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The MED POL Phase-III activities for the biennium 2000-2001

Introduction

During the biennium 1998-1999, as a result of the adoption of the MED POL Phase III Programme and the subsequent adoption of the Strategic Action Programme (SAP) to Address Pollution from Land-based Activities, work was carried out to prepare the basis for the implementation of the newly adopted programmes aiming at having them fully operational during the biennium 2000-2001.

In examining the activities of MED POL proposed for the coming biennium, the following should be taken into consideration:

- 1) With the adoption of the SAP -which contains a large pollution control component- and with the beginning of its implementation, the MED POL Programme is assuming a new and important coordinating role; in order to achieve this, and in preparing its work plan, it is assumed that the MED POL Programme would give priority to the activities directly related to the implementation of the SAP;
- 2) During the 2000-2001 biennium, the main source of funding for the implementation of the SAP activities is the Mediterranean GEF Project, which is expected to be operational at the beginning of the year 2000. As a result, the work plan for the biennium is proposing for implementation those activities of the SAP which can be implemented with GEF funds;
- 3) The proposed activities of the biennium, in addition to the implementation of the SAP activities, focus on the preparation of national monitoring programmes, which should include provisions for the monitoring of trends, monitoring of compliance and biological effects monitoring. The Data Quality Assurance activities continue to be a fundamental tool for achieving reliable data and information from countries. Within the limits of the existing budget, assistance will continue to be provided to all countries in need, for the preparation and implementation of monitoring programmes;
- 4) Special attention is given to the launching of a programme of compliance and enforcement, as a follow up to the preparatory activities carried out in 1998;
- 5) Concerning the follow up to the implementation of the Protocols, while the SAP activities represent a direct contribution to the LBS Protocol, Guidelines should be prepared during the biennium for the dumping of wastes and other matter listed in art. 4 of the 1995 Dumping Protocol.
- 6) The research component of MED POL should be re-structured to allow for a dynamic mechanism enabling the countries and the MED POL Secretariat to identify, follow up and propose adequate measures for, emerging pollution issues.

The work plan for the implementation of MED POL Phase III during the 2000-2001 biennium was prepared on the basis of the above and was submitted to the MED POL National Coordinators (Reggio Calabria, 20-23 June 1999) where it was analyzed, amended and approved. The present document shows the 2000-2001 MED POL Programme as it was approved by the MED POL National Coordinators.

1. Assessment of pollution

After the preparation and the adoption of the operational documents/manuals for trend monitoring and biological effects monitoring during 1998, and with the assistance of experts and consultants, a number of countries are now in position to formulate and start implementing National Monitoring Programmes.

During the biennium, priority will be given to the formulation and finalization of such programmes in all countries. Assistance will be provided for the design and implementation of programmes and for the purchase of small pieces of equipment and material. As a follow up to the decisions of the Meeting of the MED POL Coordinators held in Delphi, 20-23 May 1997, an effort will be made to provide financial assistance to all countries in a period of time of four/five years by concentrating every year on a small number of countries according to their need and the status of preparation of their programmes.

Concerning trend monitoring, Institutions will be asked to send the results and data to the Secretariat who is responsible, according to the agreed MED POL Phase III Programme, for their analysis and interpretation.

Concerning biological effects monitoring, great emphasis will be given to the launching of this activity in the larger possible number of countries and institutions to fully complement and assist the interpretation of the chemical pollution data for appropriate managerial use. Cooperation will continue with other expert institutions and organizations such as RAMOGE to assist the laboratories participating in the proper use of the chosen techniques.

Concerning the practical aspects of the implementation of the trend and biological effects monitoring, it is proposed to convene in the year 2001 a technical review Meeting to examine achievements and bottlenecks and advise on the technical and scientific aspects of the activities. In addition to experts from participating countries, outside experts will also be invited to present their experience in other regions.

Work on the pollution hot spots and sensitive areas will continue mostly with the financial assistance of the Mediterranean GEF Project. Keeping in mind the expected final output of these activities, which is to conduct pre-investment studies for pollution hot spots as well as to prepare detailed assessment reports on pollution sensitive areas, several consultation meetings will be held during the biennium for the prioritization of hot spots and sensitive areas as well as consultations in the countries for the final selection of the hot spots for pre-investment studies. WHO will be fully involved in this activity as well as the partners of the GEF Project such as METAP and FEEM.

As in the past, training course will be organized in the framework of the monitoring programmes which will be addressed to scientists as well as managers for the use of the pollution data and results. Great emphasis will continue to be given to the implementation of Data Quality Assurance programmes, including intercalibration and good laboratory practice, to ensure high quality of the data.

Concerning the research component of MED POL, in view of 1) the very limited funds put at the disposal of the activities which, during recent years, could ensure only almost symbolic funding to projects, and 2) the need to create a more dynamic mechanism which could maintain MED POL in continuous contact with possible emerging pollution issues, it is proposed to use the available funds to:

- 1) convene small scientific meetings with Mediterranean experts in cooperation with the MED POL National Coordinators and the competent UN Cooperating Agencies to identify emerging pollution issues which may deserve more in depth assessment and possibly suggestions for action to the countries;
- 2) assign, in consultation with MED POL National Coordinators, research grants to designated Mediterranean research Institutions to carry out specific research on the identified subjects aiming at assessing the problem and proposing possible control measures to Contracting Parties.

The above mechanism will ensure a continuous link with the actual pollution problems of the region and will enable MED POL to concretely bridge between scientific issues and managerial aspects.

2. Pollution control/LBS Protocol/Strategic Action Programme (SAP)

Great emphasis will be given to enforcement and control of legislation. Countries will be assisted in the preparation of compliance monitoring programmes on the basis of the existing legislation and to merge them into their National Monitoring Programmes.

On the basis of the preparatory work carried out during 1999, countries will be assisted in the establishment/strengthening of systems of inspection through training courses as well as the establishment of an Informal Network on Compliance and Enforcement composed of responsible authorities from all Contracting Parties. A first Meeting of the Informal Network will be held in the year 2000.

