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IMPLEMENTATION OF MED POL - PHASE III

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Introduction

The MED POL Programme, at the time of the launching of MAP (1975), occupied a predominant role over the other components in view of its solid structure and the overall orientation of MAP towards marine pollution. In the following years, a gradual refocussing of MAP had brought MED POL towards a closer relation with coastal areas, land/sea interaction and pollution from land-based activities, gradually transforming the approach of the programme. Lately, with the approval of MAP II (1995) and the adoption of the revised LBS Protocol (1996), MED POL has been invested a fundamental role in the process of sustainable development which was reflected in the formulation of its Phase III.

As a result, during 1997 the MED POL programme has been re-examined by the Secretariat in order to propose a revised structure of the ongoing activities and to formulate new programmes and activities to pursue the implementation of its new role. In doing this, the Secretariat is taking into full account the lessons learnt from the achievements and the bottlenecks of Phases I and II as well as the following elements:

concerning the position of MED POL within MAP

- the expected role of MED POL, in the new framework of MAP II, to be an effective tool for achieving sustainable development; and
- the approved objectives and principles of MED POL Phase III;

concerning the capacity building needs

- the need to further improve the capabilities of developing countries to design and implement the monitoring and research activities and make use, for managerial purposes, of their results; and
- the need to assist the developing countries in the effective implementation of the LBS, Dumping and Hazardous Wastes Protocols;

concerning funding

- the level of funds expected to be available for the activities and the need for precise criteria concerning direct assistance;
- the decision by the Contracting Parties to formulate the activities, whenever possible, by project; and
- the need for closer contacts with the outside donors to obtain additional support.

The general principles and the objectives of the MED POL Programme until the year 2005, i.e. to provide the basis for action related to the assessment, prevention and elimination of marine pollution and to relate such action to the other components of MAP in the perspective of sustainable development (UNEP(OCA)/MED IG 8/7, Annex IV, Appendix), were agreed upon by the Contracting Parties at their 1996 Meeting held in Montpellier.

In organizing the activities, MED POL will therefore give much stronger emphasis to the action-oriented managerial aspects, i.e. pollution control. The switch from assessment to control of pollution, which gradually started during the phase II of the Programme, and was tested during

the execution of the CAMPs, is necessary to enable MED POL to be instrumental in the implementation of the Protocols, and in particular the LBS Protocol, by the Contracting Parties.

The present document is prepared by the Secretariat for the Meeting of the MED POL National Coordinators to briefly present and propose how the Phase III activities could be organized and implemented in future. It is submitted for discussion and will provide the basis for the formulation of a set of recommendations to be presented to the Meeting of MAP Focal Points to be held in July 1997 and subsequently to the Contracting Parties in November 1997. However, if approved by the National Coordinators, a number of activities could already be implemented in 1997 by making use of the funds approved by the Meeting of Contracting Parties held in 1996 in Montpellier.

Although MED POL is intended as an integrated system of interconnected activities in which none of them is independent and all contribute to the ultimate goals of the Programme, in order to simplify the discussion on the individual elements, this document will present separately the proposed activities related to pollution assessment, pollution control and programme coordination.

1. Assessment of pollution

As part of the implementation of the LBS Protocol, the continuous assessment of pollution-related problems at the national and regional levels is expected to provide the scientific basis and the rationale needed by the Contracting Parties to formulate, adopt and implement action plans, programme and measures.

As a result, the pollution assessment component of MED POL Phase III is designed to assist the Contracting Parties to obtain the appropriate data and information for (a) the identification of sources and loads of pollution, (b) the levels and trends of contaminants and (c) the identification and the assessment of potential short- and long-term threats to the Mediterranean environment.

In the past, through the monitoring component of MED POL, a large number of pollution data on levels and sources were obtained, several scientifically valid assessment documents were produced leading to the adoption of control measures, and the general capabilities of the region were substantially improved through the capacity building component.

However, the MED POL monitoring activities have not succeeded, until now, to fully prove their important role for coastal zone management. In addition to the very large differences in human, financial and institutional resources still existing between the countries of the region -which could not be bridged by the not sufficient financial resources put at the disposal of MED POL as well as the often limited funds invested by the countries-, the often too ambitious objectives of the national monitoring programmes are among the problems which did not allow the MED POL monitoring activities to prove their managerial function in many countries of the region.

