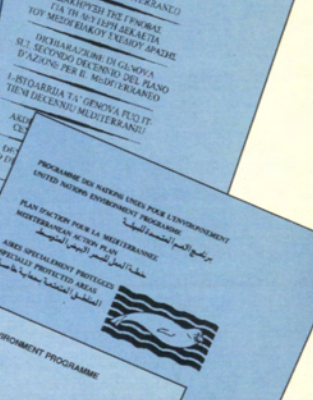
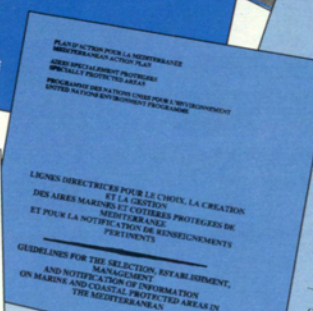
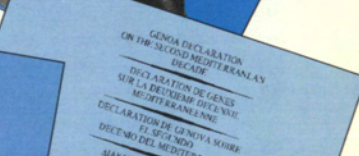
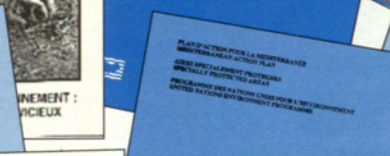
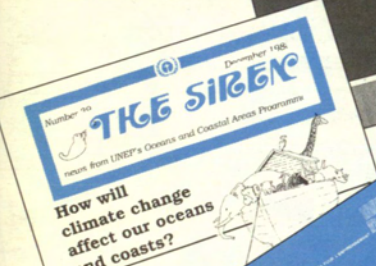
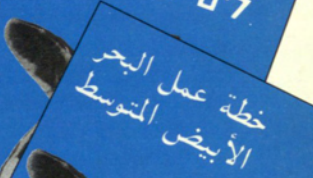
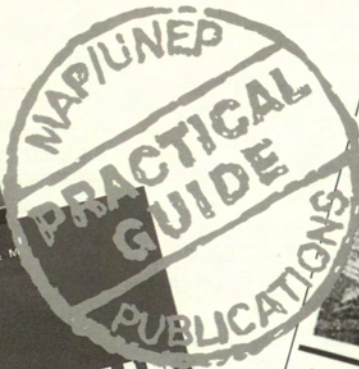




MED WAVES

MAP COORDINATING UNIT • NEWS BULLETIN PUBLISHED IN ENGLISH/ARABIC/FRENCH • N° 28



SUMMER 1993

THE JOINT MEETING OF THE SCIENTIFIC AND TECHNICAL COMMITTEE AND THE SOCIO-ECONOMIC COMMITTEE AND THE PREPARATION OF THE ANTALYA MEETING

Convened in Athens, 3-7 May 1993, the representatives of the Mediterranean States examined the latest developments of MAP and cleared the way for the decisions that will be taken at the Eighth Ordinary Meeting of the Contracting Parties in Antalya next October

The Joint Meeting, convened five months before Antalya, had as a task to discuss the programme and budget for MAP for the next biennium 1994-1995, which will be submitted to the Contracting Parties for adoption. The two Committees met jointly in a plenary session to consider matters of common interest and separately to review their respective programme components. Mr. S. Busuttill, MAP Co-ordinator, welcomed the participants on behalf of UNEP's Executive Director and emphasized that the repercussions of the 1992 UN Rio Conference had been clearly felt in the Mediterranean region, where MAP had already been extensively discussed within the framework of sustainable development. He then presented the Progress Report on the Implementation of the 1992-1993 Mediterranean Action Plan.

MAP and sustainable development

During the general discussion that followed the Co-ordinator's presentation, several delegates intervened in order to obtain clarification or make corrections to various aspects of the report. They emphasized the need to distinguish more clearly the activities of MAP *stricto sensu* from some other activities marginal to MAP and to find a compromise between the financial strictness imposed almost everywhere and the needs arising from the concretization of the general principles adopted at Rio. These concerns are expressed in the new formulation of the recommendations and the programme/budget which will be submitted to the Contracting Parties at Antalya for adoption: the emphasis is on "concrete and effective activities within the framework of MAP with the least possible administrative cost".

Given these financial constraints,

the meeting participants acknowledged the role that must be played by MAP in instituting sustainable development in the Mediterranean; the Co-ordinating Unit was requested "to identify in Agenda 21 the most appropriate activities for the Mediterranean Basin so that they can be implemented by the Contracting Parties at different levels, including the level of national sustainable development strategies for ensuring appropriate work at the inter-ministerial level and the level of regional sustainable development strategies and/or relevant municipal strategies so that they may become pilot activities.

Continued interest in CAMPs

Concerning the CAMP projects, most delegates expressed the view that they should be extended, although one representative felt that excessive proliferation of such projects would lower scientific standards. Thus, the Contracting Parties at Antalya will have to confirm the conclusion and continuation of the CAMPs in progress and approve the launching of three new CAMPs for Israel, Malta and Lebanon; furthermore they will examine a proposal by the Italian authorities to the effect that the Venice Lagoon CAMP, which would be financed by Italy, serve as a demonstration model for coastal zone management.

The interest generated by the CAMPs was once more felt clearly by the meeting, since two delegates, from Cyprus and Libya, expressed their countries' interest in submitting proposals for the initiation of CAMPs in their respective coastal areas.

The Antalya agenda

The Athens meeting did not have the mandate to decide on fundamental questions and their financial implications which will be on the agenda of the Antalya meeting. Its task was to "pave the way" for the latter to carry out its deliberations more effectively. Thus, in addition to the above-mentioned points, it was decided to include in the recommendations of

the Joint Meeting: the principles that will govern the MED POL Phase II activities up to the year 1995, and the MED POL Phase III activities between 1996 and 2005, the new functions conferred upon REMPEC concerning port reception facilities, the current transitional status of the Split Centre, the "Observatory of the Mediterranean environment" function of the Blue Plan Centre, the active relaunching of the Tunis Centre and the confirmation of the role of the Marseille Centre. At the legal level, the proposal was formulated to convene in 1994, a second meeting of Mediterranean experts on the "Dangerous Wastes" Protocol, with a view to convening a Conference of Plenipotentiaries in 1995. Finally, following assessment of the situation of the pollution of the Mediterranean by carcinogenic, teratogenic and mutagenic substances, several measures based on the principle of precautionary approach are submitted to the Mediterranean States for approval.

However, the large environmental questions in the Mediterranean cannot be separated from the more general geopolitical context of the region, its developments and upheavals, as is illustrated by the case of the former Yugoslavia. In Antalya, the Contracting Parties will decide on an official application from Croatia to the Bureau to become a party to the Barcelona Convention; this does not exclude the possibility in the meantime and depending on developments in that area, that the status of new states which may have originated from the former Yugoslavia be reviewed, so that, in due time, they may participate on an equal footing in the Mediterranean cooperation in the field of environmental protection.