Concerning health-related pollution aspects, a Meeting will be held in 2001 aiming at finalizing criteria and standards for health-related monitoring of coastal recreational and shellfish waters and an intercalibration exercise will be organized.

Concerning the implementation of the LBS Protocol, the achievement of a number of activities of the Strategic Action Programme (SAP) to Address Pollution from Land-based Activities will represent the main contribution to the fulfilment of the provisions of the Protocol. Full details of the planned activities for the biennium 2000-2001 are given in the **Annex** attached to this document. The activities will basically cover the preparation of regional plans and programmes, the initiation of the process of formulating National Action Plans, the organization of regional and national training courses and assistance to countries for the work of Inter-ministerial national committees, which will be achieved with the financial assistance of the GEF Project. In addition, it is foreseen to further work on the finalization of the Transboundary Diagnostic Analysis (through the GEF Project) and to assist countries to gradually develop Pollutant Release and Transfer Registers (PRTRs). A Consultation Meeting will also be held in 2001 to finalize the reporting methodology in relation to the LBS Protocol.

3. Other Protocols

In view of the expected entry into force of the 1995 revised Dumping Protocol, and on the basis of the positive work which lead to the adoption of Guidelines for the Management of Dredged Material, additional work is proposed to fulfil the requirement of Art.3 and 6 of the Protocol. It is in fact proposed to work during the biennium on the preparation and the approval of the additional Guidelines required for the dumping of waste and other matters listed in art.3. Draft Guidelines will be prepared in 2000 and a Government-designated Expert Meeting to approve the Guidelines is in principle scheduled for 2001, if outside financial sources are found.

To this effect, a request for extra funds to host the Meeting will be asked to all Contracting Parties.

Concerning the Hazardous Wastes Protocol, assistance is offered to all Contracting Parties in relation to the implementation of the needed preparatory activities in view of the future entry into force of the Protocol. A number of activities aiming at preparing the ground for the implementation of the Protocol are included in the SAP activities and will be implemented during the biennium as part of the GEF Project work plan.

4. Coordination

The MED POL Programme will be coordinated during the biennium by three UNEP Professionals and one Officer from WHO. In particular, the MED POL Coordinator (F.S. Civili, P5), the Programme Officer (occupied until March 1999 by G.P. Gabrielides at the level P5, now re-classified at the level P4 and presently vacant), the Programme Officer (recruitment procedures being finalised, P3) and the WHO Senior Scientist (G. Kamizoulis, P5).

While the P3 post will be mostly related to the follow up of the implementation of the SAP and the Protocols, the P4 post will be dealing with the scientific aspects of the Programme and in particular with the preparation of trend and biological effects monitoring programmes. The WHO Officer will in general be responsible for the health-related aspects of the Programme and in particular of the compliance monitoring and the work on the hot spots.

Joint work will continue with the UN Cooperating Agencies especially in relation with some aspects of monitoring (WHO, WMO), Data Quality Assurance (IAEA, WHO), and research on pollution emerging issues (WHO, WMO, IOC and IAEA). FAO will be involved in some activities in its field of competence as part of the SAP.

During the biennium, several coordination meetings will be held with the GEF Project partners in relation to the implementation of the activities, and a Meeting of the MED POL National Coordinators will be held in 2001 for which a partial external financial support is sought from Contracting Parties.

ANNEX

IMPLEMENTATION OF THE STRATEGIC ACTION PROGRAMME (SAP) IN THE BIENNIUM 2000-2001 AS PART OF THE MED POL WORK PROGRAMME

Introduction

The Strategic Action Programme to address Pollution from Land-based Activities (SAP) was formulated as part of the implementation of the revised LBS Protocol (Art. 5 and 15) through a PDF-B grant provided in 1997 to the MAP/MED POL Secretariat by GEF. It was then adopted by the Contracting Parties at their Tenth Ordinary Meeting held in Tunis on 18-21 November 1997.

As agreed with the GEF Secretariat, the initial GEF grant had been provided on the assumption that the SAP would be adopted and that a larger grant could be further provided to assist the countries in the future implementation of the activities of the SAP. As a result, immediately after the adoption of the SAP, a proposal for a larger three-year project aiming at preparing the basis for the implementation of the SAP activities was prepared by the MAP/MED POL Secretariat in the form of a Project Brief. A Meeting of the MAP/GEF National Coordinators was held in Athens, on 22-23 January 1998 to discuss, amend and approve the content of the Project Brief which would be submitted to the GEF Council for approval and funding (UNEP(OCA)MED WG.138/2). The Project Brief, which described the objectives of the Project including the work plan and budget of the activities, was approved by the MAP/GEF National Coordinators who considered it as a concrete contribution to the implementation of the SAP and stressed that, considering that the GEF funds were addressed to assist only twelve Mediterranean countries, the funds put in the project by MAP should be used to the benefit of all Contracting Parties for the implementation of the SAP activities. The Project Brief was approved by the GEF Council in April 1998 (see doc. GEF Project Brief "Determination of priority actions for the further elaboration and implementation of the Strategic Action Programme for the Mediterranean Sea") with a contribution from GEF of 6,29 million US \$, a participation of 3,04 million US \$ in cash and kind from the countries and 1,12 million US \$ in cash and kind from MAP.

In view of the ambitious nature of the SAP, the Secretariat further worked to ensure possible additional funds and expertise to complement those put at the disposal of the Project. As a result, an additional 1,6 million US \$ was assured from the French GEF (FFEM) as well as a contribution in kind from METAP who will participate in the coordination and follow up of the activities. Additional contributions are still sought from other sources such as FAO and other Organizations.

Since the approval of the Project Brief by the MAP/GEF National Coordinators and subsequently by GEF Council, the Secretariat has worked on the preparation of the administrative project document which describes in detail the activities. A number of small meetings and consultations were also held with the partners and cooperating Organizations and Centres to discuss the operational aspects of the Project. The project document is now expected to be finalized by the UNEP/GEF Coordination Unit and subsequently by the GEF Secretariat by the end of the year. The activities related to the implementation of the SAP are therefore expected to start at the beginning of the year 2000.

