, on tourism and agriculture — since agriculture remains one of the highest priorities in the 6th 5-year Development Plan —, to turn its attention toward environmental problems and their solution was and is a vital economic necessity. We understood this very quickly and spared no effort at national level as well as at international level through our delegations to the various international organizations, be they part of the United Nations system or the non-governmental organizations. Through these efforts we have gained the confidence of our colleagues from the other Mediterranean states and this is the reason why Tunisia was selected to host the regional projects MEDRAP and the Activity Center for the Specially Protected Areas.

**MW:** What are your impressions after 10 years?

**HB:** The Mediterranean Action Plan celebrates its 10th anniversary this year. The Mediterranean countries and those responsible for the Mediterranean Action Plan are at national level drawing up a balance-sheet of the efforts undertaken for the protection of their coastal regions. I believe that today we can be optimistic about the future of our region. It is a fact, that during the last 10 years of negotiations a spirit of co-operation and the political will to safeguard our common sea have always prevailed. This solidarity oriented towards action, the speedy realization of the urgency to take appropriate measures have allowed us to overcome to a certain degree the differences existing among our countries in order to protect our old and beautiful Mediterranean, sung by our poets. The Mediterranean countries committed themselves to this goal 10 years ago in Barcelona. I am positive that they will reconfirm it this coming September in Genoa. ■