Keeping in mind the above, the activities of this component will be organized at the regional, sub-regional and national levels with clear and realistic objectives aiming at precise, visible and easy-to-monitor goals.

This component will therefore be implemented through the organization of trend monitoring of pollution levels, loads and biological effects and target-oriented research .

In order to obtain the necessary data and information, the practice of soliciting every year the preparation of National Monitoring Programmes will continue. These Programmes will describe the work to be carried out at each station and will contain all the elements of the coastal zone pollution **trend monitoring** (stations, parameters, matrices, frequency, etc.)(for details on the trend monitoring see document UNEP(OCA)MED WG.127/4). All countries will be asked to prepare and implement a monitoring programme as part of their obligations to the Convention and the Protocols. In this framework, the coordinating and promoting role of the MED POL National Coordinators is considered an essential element for the success of the activities.

Concerning the management of the data and the results of the trend monitoring, as described in the MED POL Phase III approved in Montpellier, the data obtained by the national Institutions will be provided by the National Coordinators at regular and precise intervals to the Secretariat who will analyse and use them for the preparation of site pollution trend reports. The results of the trend monitoring will be used to assess the effectiveness of the programmes, measures and action plans eventually implemented by each country. The overall coordination and harmonization of this monitoring component will be the responsibility of the Secretariat who will achieve it in close cooperation with the Institutions providing the data and the MED POL National Coordinators.

With reference to *Biological Effects monitoring*, this component was initiated in 1996 on a pilot scale with the long-term aim of assessing the effects of pollution on the marine ecosystem. The programme started with the participation of 11 laboratories from 8 countries. The results of this exercise have not yet been evaluated. However, it is clear that this type of monitoring cannot as yet be launched on a Mediterranean wide scale. The intention of the Secretariat is to propose that, once all the details of the programme are agreed upon, biomonitoring is included, on a country by country basis, in the national monitoring programmes. At the moment 4-5 techniques are being tested. An ideal biomonitoring programme should include a set of techniques to enable proper interpretation of the situation. It is anticipated that by the end of 1998 an agreement will be reached on the details of the programme. Assistance should continue to enable in the long-term the full participation of all countries while a quality assurance programme will be initiated on a permanent basis.

Through the continued efforts to improve *data quality*, substantial and evident progress has been achieved by the laboratories of the region through MED POL, especially in the analysis of organic contaminants and trace metals. However, the results of the recent intercomparison exercises carried out by IAEA/MEL show that accuracy and precision of the analytical results are in many cases still not adequate to provide the solid basis needed for the reliable and continuous assessment of the Mediterranean pollution and, even less, to assess temporal trends in pollution. The Secretariat therefore believes that the successful implementation of the trend monitoring requires renewed efforts of all participating laboratories to improve the quality of the analytical data. This can be achieved through:

- mandatory participation of the participating laboratories in the analytical intercomparison exercises (needed to validate the monitoring results);
- enhanced use of Certified Reference Materials, accurate use of Reference Methods and full adhesion to Quality Control procedures; and
- intensified individual and group training.

In addition, Data Quality Assurance programmes should be included in the design of the monitoring programmes including analyses of split samples.

Regarding the work on the identification of the *sources and loads of pollution*, after the not always encouraging results obtained in the past, during 1997 a project was launched, financed by GEF, related to the identification and assessment of problems and causes related to pollution "Hot Spot" and sensitive areas (see more details on the activities financed by GEF under chapter 2.).

The aim of the project, being implemented as part of the formulation of the Strategic Action Programme to address pollution from land-based activities, is the identification of pollution "Hot Spots" in each Mediterranean country based on the assessment of contaminants reaching the Mediterranean Sea from (a) coastal cities and urban agglomeration with more than 100,000 inhabitants, and (b) industries discharging directly into the sea.

The project will provide a first clear picture, including a list of priorities and costed remedial actions, of the main sources and loads of pollution of the region; a starting point which will need to be further updated and completed in the future as one of the requirements of the LBS Protocol. The identification of sources and loads of pollutants is in fact one of the main elements required for the formulation of action plans, programmes and measures for the gradual elimination of pollution.

Concerning the supporting *target-oriented research*, the Secretariat is proposing to consider the following subjects:

- a) eutrophication;
- b) biomonitoring techniques;
- c) atmospheric deposition;
- d) biogeochemical studies.