The effective implementation of the SAP activities by the countries is concretely supported by the GEF Project. In particular, the activities foreseen in the three-year Project address a number of necessary actions which will prepare the ground for the fulfilment by the countries of both the mid- and long-term targets and objectives of the SAP. In addition, the proposed work plan for the MED POL Phase III gives priority to the SAP and many of the activities are addressed to assist countries in its implementation.

The SAP is expected to be implemented over a period of about 25 years and the framework and timeschedule for the completion of a number of activities is set within the next ten years at the latest. However, while attempting to assist the countries in the concrete implementation of the SAP, it became apparent that the most practical and effective means for reviewing and approving an operational phase of the Programme, would be to present a detailed workplan and timetable for activities to be implemented in each biennium. This approach will also allow the SAP to follow up the developments and needs of the region in real time and consequently to provide realistic and monitorable targets and activities every two years.

As a result, for the forthcoming biennium (2000-2001) the activities proposed for implementation are those considered essential to start the process of providing all countries with the necessary tools (regional guidelines, strategies, plans and programmes for sharing technical information and advice, priority capacity building and public participation activities), to enable them to initiate the long-term process which will allow them to fulfill most of their priority objectives, particularly in view of the newly introduced activities related to the pollution hot spots and sensitive areas. The activities foreseen for the biennium, which are to be considered an integral part of the MED POL programme, take into account those which will be supported by the Mediterranean GEF Project, as well as other continuous activities already being implemented in the framework of the MED POL Programme, such as monitoring programmes for compliance, trends and biological effects, priority activities on reporting to be included in the LBS reporting system and preparatory activities related to the formulation of National Action Plans for the elimination of land-based pollution. The implementation of National Action Plans represents the operational long-term result of the Strategic Action Programme, as they are supposed to make use of the results of all the individual activities identified in the SAP. Concerning National Action Plans, the activities proposed to be implemented during the biennium cover only the preparatory work which should be carried out in each country which will be the basis of the sectorial and national plans foreseen by the SAP. The content of the plans will be agreed upon by the countries' experts on the basis of the general guidelines contained in the SAP and the specification of each country.

The present Annex contains a detailed proposed workplan and timeschedule for implementation in the biennium 2000-2001 of the activities selected according to the above criteria and principles. The workplan was discussed and amended by the Meeting of MED POL National Coordinators and recommended for inclusion into the overall MED POL workplan to be transmitted to the Meeting of the MAP Focal Points and subsequently to the Contracting Parties for adoption.

SAP activities to be implemented during the biennium 2000-2001 as part of the MED POL workplan**1. Preparation and adoption of regional guidelines to address pollution from land based sources**

Work on the preparation of guidelines will be supported by the Mediterranean GEF Project. The selected guidelines are those for which the MED POL Programme had identified the need for further assistance, such as sewage treatment and disposal, disposal of urban solid wastes, industrial wastewater treatment and disposal, river and marine coastal zone pollution monitoring and those for which the technical basis would need to be strengthened to enable the implementation of the activities based on newly introduced principles and new ideas, such as the application of clean technology and best environmental practice.

WHO/MED POL will be responsible for the preparation of the following three guidelines.

a) Guidelines for sewage treatment and disposal.

The preparation of guidelines for sewage treatment and disposal will commence in 2000 and will be carried out with the assistance of Mediterranean experts. The UNEP environmental guidelines for domestic wastewater management (UNEP Environmental Management Guidelines, No.14, UNEP, Nairobi, 1988) will be taken into consideration in the preparation of the guidelines. The document will include environmental quality criteria and standards. The need for separate treatment of municipal and non-compatible industrial waste in order to conform to the provisions of the LBS Protocol could also be addressed. An experts consultation meeting will convene to review and approve the technical details of the selected draft guidelines, prior to submission to the MED POL National Coordinators for approval. The approved guidelines will then be submitted to the Meeting of the Contracting Parties for adoption.

b) Guidelines for environmentally sound and economically feasible systems of municipal solid waste collection and disposal.

These guidelines will incorporate the principles of non-hazardous material recycling and reuse and will be drafted by 2001 according to the procedure outlined in (a) above.

c) Guidelines for industrial waste water treatment and disposal.

The preparation of these guidelines will commence in 2001 and will also address the need for separate treatment of municipal and non-compatible industrial waste in order to conform to the provisions of the LBS Protocol. The guidelines will be drafted according to the procedure outlined in (a) above, taking into consideration the methodology described in the MAP Technical Report "Guidelines for the Treatment of Effluents Prior to Discharge into the Mediterranean Sea (MAP Technical Report Series No 111).

Guidelines for wastewater treatment and waste disposal from industries which are sources of BOD and COD, nutrients and suspended solids, will be included.

The CP/RAC will assist MED POL in the preparation of the following three sets of guidelines.

- d) Guidelines for the identification and the application of cleaner technology incorporating BAT and BEP in industry.

The preparation of these guidelines will commence in 2000 with the assistance of Mediterranean experts, in cooperation with the CP/RAC and making use of the experience gained outside the region. An experts consultation meeting will convene to review and approve the technical details of the selected draft guidelines prior to submission to the Meeting of CP/RAC National Focal Points for formal approval by 2002. The approved guidelines will then be submitted to the Meeting of the Contracting Parties for adoption.

The guidelines will examine and identify BATs, BEPs and cleaner technologies in industrial installations to reduce pollution in selected priority sectors of activity according to the LBS Protocol. Evaluation criteria to identify BATs, BEPs and cleaner technologies will take into account the following substances:

- c) Dioxins and furans
- c) PAH
- c) Hg, Cd and Pb
- c) Organometallic compounds
- c) Zn, Cu and Cr
- c) Other organohalogen compounds:
 - Halogenated Aliphatic Hydrocarbons (chlorinated solvents, chlorinated paraffins)
 - Halogenated Aromatic Hydrocarbons (Chlorobenzenes, polychlorinated naphthalenes, polybrominated diphenyl ethers and polybrominated biphenyls)
 - Chlorinated Phenolic compounds
 - Organohalogenated pesticides

- e) Guidelines for the application of BAT and BEP in industrial installations which are sources of BOD and COD, nutrients and suspended solids.