To reach a joint decision with the Turkish authorities on all organizational and technical details of the Eighth Ordinary Meeting of the Contracting Parties, two MAP missions, one in October 1992 and the other in August 1993 were sent to Antalya. The Government of Turkey announced to the oth-

MAP Activities

er Contracting Parties that it wanted to be considered for the Presidency of the Bureau, to be elected in Antalya. In addition to the active part that Turkey has played from the beginning of the Mediterranean Action Plan, one should emphasize the pivotal role that it will play in the future by hosting in Istanbul the Secretariat of the Convention for the Black Sea, recently created. The cooperation between the Istanbul Secretariat and the Athens Unit, in common or complementary fields, concerning two seas closely linked through geography and history, should be on the Agenda of the Antalya Meeting and figure prominently in the next biennial exercise.



Consultation on microbiological quality of coastal recreational waters

***(WHO/UNEP joint project,
MED POL - Phase II,
Athens 9-12 June 1993)***

As a follow-up to the 1991 consultation on the same subject and its recommendations, WHO and UNEP convened a consultation in Athens (9-12 June, 1993) within the framework of the MED POL Phase II Programme. It was attended by 24 temporary advisors from 11 countries (6 of them Mediterranean), one representative each from UNEP and the Commission of the European Communities and two representatives from the WHO Regional Office for Europe. The objectives of the consultation were:

- to expand the current guidelines insofar as bathing is concerned, by the inclusion of complementary study designs;
- to expand the scope of the guidelines by the inclusion of protocols for studies on non-bather group uses of recreational water;

- to review the results of recent microbiological/epidemiological studies and re-evaluate the scientific evidence for the formulation of recommendations for recreational water and beach quality criteria and standards.

Participants reviewed the 1991 guidelines for prospective microbiological/epidemiological studies on the correlation between natural recreational water quality and effects on health. The microbiological determinants listed, as well as the methods recommended for their determination, were updated. In reviewing the results of recent studies, the experience emerging from studies carried out on thirteen beaches in the United Kingdom between 1989 and 1992, stressed a number of basic needs which epidemiological/microbiological protocols should consider. Participants also reviewed a draft protocol for randomized controlled clinical studies and a draft protocol for small-scale studies on different water-exposure groups; the final versions of both these protocols were adopted by the meeting.

Concerning standards and quality criteria for recreational waters, participants considered that at present, there was insufficient evidence to justify any recommendations for alterations.

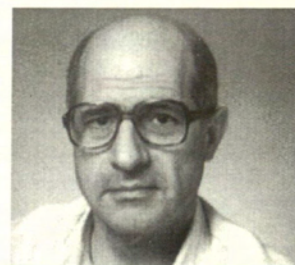
Among the recommendations adopted at the meeting, the participants considered that the WHO should: explore the possibility of promoting a multi-country study on selected recreational beaches in Europe and the Mediterranean, to enable a more accurate appraisal of health risks to recreational beach users, under different exposure conditions; develop a set of aesthetic indicators, which should form an integral part of the planned recreational water and beach quality guidelines, and establish their links with subjective well-being; finally organize and conduct, in collaboration with appropriate national authorities, a survey of all currently available information in the European and Mediterranean regions on the extent of morbidity associated with exposure to natural recreational waters.

FAO/UNEP/IAEA Training Workshop on the design of monitoring programmes and management of data concerning chemical contaminants in marine organisms

(Athens, 22-26 June, 1993)

This training workshop was attended by 22 scientists (21 from Mediterranean countries). Thirteen lectures were given, including presentations on the importance of quality assurance for monitoring, strategies and objectives for monitoring, statistical aspects of monitoring trends and computerization of monitoring data. Moreover, three participants had the opportunity to present the work they carry out in their respective countries. At the conclusion of the workshop, a questionnaire was given to the participants to assess the effectiveness of this type of training and the interest it had for them. Since the workshop was carried out in the light of reexamining both the whole content and the objectives of the MED POL Programme in view of certain deficiencies that appeared in the past few years, G.P. Gabrielides, FAO scientist responsible for organizing the training workshop, summarizes the general philosophy in the following interview he gave to MEDWAVES.

AN INTERVIEW WITH G.P. GABRIELIDES FAO Fisheries expert (marine pollution)



Born in Cyprus in 1945, G.P. Gabrielides carried out graduate and post-graduate studies in Oceanography in England. He worked at the Fisheries Department of the Ministry of Agriculture and Natural Resources in Cyprus, then at the National Centre for Marine Research in Athens, Greece. Since 1983, Mr. Gabrielides has been in charge of the FAO Project Office at the Co-ordinating Unit in Athens.

MEDWAVES. - Why did you consider it necessary to organize such a training workshop?

G.P. Gabrielides. - Firstly, I would like

(Interview cont'd)

to point out that the workshop concentrated on chemical contaminants in marine biota for which FAO - the organization to which I belong - has the responsibility.

I believe that over the years, MED POL has done a lot in assisting the countries to generate data (quantity) and also to improve their analytical quality. Without putting an end to these activities, I think we should pay more attention to the utility and utilization of the data produced. As you know, the generation of monitoring data is an expensive exercise (involving boats for collecting samples and sophisticated analytical instruments). Programmes should be re-designed to be more effective and meet specific objectives.

The only information we can get now from the data collected at MEDU, as provided by the MED POL national coordinators, is the level of a contaminant in a particular species. We have recently asked a statistician to analyze these data to see whether they could be used to give a reply to the question, "Is the level of pollution with time decreasing or increasing?" Unfortunately, due to inconsistencies and various gaps it was not possible to answer this question.

Therefore, the aim of the workshop was to acquaint participants with new ideas regarding the designing of programmes, stress the points that one should be careful about, such as consistency and analytical quality, and indicate how data could be assessed and utilized.

MEDWAVES. - What do you mean by inconsistencies and gaps? Can you be more explicit?

G.P.G. - In order to be able to compare data, they must be of the same type. The same way that you cannot compare mercury concentrations with cadmium concentrations, you cannot also compare mercury levels in one species with that in another species. Being consistent means measuring the same contaminant in the same species every year. In addition, since there are a lot of other variations which have to be minimized, the species have to be collected from the same location, at the same time of year; they must also be of the same

size. During the workshop, participants were shown how natural variations mask the real differences in pollution levels which we are trying to detect. When I refer to gaps, I mean temporal and geographic gaps. The programme must cover the whole area in question and samples must be collected every year or every season depending on the objective.

MEDWAVES. - Does this mean that all the data collected so far are useless?

G.P.G. - No, far from it, because the data give an indication of the level of pollution in the region; however, they cannot be used for trends. The study mentioned above has shown that an objective investigation of between year variation in contaminant levels was virtually impossible because of the inconsistent collection, preparation and chemical analysis of data throughout the monitoring programme, also that there was an insufficient number of pools on each sampling occasion and/or an insufficient number of years sampled.

It must be recognized that a temporal monitoring programme requires many years' data and replicate pools each year. Monitoring for temporal purposes should be restricted to a small number of target species and should have well defined sampling stations and a small number of well defined sampling occasions each year.

MEDWAVES. - Some of the lecturers of the workshop were scientists from Northern European countries. Does this simply show a call for support from outside the region or is there another reason for it?

G.P.G. - The problems we are now trying to solve in our region have already been tackled by our colleagues involved in the North Sea and Baltic programmes and I thought it would be a good opportunity to benefit from their experience. This was the reason for their presence here. I must point out, however, that the problems are so complex that even in the North they are still working on new ideas to improve the situation.