The implementation of research projects relevant to the above subjects is considered an essential support to the pollution assessment activities and will provide the information needed for the full understanding of pollution causes, fate and effects.

2. Control of pollution

Taking into account the data and the information obtained in the previous phases of MED POL and relying on the system proposed for the continuous assessment of pollution mentioned in chapter 1., MED POL Phase III will emphasize, as its main activity, the development of action plans, programmes and measures for the control and the gradual elimination of pollution and compliance with those eventually adopted by the Contracting Parties. The thirteen control measures adopted until now by the Contracting Parties will also be used as appropriate in the formulation of the action plans.

The adoption of the LBS Protocol (1980), its entry into force (1983), and its amendment (1996), provide the legal basis for the development of action plans, programmes and measures for the control and gradual elimination of pollution from land-based activities.

In the course of 1997 very important steps are being made to prepare the basis for an effective implementation of the new *LBS Protocol*. The approval by GEF of the proposal made by the Secretariat for a Project Development Facility (PDF) grant to formulate a Strategic Action Programme to address pollution from land-based activities, should be in fact considered a unique opportunity which will lead in a relatively short time to the formulation, and possibly the adoption, of two basic requirements of the revised Protocol, i.e. the regional action plan for the gradual elimination of land-based pollution and the guidelines for the formulation of the related national action plans.

In addition, the PDF grant will enable the Secretariat to prepare a Transboundary Diagnostic Analysis of the environmental problems of the region and a country by country Report on pollution "Hot Spots". The value of these documents is made higher by the fact that they will be completed by an investment portfolio which will include the indications of appropriate and costed remedial actions. The activity will be followed by a Donors' conference which will examine a full project which could cover the implementation of specific interventions at the national level related to the solution of problems of regional significance.

As a result, the activities being implemented in the above framework, which are being followed by all Contracting Parties with great attention and effectiveness, will create a solid platform with the basic information which were needed for the formulation of regional and national strategies for the implementation of the Protocol.

In particular, the Secretariat intends to fully complete the Report on the pollution "Hot Spots" by gathering the missing data and keeping it up-to-date. The information contained in the Report will be also utilized for the preparation of national monitoring programmes, i.e. for the selection of stations, parameters and frequency of sampling.

Furthermore, the results of the 1997 above activities will have to be followed by many more specific actions resulting from the decisions of the Contracting Parties.

In this context, the Secretariat is proposing to concentrate the work on the four priority issues listed in the following paragraphs.

In chapter 6. of the 1995 Barcelona Resolution, the Contracting Parties agreed on a number of actions related to the reduction of discharges and emissions of **substances that are toxic, persistent and liable to bioaccumulate (TPBs)** with a view at their gradual elimination. To this end, a Consultation Meeting was held in Marseille in October 1996 where specific actions were identified and recommended. Furthermore, TPBs are given priority for action also in the 1996 revised LBS Protocol together with **waste water treatment and management**. The Global Plan of Action of Washington also recommends actions on these subjects. As a result of the work carried out as part of MED POL, and in line with the basis for action of the Global Plan of Action, the effects of the enhanced mobilization of **nutrients** are higher productivity but often these can result in changes in species diversity, excessive algal growth, dissolved oxygen reductions, associated fish kills and sometimes the increased occurrence of toxic algal blooms. Although eutrophication phenomena are generally confined to the vicinity of coastal discharges, because of the multiplicity of such discharges and the atmospheric transport of nutrients, the effected areas of the region are becoming more and more extended thus requiring special attention and appropriate intervention. Article 6. of the LBS Protocol explicitly provides for authorizations or regulatory systems for discharges and for the establishment of competent **structures of inspection** for compliance. The Secretariat considers the subject especially important and worth immediate attention by the Contracting Parties.

On the basis of the above mentioned rationale, the Secretariat is proposing the following line of work for each of the priority issues:

(A) Toxic, persistent and liable to bioaccumulate substances (TPBs)

- Identification of policies and implementation strategies for the elimination of TPBs based on the application of the precautionary approach to production processes and cleaner technologies;
- Continuous monitoring of emissions and levels of TPBs;
- Compilation of national toxic use inventories of TPBs including the preparation of guidelines;
- Improvement of environmental performance of industry including the promotion of clean production alternatives;
- Formulation of the necessary and regulatory framework to control and eliminate inputs of TPBs.