These guidelines will be drafted by 2001, according to the procedure outlined in (d) above.

- f) Guidelines for the application of BEP (including good agricultural practices) for the rational use of fertilizers and to reduce unnecessary inputs of nutrients into the environment from agriculture.

These guidelines will be drafted by 2001, in consultation with the FAO and according to the procedure outlined in (d) above.

- g) Guidelines for river pollution monitoring programmes.

These Guidelines will relate to the impact of river pollutant inputs on the sea. MED POL will be responsible for the preparation of these guidelines by 2001, according to the procedure outlined in (a) above. In preparing the Guidelines, cooperation with other competent intergovernmental bodies should be considered.

2. Identification and validation of technologies appropriate for the control of pollution from Land-based Sources

The SAP has identified the need for applied research to identify and validate technologies appropriate for the control of pollution from land based sources; more specifically, to identify and validate a) sewage treatment technologies (section 5.1.1 of the SAP and b) industrial wastewater treatment technologies (section 5.2 of the SAP). The work, which will be mainly related to gather information on the existing state-of-the-art technologies and to implement small-scale pilot projects, is planned to commence in the biennium 2000-2001 and to be completed by 2002, and will be carried out by relevant Mediterranean research institutes in consultation with country representatives, as part of the MED POL Phase III Programme.

The identification and validation of sewage treatment technologies could focus on technologies for solving sewage treatment requirements in problematic Mediterranean areas due to their characteristic land morphology or siting with respect to the general urban planning scheme.

The identification and validation of industrial wastewater treatment technologies could focus on the improvement of managerial practices and techniques.

3. The preparation of regional strategies and plans

The Strategic Action Plan builds on the new approach established by the 1995 GPA and introduces new objectives and new principles, based on the need for a reformulation of the strategy to tackle land based pollution as indicated by the amended LBS Protocol. It therefore appears necessary to prepare regional strategies and plans for newly introduced activities, not previously dealt with during the period of implementation of MED POL Phase II. As a result, the following activities of the SAP are planned to be carried out in the period 2000-2001:

- a) To prepare a Mediterranean Strategy for the Management of Hazardous Wastes, based on the principles of prevention, reduction and reuse and the application of Best Available Techniques and Best Environmental Practice for hazardous waste reduction and disposal; to take into account the regulation of hazardous waste transport and remedial actions.

The implementation of this activity will be supported by the Mediterranean GEF Project, which includes the preparation and adoption of a regional plan on the management of hazardous wastes.

MED POL will review all the available information on the management practices for hazardous wastes. By 2001 Mediterranean experts in consultation with regional technical experts and expert country representatives will elaborate a document as a basis for the development of a Mediterranean strategy for the management of hazardous wastes. An experts consultation meeting will convene to review and approve the technical details of

the document prior to its submission to the Meeting of MAP National Focal Points for formal approval by 2002. The approved document will then be submitted to the Meeting of the Contracting Parties for adoption. Countries will thereon be encouraged to adopt national strategies, based on the regionally adopted strategy.

It is proposed that emphasis be placed on the principles of pollution prevention, reduction at source, separate collection and recycling of non-hazardous materials. The Strategy could emphasise pollution prevention through the avoidance of the manufacture of harmful products and a change from a "throwaway" model to a "use and reuse" model, based on the 4 "Rs": Reduce, Repair, Reuse and Recycle, combined with the separate collection and disposal of waste and hazardous waste. The polluter pays principle could be a key theme of the Strategy, whereby industry would regain possession of any hazardous waste as a direct or indirect result of the production process and be able to reuse, dismantle, recycle and, finally, dispose of wastes without endangering the environment or health. The costs of the above would be an integral part of the production costs. In preparing the strategy, the work carried out in the framework of the Basel Convention will be taken into account.

The importance of voluntary environmental, health and safety performance improvement initiatives in pollution prevention and reduction at source could be included, in particular the implementation of voluntary initiatives by industry, such as Responsible Care®¹, involving commitments made through a comprehensive set of management practices.

It is proposed that the Strategy elaborates the policy elements for the environmentally sound management of hazardous wastes. These could include the basic elements for the preparation of a) technical guidelines for the environmentally sound management of hazardous waste, and b) disposal operational guidelines for the environmentally sound storage, transport and treatment of waste. Particular attention would need to be given to the prevention of the pollution resulting from incineration of hazardous wastes. The Strategy could elaborate supports for the implementation of the Hazardous Wastes Protocol (which could include a manual for implementation, guidelines for the formulation of national legislation, training and technical/legal assistance through the Secretariat). The strategy should take into account the relevant work carried out by OECD.

- b) To provide Contracting Parties with technical information and advice on the nine pesticides and PCB substitutes and make appropriate recommendations for the environmentally sound disposal and progressive elimination of the nine pesticides and PCBs

A technical document, providing information on the nine pesticide and PCB substitutes and the environmentally sound disposal and progressive elimination of the nine pesticides and PCBs, will be prepared by 2001, by Mediterranean experts in consultation with expert country representatives. In preparing the document, particular attention will be paid to the

1 Responsible Care® is a voluntary environmental, health and safety performance improvement initiative of the chemical industry. Responsible Care® commits companies to improved environmental, health and safety performance through implementing six codes of management practices designed to continuously improve virtually every aspect of a product's life-cycle, from initial research, to manufacturing, distribution, transportation, use and disposal.

provisions of the Global Treaty² to reduce and eliminate environmental emissions and discharges of persistent organic pollutants, which is under preparation. An experts consultation meeting will convene to review and approve the technical details of the document, prior to its submission to the Meeting of National Focal Points for formal approval by 2002. The approved document will then be submitted to the Meeting of the Contracting Parties for adoption. The material will then be distributed to all the Mediterranean countries.