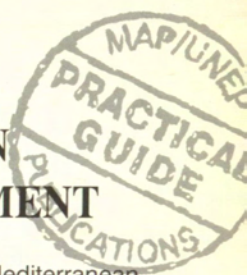
MEDWAVES. - What was the response of the participants?

G.P.G. - As this was the first time that such a workshop was organized, we asked the participants at the end of the workshop to complete a questionnaire anonymously, to see their response. We are trying to find out what they thought of the contents of the workshop and whether they benefited from it.

The main conclusions, based on the replies, were that a) more than 90% of the participants found the course either very useful or quite useful; b) the most popular topics of the workshop were the analytical quality assurance programme and the statistical analysis of the data; c) the majority of participants thought that such workshops should be repeated, particularly on specific topics such as the statistical treatment and interpretation of monitoring data.

MEDWAVES. - As FAO specialist at the Athens Co-ordinating Unit you have been closely involved with the development of MED POL. What advice would you give to people in charge of monitoring programmes in the region?

G.P.G. - I will give you some personal opinions which however have been corroborated and reinforced, it is true, by the collective reevaluation of this fundamental part of the programme carried out at present within the framework of MAP. I think that those in charge of monitoring programmes should review them setting specific objectives and redesigning them accordingly. In particular, they should remember the following points which I am enumerating in no particular order: to ensure that the data collected are really useful for the defined objectives of the monitoring programme; to review the programme and the results at intervals and, if necessary, modify the programme (by addition or deletion) to redirect it to the specific objectives; not to continue measurements simply for the sake of continuing or because it is easy to do so since the procedures are already well established; to measure contaminants only in the matrix or substrate necessary to meet the defined objective; to adjust the sampling frequency according to real needs; to ensure that data quality is adequate for the purpose in question. You can imagine of course that



MAP/UNEP PUBLICATIONS ON THE MEDITERRANEAN ENVIRONMENT

(Interview cont'd)

the list is not exhaustive.

MEDWAVES. - *A question now less directly linked with the workshop concerning FAO's involvement in the work of the Co-ordinating Unit: a new concept appeared recently, that of bio-monitoring. What is it exactly?*

G.P.G. - The simple measurement of contaminants in marine biota, even though considered valuable and necessary, does not provide all the information required in pollution assessment work. How do these biota react to a particular level? This is also an important aspect. Therefore biomonitoring was introduced recently, in advanced national and international monitoring programmes. Biomonitoring isn't just measuring a chemical contaminant - this is now called chemical monitoring - but the study or monitoring of the impact of the chemical contaminants on biological processes, on marine flora and fauna. However, there is a multitude of responses which can be studied: selection is necessary. There is no single biological measurement that will indicate the effects of pollution. More than one technique is always being used.

For the Mediterranean, a group of experts who met in Malta in November 1992 recommended the initiation of a pilot biomonitoring programme using two specific and two general stress indices which have been considered "suitable". The introduction of biomonitoring does not mean the end of chemical monitoring. Biomonitoring is carried out to get complementary information. Analytical chemistry and the biological determination of toxic effects represent two approaches to the same problem; it is not possible to interpret biological changes without knowing the level of associated chemical contamination, just as it is impossible to assess the significance of observed chemical concentration in the absence of information on their biological impact. In fact, any serious study of the biological effects of pollution must go hand in hand with a monitoring programme of chemical analysis.

Since it was initiated in 1975, the Mediterranean Action Plan accompanied its activities with a considerable editorial output concerning these activities; this output complements the studies specifically devoted to the Mediterranean, published by the Oceans and Coastal Areas Programme of UNEP, Nairobi. The MAP publications are supported by the computer and the information services of the Athens Unit and by the liaison and consulting role played by its library. Furthermore, for the last 8 years, MEDWAVES regularly reports on publications as they appear. However, we feel that it might be useful to present in its totality this unprecedented editorial effort, which is a true encyclopedia on the Mediterranean environment continually completed and brought up to date. This Practical Guide, without being exhaustive, will make it easier for the reader to know what is available and to take advantage of the many studies, reports, brochures, periodicals and information bulletins.

WHO PUBLISHES WHAT?

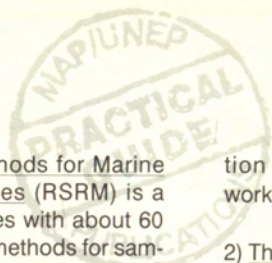
The Oceans and Coastal Areas Programme Activity Centre (OCA/PAC), in Nairobi, Kenya, headquarters of UNEP, which is the successor to the old Regional Seas Programme and ultimately responsible for MAP, publishes the following:

1) The Regional Seas Reports and Studies series (RSRS) has about 150 publications to date on the various regional seas - and of course the Mediterranean which was the first to have its own Action Plan under UNEP - and on global aspects of pollution and marine environment; the series includes certain GESAMP reports (Group of experts on scientific aspects of marine pollution), all of which are published by OCA/PAC in the separate series of Reports and Studies of GESAMP. Certain indicative numbers are: *The health of the oceans* (RSRS 16, 1982), *Principles for developing coastal water quality criteria* (RSRS 42, 1984), *Long-term consequences of low-level marine contamination* (RSRS 118,

1990). Concerning the Mediterranean the series contains *inter alia*: *Atmospheric transport of contaminants into the Mediterranean region* (RSRS 68, 1985), *Tar pollution in the Mediterranean Sea* (A. Golik, RSRS 91, 1988), *The Regional Activity Centre for the Mediterranean Specially Protected Areas* (RSRS 100, 1988), *Implications of expected climate changes in the Mediterranean region* (G. Sestini, L. Jeftic and J.D. Milliman, RSRS 103, 1989), *State of marine environment in the Mediterranean region* (L. Jeftic et al., RSRS 132, 1990). Finally some numbers of the same series are studies on specific areas in the Mediterranean, such as: *Environmental impact assessment: the marina in Paphos (Cyprus)* and *Environmental impact assessment: sewage treatment plant for Port Said* (RSRS 130 and 133 respectively). Most of the studies are joint publications with other UN organizations.

2) The Regional Seas Conventions and Protocols series (RSC) includes certain basic legal texts concerning the Mediterranean: *Convention for the protection of the Mediterranean sea against pollution, including: Protocol for the prevention of pollution of the Mediterranean sea by dumping from ships and aircraft; Protocol concerning cooperation in combating pollution of the Mediterranean sea by oil and other harmful substances in cases of emergency; Protocol for the protection of the Mediterranean sea against pollution from land-based sources* (RSC 2, 1982); *Rules of procedure for meetings of the Contracting Parties to the Convention for the protection of the Mediterranean sea against pollution and its related protocols* (RSC 8, 1985); *Protocol concerning Mediterranean specially protected areas* (RSC 9, 1986). All these texts are multilingual.

3) The Regional Seas Directories and Bibliographies series (RSDB). Here again there are specific numbers on the Mediterranean: *Directory of Mediterranean marine research centres* (RSDB 1, 1976, 2 1977, 15 1985), *Selected bibliography on the pollution of the Mediterranean sea* (RSDB 7, 1981), *Bibliography on the marine environment in the Mediterranean* (RSDB 20, 1985).