(B) Waste water treatment and management

- Identification of policies and implementation strategies for municipal waste water management and discharge, cleaner production applications and best practice urban design;
- Formulation of environmental quality criteria and legislative and regulatory framework to control effluent discharges;
- Preparation of guidelines, standards and criteria for industrial effluents, effluents requiring separate treatment and industrial effluents at sources;

(C) Nutrients

- Identification of policies and implementation strategies for the prevention and elimination of releases of nutrients from anthropogenic sources including best environmental practices and best available techniques in agricultural, aquacultural and industrial activities;
- Continuous monitoring of the nutrient input from anthropogenic sources and of eutrophication phenomena;
- Development of the necessary legislative and regulatory framework to control the input of nutrients from anthropogenic sources;

(D) Structures for inspection to assess compliance

- Assessment of present status of national inspection structures;
- Assistance to countries for the establishment/strengthening of existing inspection structures including training.

The above represents only a first indication of the line of activities the Secretariat is proposing to follow, in order to assist the Contracting Parties in the future implementation of the Protocol. It is foreseen to develop for each of the listed actions a full and detailed programme and timetable which will be presented to the Contracting Parties for approval.

It is also worth mentioning that the Mediterranean Commission for Sustainable Development identified the subject "Industry and sustainable development (cultural, economic, technical and financial aspects of the progressive elimination of land-based pollution)" as one of the priority subjects for 1998. It is expected that MED POL will closely cooperate with the task manager (Italy) to prepare an activity plan which will surely contribute to the long-term implementation of the Protocol.

As a tool for controlling the compliance with the existing legal obligations of each country at the national or international/regional level, the National Monitoring Programmes will also include all the elements of the **compliance monitoring** (for details on the compliance monitoring refer to document UNEP(OCA)MED WG.127/5). Each country, through its National Coordinator, will process and analyse the results of the activities and will provide the Secretariat with a compliance report. No raw data will be asked or processed by the Secretariat. A format for the compliance report will be proposed by the Secretariat to the MED POL National Coordinators and subsequently to the Contracting Parties for adoption.

Concerning the supporting **target-oriented research**, the Secretariat is proposing to consider the following subjects:

- a) eutrophication;
- b) evaluation of the standards applied and establishment of quality criteria for recreational waters; and
- c) methods and techniques for pollution prevention.

The above are considered priority areas as support to the formulation of action plans, programmes and measures for the gradual elimination of pollution.

The proposed line of action presented in this chapter is finally considered by the Secretariat in line with the approved **Global Programme of Action (GPA)** for the protection of the marine environment from land-based activities adopted in Washington in 1995. In particular, the recommendations of the GPA related to the actions at national level, the regional cooperation

and the suggested approaches by source category, which have inspired the revision of the LBS Protocol, are now fully reflected in the activities proposed in the pollution control component of MED POL Phase III thus providing an example of implementation of the Global Programme at the regional level.

3. Programme coordination

The activities of MED POL Phase III are expected to be implemented gradually considering that in many cases large efforts should be made by the Secretariat and by the countries to reformulate objectives and be more action-oriented.

As to the direct assistance to countries for the implementation of the *monitoring activities*, a revised mechanism is proposed based on the experience gained through Phase I and Phase II. The mechanism aims at reaching in a relative short period of time a minimum capability standard in all countries and takes into account the limited funds put at the disposal of MAP, which are not expected to increase in the near future. It is therefore proposed to select every year a number of countries (indicatively four or five, depending on the overall availability of funds and the type of assistance needed by each country) for which a three-year capacity building programme is prepared. During this three-year period, according to the needs and the availability of funds, enhanced assistance will be provided to each selected country in the form of programme designing, purchase of equipment, training, data processing, data quality assurance and enhancement of compliance control capability.

The country-tailored assistance programmes, to be agreed upon with the MED POL National Coordinators of the country, will be realistic and will have clear and easy-to-assess targets. At the end of the programme, minimum assistance will continue to be ensured in the years to maintain and improve the results achieved. The data quality assurance activities are instead expected to continue to be implemented at a full scale under the coordination of IAEA/MEL.