4. The preparation of National Action Plans and Programmes

4.1. The process of preparation of National Action Plans to address pollution from Land-based activities

The formulation of National Action Plans (NAPs) represents the operational long-term result of the Strategic Action Programme, as the National Action Plans are supposed to make use of the results of the individual activities identified in the SAP. According to the Programme, in fact, the Contracting Parties will develop or review and adopt, within five years at the latest, National Action Plans addressing pollution from land based sources, through the adoption of the targets and activities identified in the SAP and through taking action to implement these programmes with the assistance of international cooperation. National Action Plans will focus on sustainable, pragmatic and integrated environmental management approaches and processes, such as integrated coastal area management, harmonized, as appropriate, with river basin management and land-use plans.

Following the preparation of a national diagnostic analysis, to identify and assess national problems and issues, in 2001 sectoral programmes will start to be prepared containing the actions required to reach the respective regionally adopted targets. The programmes, to be prepared by small national working teams, will consist of actions necessary to fulfill the relevant provisions adopted on a regional level such as regional plans, guidelines, common measures, environmental quality criteria, emissions limits, capacity building activities, etc. National experts will then on the basis of the sectoral programmes start to prepare, in consultation with MAP, the National Action Plans, which will be submitted to national authorities for formal adoption.

This activity will be supported by the Mediterranean GEF Project, which includes the provision of support to inter-ministerial committees of the countries in the development and implementation of individual National Action Plans.

If needed, international experts will be recruited to assist in the preparation of the National Action Plans. In the countries where national environmental plans or sectoral plans adequately covering land-based marine pollution have already been adopted these plans should be strengthened in view of the SAP objectives. In these cases, consolidated sectoral plans might be considered as a national plan to combat land-based marine pollution.

The general objective of a National Action Plan is, *to eliminate pollution deriving from land-*

² Governments are working to reach agreement on a global treaty to reduce and eliminate environmental emissions and discharges of persistent organic pollutants by the year 2000 in response to a mandate from the UNEP Governing Council. An intergovernmental negotiating committee is preparing an international legally binding instrument for implementing international action, initially beginning with the 12 POPs. An expert group will develop science-based criteria and a procedure for identifying additional POPs as candidates for future international action.

based sources and activities, in particular to phase out inputs of the substances that are toxic, persistent and liable to bioaccumulate listed in annex I to the Protocol.

The specific objectives of the National Action Plans are:

- C The formulation of principles, approaches, measures, timetables and priorities for action;
- C The preparation of a national priority list for intervention and investment ("investment portfolio");
- C The analysis of expected baseline and additional actions needed to resolve each transboundary priority problem;
- C The identification of potential roles for Non-Governmental Organizations in the implementation of the NAP.

The National Diagnostic Analysis to establish national priorities for action combines five elements:

- C identification of the nature and severity of problems;
- C identification of contaminants;
- C identification of physical alterations and destruction of habitats;
- C identification of sources of degradation;
- C identification of areas of concern;

In addition to the results of the National Diagnostic Analysis, national priorities for action will take into account national reports on "pollution hot spots and sensitive areas" as well as the provisions of the LBS Protocol. Finally, priorities for action should specifically reflect:

- C the relative importance of impacts upon food safety, public health, coastal and marine resources, the health of the ecosystem and socio-economic benefits, including cultural values; and
- C the costs, benefits and feasibility of options for action, including the long-term cost of no action.

4.2. The process of preparation of sectoral programmes

Sectoral programmes will form the basis of the National Action Plans and will therefore be prepared for all the priority areas for action to control pollution from land based sources identified in the SAP. The preparation of a list of activities containing the actions required to reach the respective regionally adopted targets, will commence by 2001 and will be implemented by national experts in consultation with MAP.

A list is provided below of proposed activities related to a number of priority areas of particular relevance to the MED POL Programme:

- a) The development of national programmes for the environmentally sound management of sewage.

National programmes for the environmentally sound management of sewage are expected to include the activities which have been specified in the SAP.

- b) The development of national programmes for the reduction at source and environmentally sound management of urban solid waste.

National programmes for the reduction at source and environmentally sound management of urban solid waste are expected to take into account the targets specified in the SAP.

- c) The development of national programmes to control air pollution from mobile sources

Taking into consideration the regional policy to be developed on the promotion of measures to implement the Framework Convention on Climate Change (Kyoto Protocol), national authorities are expected to adopt, wherever feasible, measures to control emissions of carbon dioxide, i.e. through the promotion of energy conservation and energy efficiency. National programmes to control air pollution from mobile sources are expected to include the activities which have been specified in the SAP.

- d) To prepare national programmes for the reduction and control of pollution by the heavy metals mercury, cadmium and lead.

National programmes for the reduction and control of inputs of the heavy metals mercury, cadmium and lead are expected to include the activities which have been specified in the SAP.

- e) To prepare national programmes for the reduction and control of pollution by the following organohalogen compounds.

- Halogenated Aliphatic Hydrocarbons (chlorinated solvents, chlorinated paraffins)
- Halogenated Aromatic Hydrocarbons [Chlorobenzenes, polychlorinated naphthalenes, polybrominated diphenyl ethers (PBDEs) and polybrominated biphenyls (PBBs)]
- Chlorinated Phenolic compounds
- Organohalogenated pesticides

National programmes for the reduction and control of pollution by the above organohalogen compounds are expected to include the activities which have been specified in the SAP.

- f) To develop national programmes for the environmentally sound management of wastewater and solid waste from industrial installations which are sources of BOD.

National programmes for the environmentally sound management of wastewater and solid waste are expected to include the activities which have been specified in the SAP.

4.3. Additional activities to be included in the National Action Plans

The following activities which have been specified in the SAP and are considered as priority areas for action, are also expected to be taken into full account in the preparation of National Action Plans to control pollution from land based activities.

- a) Updating and adoption of national regulations on sewage discharges to the sea and rivers.