4) The Reference Methods for Marine Pollution Studies series (RSRM) is a highly specialized series with about 60 numbers on reference methods for sampling, determination of chemical contaminants and micro-organisms, toxicity tests, statistical methods for the evaluation of results etc.

5) **Miscellaneous publications:** Several volumes of *Ambio*, a bimonthly international publication of the Royal Swedish Academy of Sciences, are on regional seas and published with the cooperation and financial support of UNEP; N° 6, 1977 on the Mediterranean, published two years after MAP was launched, was a landmark issue. *The Siren*, quarterly newsletter of UNEP's Oceans and Coastal Areas Programme in addition to a brief article on the environment, reports (in English, French and Spanish) on the activities of the various Action Plans for the regional seas, complementing them with pertinent comments by a blue seal, spokesperson for animals victim of pollution. *Our Planet*, the bi-monthly UNEP magazine, published in English, French and Spanish, deals with all the main global environmental problems. *The Mediterranean Action Plan, the Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols* contains all the basic legal texts for MAP in one volume. *High and Dry: Mediterranean climate in the twenty-first century* is for the public at large, as is *UNEP Profile* which sets out the structure and activities of the Nairobi organization. There is also a number of adhesive stickers on environmental issues.

The complete list of Oceans and Coastal Areas publications is updated every year in the *CATALOGUE OF PUBLICATIONS* (N° 10, 1993) which gives not only all the volumes published, but also information on which are available and in what language. All UNEP publications are sent free of charge upon request. Contact:

Oceans and Coastal Areas Programme, Activity Centre (OCA/PAC), United Nations Environment Programme, P.O.Box 30552, Nairobi, Kenya, tel: (2542) 215 775, fax: (2542) 230 127

The Co-ordinating Unit of the Mediterranean Action Plan,

at Athens, Greece publishes:

1) All the reports of its institutional, technical and scientific meetings, consulta-

tion meetings, training courses and workshops.

2) The **MAP Technical Reports** series has published to date 75 volumes and reflected, since 1986, the scope and diversity of MAP activities on the Mediterranean environment, within the framework of the MED POL monitoring and research programme on pollution in the Mediterranean, as well as the programme of the Regional Activities Centres at Split, Malta, Tunis and Sophia Antipolis. Our readers are familiar with the Technical Reports since we give a brief overview in each number of the content of the volumes recently published (see in this issue of *MEDWAVES* p.10 under the heading



MAP Publications, a summary of the contents of volumes 71 to 75). Forty of the 75 volumes are MED POL research studies on pollution, mostly final reports on MED POL research activities. There are also periodic evaluations of pollution in the Mediterranean sea which integrate both the MED POL data and the pertinent scientific literature and which have, since 1987, served as the basis for the justification of common antipollution measures for major contaminants (mercury, N° 18; organotin compounds, N° 33; cadmium, N° 34; organohalogens, N° 39; synthetic materials, N° 56; organophosphorous compounds, N° 58; radioactive substances, N° 62; each volume contains both the English and the French version of the evaluation). The priority actions emanating from the **Split Centre** are represented by a total of 9 volumes (N° 10-17 and 41), the activities of the **Tunis Centre** by 4 volumes (N° 26, 36, 42, 43); there has also been an increase in the variety of issues studied, e.g. legal aspects (N° 25, 38), climate changes (N° 27), jellyfish blooms (N° 47), specialized bibliographies (on climate changes, N° 29; on organotin compounds, N° 35, on organophosphorous compounds, N° 44, on marine litter, N° 50) and various directories (Directory of Mediterranean Marine Environmental Centres, N° 65). Most of the Technical Reports are joint publications with other UN agencies, like WHO, IOC, UNESCO, IAEA, IMO; the

WHO and FAO are the greatest contributors since they each have a project bureau at the Athens Unit and directly coordinate the activities that fall within their respective field of competence. Each technical report contains a list of all previously published volumes. The complete series of MAP Technical Reports is also included in the publications catalogue of Oceans and Coastal Areas mentioned above.

3) **Non-specialist publications:** *Mediterranean Action Plan*, illustrated brochure on MAP's structure and objectives (published between 1985 and 1989 separately in the Mediterranean languages: Arabic, English, French, Greek, Hebrew, Italian, Maltese, Serbo-Croatian, Spanish and Turkish). The text of the Specially Protected Areas Protocol in 4 languages (Arabic, English, French, and Spanish) in one volume. The texts of the Action Plan for the preservation of the Mediterranean marine turtles and the Action Plan for the Mediterranean seal *monachus monachus* in English, French and Arabic in the same volume. The *Genoa Declaration on the Second Mediterranean Decade* (the text of the Declaration in the 10 Mediterranean languages in one volume, 1988). An explanatory volume *The Mediterranean Action Plan: to save a common heritage*, on the structures, history and accomplishments of MAP published in connection with the Rio Summit (in English and French, 1992). The Coordinating Unit also published in 1992: *Mediterranean Action Plan, Convention for the Protection of the Mediterranean Sea against Pollution and its related Protocols*. This volume in English and French contains the MAP legal texts of the Barcelona Convention and its 4 Protocols with Annex IV to the Land-Based Sources Protocol (Airborne pollution) adopted in 1991 and an Appendix containing a list of signatures and ratifications to the Convention and its Protocols as at 30 October 1991.

4) A quarterly information bulletin on MAP published in English, Arabic and French, *MEDWAVES* (which we are sure the reader is familiar with!) disseminated free of charge in all the coastal states. In the last two years, *MEDWAVES* came out three times a year rather than 4, because two numbers were double, one on Egypt (N° 24, 1992) and the other on the Mediterranean after Rio (N° 26, 1992). The same will happen this year with N° 29, a double number on Turkey and the Antalya Meeting. All Unit publications are sent free of charge upon request; they are also listed in the Oceans and Coastal Areas Catalogue of publications mentioned above.

For more information please contact:
Coordinating Unit for the Mediterranean
Action Plan, Information Services, 48,
Vas. Konstantinou, 116 35 Athens,
Greece, tel: (30) (1) 725 3190-5,
fax: (30) (1) 725 3197.

The Publications of the MAP Activity Centres.

The Split and Tunis Activity Centres (Priority Actions Programme Centre and Specially Protected Areas Centre, respectively), in addition to the main studies published in the MAP Technical Reports series mentioned above, each publishes and disseminates its technical documents, guidelines, reports of meetings and training courses, directories and practical guides developed within the framework of their activities. The SPA Tunis Centre has published for dissemination by the Coordinating Unit, the *Guidelines for the selection, creation and management of protected marine and coastal areas of the Mediterranean and for the notification of pertinent information*. It recently published an illustrated brochure for the public at large: *The Specially Protected Areas in the Mediterranean; to save a common heritage* (which also contains a list of documents published or to be published by the Centre). (Contact: Coordinating Unit for MAP, Athens (see above) or directly the centre: RAC/Priority Actions Programme, 11 Kraj Sv. Ivana, P.O.Box 74, 58000 Split, Croatia, tel: (38) (58) 43499, fax: (38) (58) 361677; RAC/Specially Protected Areas, 15 rue Ali Ibn Abi Taleb, Cité Jardins, 1002 Tunis, Tunisia, tel: (216) (1) 795 760, fax: (216) (1) 797 349).



