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**REVIEW OF THE IMPLEMENTATION OF THE SAP THROUGH THE EXECUTION
OF THE GEF PROJECT AND THE MED POL PROGRAMME**

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INTRODUCTION

Since the adoption of the Strategic Action Programme (SAP) to Address Pollution from Land-based Activities in 1997, and the decision of the Contracting Parties to assign to the MED POL Secretariat the coordination and follow up of the related activities, large efforts were made to adequately prepare the basis at the regional and the national level for a successful and sustainable long-term implementation of the SAP activities.

As a first step, many activities of MED POL, e.g. the monitoring, were reviewed and placed in a new prospective so as to contribute to the implementation of the SAP objectives. Secondly, after numerous negotiations, a specific project was prepared and proposed in 1998 to GEF for funding. The project specifically presented a number of activities at the national and regional level aiming at creating a solid technical, institutional and policy basis to ensure the implementation of the SAP on the long-term. The project, that was approved and launched in 2001 for a duration of three years, while included a contribution of 6 million US \$ from GEF and of about 900,000 US \$ from MAP, it also attracted other donors such as FFEM and METAP and external contributors and partners such as ICS-UNIDO and presented a final budget of 12 million US \$.

In view of the complexity of the actions related to the implementation of the SAP and the many actors involved, that also include WHO/EURO, PAP/RAC, SPA/RAC and CP/RAC in addition to those mentioned above, the Secretariat felt it useful to review and discuss the status of implementation of the activities, the operational links between Organizations and the activities and the prospects of implementation of the SAP after the termination of the GEF Project.

This document summarizes the main activities already implemented or being carried out in the framework of the SAP through the MED POL Programme and the GEF Project.

1. The plan for the implementation of the SAP

A plan for the implementation of the SAP (doc. UNEP(DEC)MED IG.13/4) was adopted by the Contracting Parties at their meeting in November 2001 in Monaco. The Plan is structured in three components, as follows.

Component I includes the conceptual framework, strategic actions, phasing and work plan. It describes objectives, principles and approaches which take into consideration the lengthy period of the implementation of the SAP as well as the different levels of socio-economic development, of technical, scientific and administrative competency, of different cultural values and environmental priorities prevailing in the region. It also describes the activities to be implemented, their work plan and timetable. However, it is necessary to identify some essential elements of the operational process, which can be considered as milestone activities envisaged by SAP, and which determine the phasing of the SAP implementation process. These activities are:

- meeting the prerequisites for the implementation of the SAP
- updating of National reports on Hot Spots and Sensitive areas
- preparation of National Diagnostic Analyses (NDA)
- preparation of sectoral programmes
- preparation of National Action Plans (NAP), and
- gradual, step-by-step implementation of NAPs.

Phasing of the SAP implementation process

Phase	Milestone activities	Note
<u>Prerequisites</u>	<ul style="list-style-type: none"> - MED POL Phase III - LBS Protocol - National Reports on Hot Spots and Sensitive areas - Preparation of the SAP 	<ul style="list-style-type: none"> (Adopted) (Signed, not yet entered into force) (Prepared) (Prepared, approved)
<u>Initiation</u>	<ul style="list-style-type: none"> - Operational Document, draft - Operational Document, revised draft - Approved Operational Document 	<ul style="list-style-type: none"> MED POL MED POL Coords., MAP NFPs CPs
<u>Formulation of NAPs</u>		
<u>Preparation of inputs</u>	<ul style="list-style-type: none"> - Updating of National reports on Hot Spots and Sensitive areas - Preparation of NDAs and BB - Preparation of sectoral programmes 	<ul style="list-style-type: none"> MEDPOL “ “
<u>Preparation of NAPs</u>	<ul style="list-style-type: none"> - Preparation of NAPs - Adoption of NAPs - Adoption of list of priorities - Adoption of workplan and timetable 	<ul style="list-style-type: none"> “ (to be defined by national authorities) (national authorities) “
<u>Implementation of NAPs</u>	<ul style="list-style-type: none"> - Gradual implementation of NAPs - Provision of assistance and support 	<ul style="list-style-type: none"> According to NAP (National support, MED POL and international sources)
<u>Review and Update processes</u>	<ul style="list-style-type: none"> - fifth year review of SAP - fifth year update of the SAP according to the development international conventions 	<ul style="list-style-type: none"> (MED POL and implementation process national authorities) “
<u>Transversal activities</u>	<ul style="list-style-type: none"> - Participatory activities - Monitoring, evaluation, reporting - Readjustment of NAP, if needed 	<ul style="list-style-type: none"> (Following SAP - NAP provisions) (Targets identified by SAP and NAP) (According evaluation of results and reports)