National regulations on sewage discharges into the sea and rivers are expected to be updated taking into account the provisions of the LBS Protocol, particularly Annex II and, where appropriate, the common measures on sewage discharges into the sea and rivers already adopted by the Contracting Parties. Regional guidelines for sewage treatment and disposal, environmental quality criteria and standards will assist Mediterranean countries to establish national legislation according to existing conditions. The work on the process for updating the regulations will start in the period 2000-2001. Parties requiring assistance in the formulation of updated regulations will be eligible for expert legal and/or technical assistance to be provided through the Secretariat;

- b) To establish a system of previous authorization by competent national authorities for works which cause physical alterations of the natural state of the coastline or the destruction of coastal habitats

The preparation of national regulations will be initiated in the biennium 2000-2001, for the establishment of a system of previous authorisation by competent national authorities for projects having a potential impact on the natural state of the coastline or on coastal habitats;

- c) To phase out the use of the nine pesticides, except for those for which WHO recommendations related to the safeguarding of human life suggest otherwise

By 2000, a report on the implementation of this activity according to the requirements of the SAP will be prepared and submitted, through the Secretariat, to the 2001 meeting of the Contracting Parties. Requests by the Parties may be made for expert legal and/or technical assistance from the Secretariat in the timely implementation of this action;

- d) To prohibit the manufacture, trade and new uses of PCBs

By 2000, a report on the adoption of national regulation prohibiting the manufacture, trade and new uses of PCBs according to the requirements of the SAP will be prepared and submitted, through the Secretariat, to the 2001 meeting of the Contracting Parties. Requests by the Parties may be made for expert technical and/or legal assistance from the Secretariat in the timely implementation of this action;

- e) To ratify and apply the Hazardous Wastes Protocol

Many States, among them Contracting Parties to the Barcelona Convention, have taken legal measures and entered into international agreements consistent with the Basel Convention to ban transboundary movements of hazardous wastes, for example the IVth ACP/EEC Convention signed in Lomé on 15 December 1989 by the European Economic Community and the African, Caribbean, and Pacific group of States, and the Bamako

Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa. It could therefore be appropriate that by the year 2001, all necessary legal and administrative measures to ratify the Hazardous Wastes Protocol are taken and, by the year 2005, all appropriate legal, administrative and other measures to implement and enforce the provisions of the Protocol.

It is finally assumed that Contracting Parties, in line with their willingness to implement the activities of the Strategic Action Programme, will make every effort to ratify with no delay the LBS Protocol. The entry into force of the Protocol, which by all means should not be delayed beyond the year 2000, will in fact provide the SAP the needed legal status according to its Art.15.

5. Monitoring

Through the adoption of MED POL Phase III in 1996, monitoring, carried out by countries as part of their national monitoring programmes, now covers all the relevant aspects, including trend and compliance monitoring and the monitoring of biological effects. Of the monitoring activities proposed in the SAP, the following are considered as priority activities to be carried out in the biennium 2000-2001:

- a) The establishment and improvement of local and national monitoring programmes to control and assess effluents discharge and to assess the quality of the marine environment.

This activity will be implemented according to the provisions of the LBS Protocol and relevant ongoing MED POL Phase III activities related to compliance, trend monitoring and biological effects monitoring, to be included by countries in national monitoring programmes;

- b) The establishment of inspection systems to ensure compliance with the conditions laid down in the authorisations and regulations.

This action will be implemented taking into consideration the recommendations of the workshop for experts on compliance and enforcement of legislation in the Mediterranean for the control of pollution resulting from land based sources and activities (UNEP (OCA) MED WG.160/1). On the basis of this document, the Secretariat is recommended to establish an informal regional network aimed at creating contacts and the exchange of information with other regional environmental protection professionals and networks involved in compliance. The Secretariat is also recommended to develop supporting measures such as trainer training courses and seminars for inspectors and/or senior managers of control authorities, with a view to using the content of courses, manuals and guidelines prepared on a national level.

Regional guidelines for environmental inspection systems to be drafted in the framework of the Mediterranean GEF Project by 2001, will also be taken into consideration;

- c) The establishment of monitoring programmes to evaluate the effectiveness of actions and measures implemented under this Programme.

This activity will be implemented according to the provisions of the LBS Protocol and

relevant ongoing MED POL Phase III activities related to compliance monitoring, to be included by countries in national monitoring programmes.

6. Capacity Building

The activities specified in the SAP aim to improve the scientific base, environmental policy formulation, professional human resources, institutional technical capacity and capability and the implementation of environmentally sound technologies and policies for cleaner production. Priority is given to areas where it is apparent that the availability of trained personnel in the national administration would be an essential factor for the achievement of the overall objectives of the amended LBS Protocol, such as river pollution monitoring and to areas where specific competence would need to be strengthened, such as environmental impact assessment and pollution monitoring and inspection. Of the capacity building activities identified in the SAP, the following activities are therefore proposed to be carried out in the biennium 2000-2001:

The training activities (a) to (e) will be organised jointly with the Mediterranean GEF Project.

- a) To formulate and implement in the framework of MED POL capacity-building programmes related to the assessment and control of marine pollution.

Regional and national training programmes will be implemented according to the provisions of MED POL capacity building activities to be included in national monitoring programmes. One regional trainer training course and a number of national training courses on pollution monitoring and inspection will start by the year 2001;

- b) Training programmes on the operation and maintenance of wastewater treatment facilities.

A regional training course was organised in 1999 (Sophia Antipolis 21-24 April 1999), with participants from 15 countries, who were trained as trainers. A second regional training course, using the experience gained from the first, will be organised in 2000. A number of national training courses will start by 2001, by the staff trained during the regional course.

WHO/MED POL will be responsible for the preparation of this training programme, in the framework of the capacity building activities of the MED POL Programme;

- c) Training programme on BAT and BEP and cleaner production techniques for priority target industries.

A regional trainer training course will be organised in the year 2000, according to the procedure described in (a). The course could also include process modifications that reduce waste streams, resource recovery (closed loop operations) in industries, primary wastewater treatment at source and industrial location of new plants to managed estates for centralized industrial wastewater treatment. A number of national training courses will be organised on the subject in the period 2000-2001, by the staff trained during the regional course.