The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) in Malta, regularly publishes and updates technical documents:

Inventory of equipment and products against pollution from hydrocarbons, Directory of companies offering services in the Mediterranean in case of emergency, also Operational guides and a List of alerts and accidents in the Mediterranean. (Contact: REMPEC, Manoel Island, Malta, tel: (356) (33) 7296-9, fax: (356) (33) 9952).

As for the **Blue Plan/Regional Activity Centre in Sophia Antipolis**, its publication programme is considerable and constitutes in itself one of the main activities of the programme which con-

sists of putting at the disposal of specialists, land planners and decision-makers in the Mediterranean, a body of data, scenarios and orientations on the future relationships between populations, natural resources, environment and development in the region. This prospective whole includes a fundamental and lengthy volume, the result of 8 years work, *The Main Report of the Blue Plan*, published first in 1987 by MAP/UNEP in French and English, then commercially (in French, under the direction of Messrs. Grenon and Batisse, *Le Plan Bleu: Avenirs du bassin méditerranéen*, 1988, éditions Economica, 49 rue Héricart, 75015 Paris, France; in English, *The Blue Plan: Futures for the Mediterranean Basin*, 1989, Oxford University Press, Oxford, U.K.). The same work was published in Spanish (Edit. Mopu, 1990) and Arabic (Edit. Edifra, 1991). A summary document of 100 pages, *The Blue Plan: summary and orientation for action*, was published in English and French at the same time as the main report, then translated into Arabic and Serbo-Croatian. Around this main report successive publications have appeared since 1990, which are updated complements, the specialized brochures of the Blue Plan, giving a more detailed analysis of the areas that the main report had only approached from a general point of view: 1) *Fisheries and aquaculture in the Mediterranean*, 1990; 2) *Mediterranean forests*, 1990; 3) *Conservation of Mediterranean ecosystems*, 1990; 4) *Industry and environment in the Mediterranean*, 1991; 5) *The islands in the Mediterranean*, 1992; 6) *Water in the Mediterranean Basin*, 1992; 7) *Energy and environment in the Mediterranean*, 1993 (see discussion on p.11 of this issue, under the heading **MAP Publications**). It is hoped that all these brochures, which are in French - and available from the Editions Economica, Paris (see above) - will be translated into English, so that they may have the wide dissemination around the Mediterranean that they deserve. Finally, the Blue Plan has published and disseminated, in connection with the Rio Summit in June 1992, an illustrated brochure describing its structure and activities, *A Blue Plan for the Mediterranean: from thinking to action*, in English and French. (For further information, contact: RAC/Blue Plan, Place Sophie-Lafitte, Sophia Antipolis, 06560 Valbonne, France, tel: (33) (93) 653959, Fax (33) (93) 653528).

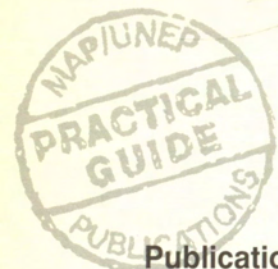
THE LIAISON AND CONSULTING ROLE OF THE LIBRARY OF THE ATHENS UNIT:

The Library, located in the premises of the MAP Unit at Athens, houses an important collection of monographs and series and has in store all the MAP/UNEP Technical Reports mentioned in this practical guide, in addition to other specialized publications on the environment in the Mediterranean, marine pollution, environmental policies, climate changes, etc., published by UN Agencies, Governments, institutes, IGOs and NGOs. One can also find the main environmental periodicals on marine environment.

The library, originally set up for the needs of the Unit staff, has now assumed the functions of dissemination, reference, and bibliographical help to the Mediterranean scientific community; it answers queries and assists visitors, students, scientists, employees, and NGO members doing research at the library. It has launched training activities jointly with the computer department of the Unit.

The library has a data base on the institutional and technical meetings organized within the MAP framework; it draws up and updates specialized bibliographies and data bases on the Mediterranean.

(Interested persons can call up the Athens Unit for an appointment to visit the library, every working day from 8.30 to 15.00 hrs: Tel. (30) (1) 725 3190-5).



THE TUNIS CENTRE FOR SPECIALLY PROTECTED AREAS INITIATES A TAGGING CAMPAIGN OF MARINE TURTLES IN THE MEDITERRANEAN

Publications on PAM

References to MAP are becoming ever more frequent in the international press and scientific literature, as well as in works on the legal aspects and policies on the environment. Here, we'll just mention three monographs on MAP which, because they reflect outside opinions, offer a valuable yardstick on what has and what hasn't been accomplished in Mediterranean cooperation in the field of environmental protection:

- *Saving the Mediterranean. The Politics of International Environmental Cooperation*, by Peter Haas, is an in-depth analysis of the Mediterranean Action Plan as concerns its institutional framework, political developments and influence struggles in the first 15 years of its existence. For Peter Haas, Senior lecturer of Political Science at the University of Massachusetts, MAP exemplifies the emergence of an "epistemological community" of environmental experts and specialists which makes itself felt as time goes by on the basis of its knowledge and like an influential lobby is able to push for the adoption of a policy of cooperation which often goes against the strictly national and "conventional" interests of the states (Columbia University Press, 562 West 113th street, New York, N.Y. U.S.A., 275 pages).

- *La Méditerranée en droit international* (The Mediterranean in international law) by Maguelonne Dejeant-Pons, contains a description and analysis of the legal framework of the Mediterranean Action Plan, of the Barcelona Convention and the institutional mechanisms on the basis of the concept of integrated planning and management for the coastal areas (Editions Economica, 49 rue Héricart, 75015 Paris, France, 371 pages).

- *The Barcelona Convention and Protocols* - The Mediterranean Action Plan Regime by Evangelos Raftopoulos (see description of contents on p. 11 of this issue, under the heading **Books - Magazines**).

The decline in the population of marine turtles in the Mediterranean has been going on for several decades; the more than 200 million year-old reptiles have not been able to defend themselves against human practices in the 20th century. The deliberate massacre, the accidental catches in fishing gear, the occupation and degradation of nesting beaches by tourism and pollution, are the main causes of this decline in numbers.



Due to the pressure from numerous national and international organizations and NGOs, the Mediterranean countries adopted in 1989, an Action Plan for the conservation of marine turtles in the Mediterranean. The objectives of the Action Plan are on the one hand to stop exploitation and reduce accidental catches in fishing gear, and on the other, to protect the nesting and wintering areas of these reptiles. It is true that the Action Plan was adopted while emphasizing that "many important aspects of the biology and behaviour of marine turtles are still not sufficiently understood in such a way as to make possible to plan a complete management strategy for the conservation of the species, but the degradation of the populations is so serious that the measures to be taken could no longer be put off". The Action Plan and its recommendations are based on knowledge and information already available. It will be modified, if necessary, as more knowledge is acquired. To this effect, scientific research has become one of the priorities of the Action Plan in order to gain a better knowledge of the biology and dynamics of the population of these species.