In parallel to the implementation of the above scheme related to those countries selected every year, the Secretariat will closely work with *all* countries and will assist them as necessary in relation to programme design, training, data processing and compliance control in order to ensure at the regional level an uniform development and implementation of MED POL Phase III.

It is therefore expected to have, in a tentative period of about five/six years, all countries at a sufficiently advanced level allowing the implementation of monitoring activities. This expectation is of course based on (1) the fact that the extensive capacity building activities implemented by MED POL in the developing countries in the past years have already created an acceptable basis in most countries and (2) the availability of sufficient funds for MED POL through MTF or other sources.

The formulation of individual capacity building programmes for specific countries has also the advantage of being potentially more appealing to outside donors who may then complement the available funds with additional resources.

Although for *all* the countries in need, in the expected time of five/six years and according to the above mechanism, a capacity building programme will be formulated and implemented, the necessary year-by-year selection of the countries could either start with those with still limited capabilities, or with those which have demonstrated a higher potential, or with a combination of the two categories. The Secretariat does not feel that any of the above criteria is clearly preferable to the others and is ready to put the subject for discussion and decision of the MED POL National Coordinators.

Already in the past, the *research activities* have demonstrated their usefulness in giving scientific and technical support to the implementation of the monitoring by suggesting and testing techniques and methods appropriate for the region and in providing scientific support to the preparation of pollution assessment documents as well as the formulation of control measures in the framework of the LBS Protocol. In addition, the MED POL research component has mobilized an impressive number of scientists and Institutions of the region who worked for common goals and exchanged experience and results, and it has developed a very productive cooperation with a number of UN Agencies and international Organizations who have put at the disposal of the Programme their specific competence and experience.

In line with the above, and according to the approved MED POL Phase III Programme, the Secrétariat still considers the research component an essential support element. However, a different system for the implementation of projects is suggested which is now based on the full participation of all developing countries.

Keeping in mind the research subjects listed under chapters 1. and 2. above, the Secretariat, on the basis of the knowledge acquired through the coordination of Phase I and Phase II and the participation of many Institutes in the Programme, will identify in each developing country the Institutes which could carry out research on the specific topics and formulate proposals to the National Coordinators accordingly. To assist the Secretariat, the National Coordinators could also provide a list of research Institutes capable and willing to participate in the programme with the indication of the subjects in which each Institute possesses relative competence. Once the selection is made, research contracts will be prepared and financial assistance provided.

In parallel, the Secretariat, while seeking cooperation with the European Commission (DG XII), will actively try to identify research Institutes from the developed countries of the region which are willing to cooperate with the selected Institutes -with minimal or no financial assistance requested- and possibly establish long-term cooperation on one or more scientific topics. Cooperation with accredited NGOs with proven experience in specific fields may also be explored and tested.

For the technical/scientific coordination of the research projects, after the withdrawal of FAO from MED POL, it is proposed to assign the follow up of the projects to WHO, WMO, IOC, IAEA and UNEP/MAP according to their field of competence and the experience gained through Phases I and II.

Concerning the implementation of the *Dumping Protocol*, while waiting for the ratification and entry into force of the 1995 amended Protocol, the Secretariat is working on the finalization of the Guidelines for the management of dredging material which will directly assist the Contracting Parties in handling an important problem common in the region. A second Government-designated experts Meeting is tentatively scheduled for October 1997 and, as a result, it is expected to present the Guidelines to the Meeting of the Contracting Parties scheduled for November 1997 for adoption. In the meantime, all National Coordinators should continue to regularly submit to the Secretariat information on dumping permits including nil reports as part of the obligations of the 1976 Protocol.

With regard to the *Protocol on Hazardous Wastes*, the Secretariat, after examining all possible alternatives, is proposing to assign the coordination and follow up of the activities related to the future implementation of the Protocol to MED POL. It is in fact expected that, once the recruitment of the MED POL staff agreed in Montpellier will be completed, the Secretariat will be able to cope with the workload expected from the coordination of, and follow up to, the

implementation of the Protocol. This subject is therefore put in front of the MED POL Coordinators for discussion and comments.

Concerning the medium-term preparatory work of the Secretariat on the Protocol, the activities foreseen cover the necessary legal and technical preparatory work including development of guidelines, rules and procedures for liability and compensation and the formulation of legal and administrative measures related to the prohibition of export and transit of hazardous wastes. Such activities are expected to start in 1998.