Training on a regional and national level, on the identification of BAT and BEP and cleaner technologies to reduce pollution in industrial installations will be organized in relation to

the emission of the following substances:

- c HCBs, dioxins and furans
- c PAHs
- c Hg, Cd and Pb
- c Organometallic compounds
- c Zn, Cu and Cr

Other organohalogen compounds:

- Halogenated Aliphatic Hydrocarbons (chlorinated solvents, chlorinated paraffins)
 - Halogenated Aromatic Hydrocarbons (Chlorobenzenes, polychlorinated naphthalenes, polybrominated diphenyl ethers and polybrominated biphenyls)
 - Chlorinated Phenolic compounds
 - Organohalogenated pesticides
- c Radioactive substances
 - c BOD, nutrients and suspended solids

The CP/RAC will be responsible for the preparation of this training programme, in the framework of the capacity building activities of the MED POL Programme;

- d) To develop training programmes on monitoring of river pollution in relation to the pollutant input to the sea.

A number of national training courses on river pollution monitoring will be organised in 2001, as a follow-up to a regional trainer training course to be organised on the subject in the year 2000. MED POL will be responsible for the preparation of this training programme.

The content of the training courses will be form the basic material for the preparation of a river monitoring manual in 2000-2002 in the framework of the MED POL Programme;

- e) To develop training programmes on Environmental Impact Assessment

New establishments (industries, aquaculture units and human establishments) will be required to undertake Environmental Impact Assessments for proposed activities subject to an authorisation by the competent authorities.

Countries requiring assistance in the preparation and evaluation of effective environmental impact assessments will be able to participate in a relevant training course by trainers, trained regionally on the subject in early 2000;

- f) To assist and advise on the preparation of reports that are required for the LBS Protocol

In accordance with Article 13 of the LBS Protocol "*THE Parties shall submit reports every two years, to the meeting of the Contracting Parties, through the Organization, of measures taken, results achieved and if the case arises, of difficulties encountered in the application of the Protocol*"

The Secretariat will provide support to national authorities requesting assistance in the preparation of reports on national regulations, action plans, programmes and measures implemented in application of the Protocol; statistical data on the authorizations granted in accordance with Article 6 of the Protocol; data resulting from compliance monitoring; quantities of pollutants discharged from their territories; and, public tracking and reporting systems of pollutants, known generically as *Pollutant Release and Transfer Register* (on PRTs see below, under Reporting);

- g) To promote joint ventures between suppliers and recipients of clean technologies, taking into account policy priorities and requirements of developing countries.

A first step could be the creation of an inventory of perspective recipient and donor countries for the promotion of the transfer of clean technology among Mediterranean countries.

The purpose of this inventory would be to identify countries in need of clean technology transfer to implement the provisions of the LBS Protocol and the specific activities identified in the SAP, as well as to identify those countries willing to enter (or in the process of entering) into bilateral cooperation, to transfer clean technology, in countries requiring such assistance.

It is expected that this inventory, would facilitate and promote access, particularly in countries in need of assistance, to clean technologies as well as promote collaborative arrangements for the development of clean technologies between enterprises of developed and developing countries.

In relation to this activity, national reference centres for "technology assessment" could be identified by Mediterranean countries, by 2005, for the evaluation of technologies, particularly those intended for transfer to developing countries. These centres would function in cooperation with the Clean Production Regional Activity Centre, making provisions for the participation of NGOs, and private sector experts.

MED POL will be responsible for the preparation of this inventory in cooperation with the CP/RAC, which will be initiated from the year 2001. This inventory will be updated on a yearly basis and made widely available to all Mediterranean Countries.

7. Public Participation

Coordinated information campaigns and special activities on environmental protection, as well as the continuation and expansion of the publication and distribution of information materials and the use of the media in all its forms will be carried out in the framework of ongoing and planned activities of MAP concerning public awareness and participation, particularly in the framework of MAP's new Strategy on Information and Public Awareness. These are continuous activities, also to be implemented in the biennium 2000-2001, in addition to the following:

- To identify potential roles for Non-Governmental Organizations in the implementation of the SAP and to ensure that all relevant IGOs and NGOs have appropriate access to information concerning the SAP and its application

NGOs will play an important role in advising on the means to incorporate the principle of sustainability, pollution prevention and control, the application of BEP and where required BAT, in policies, strategies and practices contributing to the implementation of the measures and targets included in the SAP. To this end all relevant IGOs and NGOs will have adequate access to information and meetings concerning the SAP and its application. Cooperation with experts from environmental agencies and NGOs could be strengthened, in order to assist in providing continuous assistance and advice to national authorities on policies, strategies and practices that may contribute to the implementation of the measures and targets included in the SAP in the most environmentally sound manner.

A first activity in this direction will be the organisation of a workshop in the year 2000, which will be supported by the Mediterranean GEF Project, to reach a decision on the contents of a regional programme for public participation in the implementation of the SAP, to include the role of NGOs and the provision of information to the general public.

8. Reporting

In accordance with Article 13 of the LBS Protocol "*THE Parties shall submit reports every two years, to the meeting of the Contracting Parties, through the Organization, of measures taken, results achieved and if the case arises, of difficulties encountered in the application of the Protocol*". As part of the capacity building provisions of the SAP the Secretariat will assist and advise on the preparation of reports. Of the reporting activities identified in the SAP, the following are proposed for implementation in or starting from the period 2000-2001:

- a) To prepare and apply a unified reporting system on the application of the provisions of the LBS Protocol and the SAP.

A unified reporting system on the application of the provisions of the Convention, the Protocols and the SAP is being prepared by the Secretariat, to be implemented in the framework of the Barcelona system, including the MED POL Programme. This activity could also take into consideration the recommendations on reporting of a regional plan to be drafted in 2001, in the framework of the Mediterranean GEF Project, on the establishment of reporting programmes for the marine environment.