Among actions undertaken in the Mediterranean countries, we should underline the role played by certain NGOs in the protection of nesting beaches and in public awareness campaigns. For its part, the Mediterranean Action Plan, through the Specially Protected Areas Centre in Tunis (SPA/RAC), carries out a series of ac-

tions to coordinate and reinforce the efforts of states and NGOs. It is thus that training courses on the management of nesting beaches have been organized every year (at the Lara station, in Cyprus, in collaboration with the Cyprus Wildlife Society). Identification campaigns on beaches to locate nesting sites are also being carried out; the more recent ones concern the Egyptian coasts (in collaboration with the NGO MEDASSET) and the south coast of Tunisia (in collaboration with ANPE of Sfax). Identification of nesting beaches in Lybia is planned for the summer of 1994.

Within the same context, SPA/RAC has included a new action in its programme: a large-scale tagging campaign for marine turtles. Each of the Mediterranean countries has been asked to appoint a national coordinator for this campaign and teams that will receive from the Tunis Centre the necessary equipment for the campaign (tags, clips, files, etc.). This network of volunteers will both tag the animals and collect the information on sightings of tagged animals as they move about in the Mediterranean.

This operation is not the first of its kind in the area; many researchers and NGOs have, for years, been tagging animals, but only at local scale. These activities have already shown that marine turtles move great distances within the Mediterranean and even outside of it. Unfortunately, data remain fragmentary and the number of sightings of tagged animals too low to allow solid conclusions to be drawn on trajectories of migration and areas of seasonal congregations.

Through this tagging campaign in several Mediterranean countries, it will be possible to obtain a good geographic coverage and tag a high number animals, in the hope of increasing the number of sightings and thus obtaining more complete and statistically reliable data. The campaign will also bring about a greater awareness among the public and especially the fishermen concerning the protection of marine turtles.

THE HERCULES PROJECT

Researchers from various Mediterranean countries get in gear to promote a network of laboratories on plankton in the Mediterranean sea.

The idea is simple, not very costly and will allow for a better comprehension of the pelagic ecosystem. It rests on a basic fact: several Mediterranean laboratories are already carrying out research programmes on local and seasonal variations of the biological and chemical components of this ecosystem. However, this is done in an independent, fragmentary, asynchronous manner, so that the results obtained have only local value. The idea then is to group together and coordinate these efforts in a network of laboratories, which would provide a better geographic coverage and more frequent data, which in turn would make possible a comparison of the annual cycles of biomass or abundance of planktonic species all around the Mediterranean. It would thus be possible to identify possible anomalies in the annual cycles, which are linked to climate or anthropogenic forms of pollution, and to draw up a general and reliable overview of the development and trends in the Mediterranean.

The jellyfish precedent

The project, named **Hercules** by those that conceived it, was enthusiastically supported by the researchers who came together for a round table discussion, organized in Trieste in October 1992, on the occasion of the Plenary Assembly of ICSEM. The scientists came from 13 plankton laboratories from 8 Mediterranean countries (Egypt, France, Greece, Italy, Lebanon, Spain, Syria, Turkey). The proposal was based on a project carried out between 1985 and 1987 within the MAP/MED POL framework which coordinated the monitoring and research activities on jellyfish blooms in the Mediterranean. That project produced several multidisciplinary results and instructive syntheses and showed that observations carried out with cohesion at Mediterranean scale would lead to identification of the main trends which would provide answers to questions concerning the marine environment.

A light structure

The Hercules project will impose just two constraints upon participating laboratories: 1) periods of study must run simultaneously and 2) sampling must be carried out at high frequency (minimum one per week). The equipment needed is simple and organizing the network means nothing more than setting-up a scientific committee which would ensure consultation among laboratories on the methods for sampling analysis, data processing, quality control and a bureau which would present the programme and disseminate the information to the various laboratories. The programme could start with a small number of laboratories participating, but will be fully effective only when there is high density of sampling points around the Mediterranean sea. The first phase will last two years, the results will be presented within the ICSEM framework and its extension will be reviewed in consultation with the organization that will have participated in financing the work.

What are the benefits expected?

Two different types of results are expected from the programme: first, cooperation in an effort to carry out sampling at Mediterranean scale; second, a new and global vision of the dynamics of the Mediterranean coastal areas. Moreover, it would be the base for solid cooperation among Mediterranean laboratories, through the exchange of methods, concepts and know-how. Last May, at the last Joint Meeting of the Committees in Athens, one representative proposed that of the US \$40,000 needed for the implementation of the programme, US \$20,000 could be allocated from the 1994 MED POL budget, so as to ensure regular cooperation between MED POL and the Hercules programme, with a view to guaranteeing the maximum benefit to MAP from its association with the programme. The meeting took note of the proposal and decided to transmit it to the Contracting Parties' Meeting in Antalya.

[\(For more information on the scientific content of the project, contact: Programme Hercule, Station zoologique, B.P. 28, 06230 Villefranche-sur-Mer, France\)](#)

MR. SALVINO BUSUTTIL has resigned his position as MAP Co-ordinator

Mr. Salvino Busuttill has announced his resignation as Co-ordinator of the Mediterranean Action Plan, effective as at 31 August 1993. He had succeeded Aldo Manos, who had occupied the post between 1980 and 1991. Mr. Salvino Busuttill, Co-ordinator since November 1st, 1991, had together with Mr. Ebeid, President of the Bureau of the Contracting Parties, elected at the Cairo October 1991 Meeting, represented MAP at the Rio Summit, June 1992. He had come away from this Summit with the conviction that the legal and institutional framework of MAP needed to be strengthened in order to promote the implementation of an Agenda 21 for the region and to make it the lever for Euro-Mediterranean cooperation within the framework of the Nicosia Charter and the Cairo Declaration. However, he also pointed out in an interview he gave to MED-WAVES in November 1992 "that we obviously cannot take on new responsibilities without increased technical and financial support". Mr. Busuttill followed up that idea by organizing in Malta, with the support of the Bureau, an informal expert meeting on an Agenda 21 for the Mediterranean; he also held the view that within the Coordinating Unit a new post should be created for an expert who would take on projects of sustainable development in the Mediterranean, and that a legal Committee of independent experts should be set up to advise and orient the institutional strategy of the Action Plan.

UNEP has announced a vacancy for the post of Co-ordinator; the deadline for submitting applications is 20 November, 1993, and 1 January, 1994, for the new Co-ordinator to assume his functions. Just like the Seventh Ordinary Meeting in Cairo in 1991, the Eighth in Antalya, next October, will be convened while awaiting the nomination of a new Co-ordinator; the final decision will be made by UNEP's Executive Director. It is worth noting that Dr. L. Jeftic, Senior Marine Scientist, has been appointed by UNEP's Executive Director as Deputy Co-ordinator as at 10 September 1993.

The staff of the Co-ordinating Unit and the Regional Centres expresses its warmest wishes to Mr. Salvino Busuttill for success in his new post in Malta.

MAP PUBLICATIONS

MAP Technical Reports Series

UNEP/FAO/IOC Report: **Selected techniques for monitoring biological effects of pollutants in marine organisms.** The volume contains the presentations and practical notes prepared for the training workshop UNEP/FAO/IOC of the same title, held in Nice, 14-25 September, 1992. It is divided into two parts. Part I concerns biochemical monitoring techniques: use of biomarkers, biochemical measurements, hepatic mixed function oxidase induction in fish, immunoassays for CYP1A1 induction in fish, assessment of the biological water quality using acetylcholinesterase (AChE) inhibition measurement. Part II concerns the physiological techniques: role of physiological energetics in environment toxicology and pollution assessment, field application of scope for growth (SFG). Each article is followed by a specialized bibliography.

[\(MAP Technical Reports Series, N° 71, 178 pages, English only\)](#)

UNEP Report: **Costs and benefits of measures for the reduction of degradation of the environment from land-based sources of pollution in coastal areas. A - case study of the bay of Izmir. B - case study of the island of Rhodes.** As a contribution to the improved assessment, the preparation of two case studies was undertaken by UNEP, along the general methodological guidelines recommended by a meeting of government experts, held in December 1991, in Nairobi. Taking into account the ongoing integrated coastal zone management pilot projects carried out in the framework of MAP, the bay of Izmir (Turkey) and the island of Rhodes (Greece) were selected as sites of the case studies. They represent two different, yet typical and

complementary situations, common throughout the Mediterranean: one, a larger coastal urban and industrial centre, the other, an island with tourism as the main economic activity. The main conclusion of both case studies is that the benefits from environmental protection measures would, if applied, significantly outweigh the costs of their application in the long term.

[\(MAP Technical Reports Series, N° 72, 52 pages, English only\)](#)



UNEP/FAO Report: **Final reports on research projects dealing with the effects of pollutants on marine communities and organisms.** The volume contains 6 papers in French and 2 in English, concerning the following topics: effects of cadmium on *Anguilla anguilla*, effects of cadmium and mercury on eggs of *Salmo gairdneri*, of chromium on *Mytilus edulis* and *Liocarcinus puber*, ichthyoplankton in the Lebanese coastal waters, phytoplankton structures of the bay of Algiers, impact of pollution on *Posidonia oceanica*, the composition and diversity of planktonic larval decapoda off the Mediterranean coast of Israel, and the biogeochemical cycle of mercury species in the marine environment.

[\(MAP Technical Reports Series, N° 73, 173 pages, French and English\)](#)

UNEP/FIS Report: **Report of the training workshop on aspects of marine documentation in the Mediterranean, 23-26 November, 1992, held at the Foundation for International Studies, Valletta, Malta.** Twenty-five participants from 15 countries, including librarians, infor-

mation specialists, marine scientists and decision makers, attended the workshop, which included nine lectures, group working sessions, demonstrations and discussions in plenary. The lectures and discussions are summarized in this volume. The focus of the workshop was on systems of collecting, collating, documenting, disseminating and sharing information on the marine environment of the Mediterranean and the Black Sea. In this first session, the librarian of the Co-ordinating Unit presented the methodology of collecting the information, entering it into the databases and processing it in order to establish the Directory of Mediterranean Marine Environment Centres. After four days of discussions and realizing the gaps and deficiencies in terms of access to the information and its processing at the Mediterranean level, as well as the complications in exchanging information because of the different languages used, the participants proposed the setting up of a regional network of libraries and information and documentation centres on the marine environment.

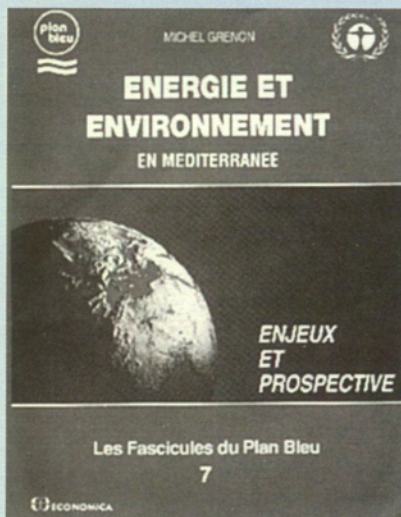
[\(MAP Technical Reports Series, N° 74, 25 pages, English only\)](#)

UNEP/WHO Report: **Development and testing of sampling and analytical techniques for monitoring of marine pollutants.** This is the final report of the project on control of intestinal pathogens (*Aeromonas* and *Campylobacter*) in marine coastal recreational areas (Activity A of MED POL) carried out by the Hydrology and Environment Institute of the Polytechnic University of Valencia, Spain. The study contains the material and methods, statistical analysis and results. The Appendix includes a series of 16 photographs of discharge points, sampling sites and laboratory procedures used in the study.

[\(MAP Technical Reports Series, N° 75, 78 pages, English only\)](#)

**PUBLICATION
OF THE 7th VOLUME
OF THE BLUE PLAN:**

**ENERGY AND ENVIRONMENT
IN THE MEDITERRANEAN,
challenges and prospective**
by Michel Grenon et al.



The author is well known in MAP circles since he was one of its main actors as Technical Director of the Blue Plan, between 1984 and 1989, and therefore responsible for the drafting of the main

report which came out in 1987. In addition, he was obviously very well qualified to write this new volume since, while remaining scientific advisor to the Blue Plan, he founded, in 1989 at Sophia Antipolis, the "**Mediterranean Observatory of energy**" which has already published reports of seminars on the perspectives of solar power stations, natural gas and electricity in the Mediterranean basin. The energy perspectives were treated in a separate chapter of the Blue Plan Report and the forecasts were confirmed in the intervening years, specifically on two points: a large increase in electricity and the expansion of the role played by natural gas. The goal of the new publication is to deepen and upgrade the analysis, to work out the forecasts in greater detail and to reexamine the conclusions in the light of developments since 1987. One of the major developments is the adoption in Rio of the Convention on climate change, the implementation of which will mean difficult choices in a key sector which affects all production activities and our everyday life. As Michel Batisse points out in the preface, "no method of production or use of energy is immune from having an impact on the environment" and this volume makes clear the

whole gamut of implications. Fossil fuel energy (where currently natural gas offers better perspectives for the decrease in the levels of gases responsible for the greenhouse effect), development of renewable sources of energy (where some Mediterranean countries have already been successful, helped by their climatic and geological conditions), uncertainties concerning nuclear power, fast growth of the electricity interconnections and the gas interconnections, rational use and control of energy (which also means the "truth in pricing", the setting up of standards, a non-mandatory policy of energy saving and research development) are all issues which are as many challenges for our societies, reviewed by Michel Grenon. The author has the right mix of clarity and detail and proposes orientations for action which make clear the need for solidarity and cooperation at Mediterranean level. His conclusion: "It is a new Mediterranean of exchanges that energy helps us build". We might add: and a new Mediterranean of well-founded hope that this book helps us conceive, in the great tradition of the Blue Plan. ([Editions Economica, June 1993, Paris, 168 pages](#))

BOOKS

The Barcelona Convention and Protocols - The Mediterranean Action Plan Regime, by Evangelos Raftopoulos, contains the fundamental legal texts of the Barcelona Convention and its Protocols, other documents relating to MAP (Statutes, Genoa Declaration, common measures, MED POL and CAMP agreements, etc.) and as an introduction, a detailed study of 80 pages, mostly on the legal level, of the development of the Mediterranean Action Plan, the setting up of its principal mechanisms and the operation of its components. The reader is thus given the opportunity to confront the analysis, done in the light of a developmental conception of the law, with the reality of the legal texts. E. Raftopoulos is legal consultant to MAP and fully conversant with the institutional framework set up in 1975 to promote Mediterranean cooperation. The same author has also written a