National authorities will prepare and submit every two years, through the Secretariat, reports on the application of the LBS Protocol, to the meeting of the Contracting parties. Such reports shall, among others specified in the LBS Protocol, include:

- National regulations, action plans, programmes and measures implemented in application of the Protocol;
- Statistical data on the authorization granted in accordance with Article 6 of the Protocol;
- Data resulting from compliance monitoring;
- Quantities of pollutants discharged from their territories;

- The development of Pollutant Release and Transfer Register (on PRTRs see j) below).

- b) To collect information on the levels and trends of loads of pollution reaching the Mediterranean Sea

This action will be implemented according to the targets established with SAP and to the ongoing activities of MED POL which are included in national monitoring programmes, taking into consideration the recommendations of a uniform reporting system which is being prepared by the Secretariat, as described in a);

- c) To create or update in as short a period as possible, an inventory of point source discharges and emissions of pollutants in (a) hot spots and other areas of concern and (b) in the public industrial sector

This activity will be included in the LBS Reporting system to be implemented in the framework of the MED POL Programme. An inventory of point source discharges and emissions of pollutants in "pollution hot spots and other areas of concern" (including pollution sensitive areas), also connected with those included in the list prepared in the framework of the Mediterranean GEF Project, will be prepared by national experts and submitted, through the Secretariat, to the meeting of the Contracting Parties. The same procedure will be applied for pollutants in the public industrial sector;

- d) To prepare an inventory of quantities and uses of the nine pesticides and PCBs as well as of the industries which manufacture or condition them

This activity will be included in the LBS reporting system to be implemented in the framework of the MED POL Programme and taking into consideration the regional plan to be prepared in the framework of the Mediterranean GEF Project in 2001, concerning a regional inventory of quantities and uses of nine pesticides and PCBs as well as of industries which manufacture and condition them;

- e) To prepare an inventory of the uses and quantities of the following substances:

- c organomercuric compounds
- c chlorobenzene, polychlorinated naphthalene, chlorinated phenolic and organohalogenated pesticides
- c chlorinated paraffins

This activity will be included in the LBS reporting system to be implemented in the framework of the MED POL Programme. An inventory of quantities and uses of these compounds as well as of the industries which manufacture or condition them will be prepared by national experts and submitted, through the Secretariat, to the meeting of the Contracting Parties;

- f) To assess the quantities and types of fertilisers used

This activity will be included in the LBS reporting system to be implemented in the framework of the MED POL Programme. An inventory of quantities and types of fertilisers used as well as of the industries which manufacture or condition them will be prepared by national experts and submitted, through the Secretariat, to the meeting of the Contracting Parties;

- g) To formulate national inventories of the following categories of hazardous wastes:
- c stocks of obsolete chemicals.
 - c the existing quantities of the three categories of lubeoil.
 - c used batteries.

This activity will be included in the LBS reporting system to be implemented in the framework of the MED POL Programme. An inventory of these hazardous wastes will be prepared by national experts and submitted, through the Secretariat, to the meeting of the Contracting Parties;

- h) To submit reports relating to radioactive substances, on the authorisations granted, data resulting from monitoring, quantities of pollutants discharged from their territories and the action plans, programmes and measures promoted

This activity will be carried out according to the requirements of the LBS reporting system to be implemented in the framework of the MED POL Programme. Following the preparation of a unified reporting system as described in (a) above, reports on monitoring data, on the nationally authorized and actual annual amounts of radionuclides released from the installations as well as action plans, programmes and measures promoted will be prepared by national experts and submitted, through the Secretariat, to the meeting of the Contracting Parties. Reporting would take into account the experience of the Paris Convention and would be harmonized internationally as much as possible in order to facilitate assessments on the influence of radioactive releases to the marine environment on a regional level;

- i) To publish a report on the State and Evolution of the Mediterranean Environment at regular intervals

The information collected on the levels and trends of loads of pollution reaching the Mediterranean Sea will be compiled into a report on the State and Evolution of the Mediterranean Environment, also including other aspects of the Mediterranean environment, to be published at regular intervals;

- j) To develop public tracking and reporting systems of pollutants, known generically as *Pollutant Release and Transfer Register (PRTRs)*, in cooperation with the OECD

The United Nations Conference on Environment and Development's (UNCED) Agenda 21 calls on governments to implement and improve databases about chemicals including inventories of emissions, with the co-operation of industry and the public. In accordance with UNCED's Agenda 21, industry should provide data on the pollutants they release, specifically those needed for the assessment of potential risks to human health and the environment. These data should be made available to national authorities, international bodies and other interested parties involved in hazard and risk assessment. One type of data referred to are emissions data which could be brought together in a Pollutant Release and Transfer Register (PRTR).

A PRTR is an environmental database or inventory of potentially harmful releases or transfers to air, water and soil as well as wastes transported off site for treatment and disposal. In addition to collecting data for PRTRs from stationary sources, PRTRs are also designed to include estimates of releases from diffuse sources such as agricultural and transport activities.

The development and implementation of a PRTR system adapted to national needs represents a means for governments to track generation, release and the fate of various pollutants over time. A PRTR can therefore be an important tool in the total environmental policy of a government, providing otherwise difficult to obtain information on the pollution burden, encouraging reporters to reduce pollution by implementation of cleaner technologies and engendering broad public support for government environmental policies. PRTRs can be complimentary to industry programmes such as ISO 14 000 and Responsible Care®.

Member States are encouraged to establish by 2001, and thereon agree to implement and make publicly available, a PRTR system. Governments would agree to cooperate with affected and interested parties to develop a set of goals and objectives for the system. Accordingly, facilities releasing potentially harmful substances to air, water and soil as well as wastes transported off site for treatment and disposal would agree to report periodically as to what was released, how much, and to which environmental media. Data would then be made available to interested parties. The principles and information contained in the OECD Guidance to Governments Manual for PRTRs [OCDE/GD(96)32] could provide a useful tool in the implementation of this activity.

As a first step, in the period 2001-2002 a regional trainer training programme, workshop, or conference could be organised on the subject, in an effort to facilitate the implementation of this activity.