MAP Technical Report (N° 25) on "Map in a functional perspective". According to him, the Barcelona Convention, despite its effectiveness which can be seen in the success of cooperation efforts, suffers today from "a legal deficit" which is three-pronged: 1) absence of legal official status for MAP structures which are not included in the Barcelona Convention, but were instituted at the operational level by "soft law" documents, i.e. the Bureau, the two standing Committees and the Regional Centres; 2) absence of a global legal strategy for the Mediterranean; 3) absence of any institutional mechanism for the implementation of such a global strategy. ([Simmonds & Hill Publishing Ltd., London, 1993, 367 pages](#))

Coasts in danger, by R. Paskoff, aims at educating the public on the problems of destabilization of coastal environments and the means to remedy the situation. The author, a physical

geographer, former professor at the Universities of Santiago (Chile) and Tunis, and currently at the University of Lyon, denounces the major errors committed, both in France and other countries, in the management of coastal lands; he then sets down the principles for sound management of these areas. ([Editions Masson, 120 Bd. Saint Germain, 75006 Paris, 1993, 248 pages](#))

MAGAZINES

Environment Bulletin: this quarterly information newsletter, published by the World Bank, contains in its Spring 1993 issue an article on "a two part strategy to attenuate environmental problems in Albania" within the framework of the METAP programme of the World Bank and the International Monetary Fund. ([Environment Bulletin, Vol. 5, N° 2, Environment Department, World Bank, Washington D.C., U.S.A.](#))

(Reviews cont'd)

Pollution Prevention: the first issue of 1993 contains an article by European correspondent Anette Binghman, entitled "Tanker pollution takes toll on Mediterranean sea", which recalls the recent accidents of tanker pollution in the region and the efforts carried out by IMO and MAP/UNEP to clean up the spills, as well as various projects for sewerage treatment plants in Mediterranean coastal states.

(Pollution Prevention, European edition, Vol. 3, issue 1, Herts WD3 2YG, United Kingdom)

Marine Pollution Bulletin: the latest issue (June 1993) contains an editorial which is an appraisal of the current policy on transboundary marine parks in the Mediterranean, with reference to several bilateral projects.

(Marine Pollution Bulletin, Vol. 26, N° 6, Pergamon Press, Oxford, U.K and New York, U.S.A.)

Proceedings - Recommendations of the Colloquium on the water demand management in the Mediterranean countries:

this colloquium was organized by the Mediterranean Water Institute, 3-5 December, 1992, at Saintes-Maries-de-la-Mer, Bouches-du-Rhône, France. About 50 experts participated and the work was divided into three workshops. The publication gives a synthesis of the results and the recommendations in terms of water demand management. (Proceedings of the Colloquium in French, English and Spanish, Mediterranean Water Institute (IME), 13241 Marseille Cedex 01, France)

Posidonia Newsletter: this periodical devoted to the conservation of seagrass beds (mainly Posidonia) announces that, due to lack of funds, it will cease to appear after the next issue. The news will sadden all those who, for years, have followed the work carried out by C.F. Boudouresque and his team and its successes (at the political level among others) in this fundamental area of coastal protection. The editorial, by Prof. C. Den Hartog, the Netherlands, reminds us of the precarious situation of seagrass beds in the Mediterranean, which is further endangered by the belief in certain technocratic circles that it is possible to reestablish the beds after they have been destroyed following coastal land development.

(Posidonia Newsletter, Vol. 4(2), 1993, Faculté de Luminy, Marseille, France)

Medmaravis News: this bulletin of the Mediterranean Association for sea birds, in addition to the presentation of its most recent activities and projects, contains the full text of the Chios Declaration for the conservation of Mediterranean ecosystems, adopted at the end of the Pan-Mediterranean Symposium, organized between 15 and 20 September, 1992, by MEDMARAVIS, in collaboration with various NGOs and the participation of several international governmental institutions. (MEDMARAVIS, B.P. 2-83470, Saint-Maximin, France; 96 via S. Satta, 07041 Alghero, Sardinia, Italy)

GEO: the September 1993 issue in the French edition, contains a 14 page dossier on the environment in the Mediterranean, along with an illustrated part (photographs, maps and drawings); it is up to the high standards of this very large circulation European monthly. There is also a magnificent pull-out section on the physical relief of the region. The Mediterranean Action Plan is given a prominent place, especially its "monitoring" component, the main problems of the region are aptly analyzed, even if at times one distinguishes a tone of polemics unfair in the case of certain countries, like Greece, instead of evaluating the economic, social and cultural context within which all national environmental policies must be developed.

(GEO, Paris, France)

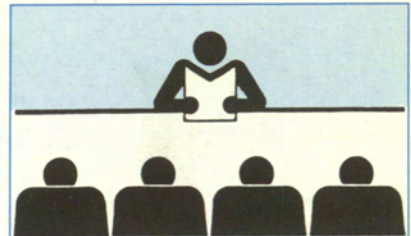
ECHOES OF MEDITERRANEAN COUNTRIES

Activities scheduled

MED COAST 93:

The first international conference on the Mediterranean coastal environment, 2-5 November, 1993, Antalya, Turkey.

As this meeting will take place when this issue of MEDWAVES comes out and three weeks after the Eighth Ordinary Meeting of the Contracting Parties in the same city of Antalya, we will report on it in our next special issue devoted to Turkey. The meeting is organized by the Turkish National Committee on Coastal Areas management and Middle East University, Ankara. The main topics will be physical, ecological and conservation issues, integrated coastal and ocean resource management and development, coastal engineering, modelling and data management.



MAP CALENDAR

Meeting of the Bureau of the Contracting Parties	11 October 1993 Antalya, Turkey
Eighth Ordinary Meeting of the Contracting Parties to the Barcelona Convention	12-15 October 1993 Antalya, Turkey
Consultation meeting on guidelines on data quality assurance	21-23 October 1993 Monaco
Consultation meeting on the application of chemical tracers of domestic contaminants for surveys of marine pollution	25-27 October 1993 Monaco
Consultation meeting on toxic wastes treatment and discharge	December Istanbul, Turkey
Consultative meeting on MED POL data processing programme and guidance for future work	December Athens, Greece

ATTENTION:

The telephone and telefax numbers at the Athens Coordinating Unit have changed. Please dial:
Telephone: (00301) 725 3190-5
Fax: (00301) 725 3197

MEDWAVES, is published quarterly by the Co-ordinating Unit for the Mediterranean. Action Plan in Arabic, 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 by permission from the author.

If you would like to propose an article on a subject related to marine science, please address it to: Gérard Pierrat, Editor **MEDWAVES**, Co-ordinating Unit of the Mediterranean Action Plan 48 Vas. Konstantinou Ave., 116 35 Athens Greece,
Tel. (00301) 725 3190-5
Fax. (00301) 725 3197,
Telex 222611 MEDU-GR