Tentative work plan and timetable for the implementation of SAP

No. Phase/stage	Activity	Deadline
1. Initiation	Preparation of draft Operational Document	Feb. 2001
	Presentation, discussion,	Feb-June2001

	final version of document	
	Approval by CPs	Nov. 2001
	Establishment of respective institutional arrangements, at regional level	Dec. 2001
	at national level	June 2002
2. Formulation of NAPs		
a) Preparation of inputs	Updating of hot spots and sensitive areas	Dec. 2002
	Provision of instructions and assistance	continuous
	Preparation of NDAs and BB	Dec. 2002
	Preparation of sectoral programmes	Dec. 2002
	Participatory activities	continuous
b) Preparation of NAPs	Preparation of NAPs	Sept. 2003
	Reporting to CPs	Nov. 2003

Adoption of NAPs and the following stages to be defined by each NAP, respecting targets defined by SAP and NAP

Component II presents the needed/recommended institutional arrangements. It includes a description and definition of the nature and the role of the bodies that could coordinate the SAP activities at the national and regional levels and the "support structures" (e.g. the SAP incubators) that could ensure the successful dissemination and assimilation of the tasks by the local stakeholders. The need to monitor the progress and to evaluate the outputs of all the activities that are being carried out in each country is also taken into account as well as the need to make use as much as possible of the existing bodies and structures both at the regional and the national levels (e.g. the Regional Activity Centres of MAP). While the proposed structures are to be considered flexible and adaptable to the existing situations, the roles and the functions that should ensure a proper coordination and implementation of the activities are considered essential.

Component III presents baseline criteria and technical instructions and information, mostly related to pollution reductions and sources of pollution. It examines the original SAP structure, chapter by chapter, and indicates how and when the main activities of the SAP could be implemented by the countries or by the Secretariat with the aim to reach the objectives and the goals of the Programme within the agreed time frame. When dealing with pollution reductions, the plan introduces the concept the national baseline budget of releases that is proposed as a starting point in order to meet the agreed reduction objectives. At their Meeting in Monaco, the Contracting Parties agreed to consider the year 2003 as the base year for the calculation of the national baseline budget of releases of the chemicals and wastes listed in the SAP. For the implementation of the pollution reductions, the meeting agreed to include an internal flexibility for which any country may transfer internally release reduction targets between different activities generating the same pollutant according to the socio-economic and environmental priorities prevailing in the country.

2. Preparation of National Action Plans (NAPs)

The formulation of National Action Plans (NAPs) (see document UNEP(DEC)MED WG.212/INF.3) represents the operational long-term aim of the Strategic Action Programme (SAP), as the National Action Plans are expected to make use of the results of the individual activities identified in the SAP. According to the SAP Programme, the Contracting Parties will develop or review and adopt, by the end of 2003 at the latest, National Action Plans (NAPs) addressing pollution from land-based sources. This implies the adoption of the targets and activities identified in the SAP. Action towards the implementation of the NAPs is to be pursued *inter alia* through bilateral, regional and international cooperation.

National programmes of action are iterative processes that call for the phased implementation of priorities identified within a cross-sectoral, participatory framework. By enabling long-term prioritisation, a country's national programme of action becomes a cyclical process that enables stakeholders to progressively identify and address threats and impacts to the marine and coastal environments. Its fundamental goal is to develop concrete projects that:

- mobilise both stakeholders and resources,
- build upon National Diagnostic Analysis (NDA) and Baseline budget of releases,
- are mainstreamed into relevant institutional, budgetary and policy frameworks, and
- incorporate lessons learnt in the process.

National Action Plans are foreseen to focus on sustainable, pragmatic and integrated environmental management approaches and processes, such as integrated coastal area management, harmonized, as appropriate, with administrative region(s) approach, river basin management and land-use plans. Towards this end the work actually executed under the sustainability of the SAP MED on the development of economic instruments and on their implementation at the national level will play a significant role, as is capacity building of national professionals in the use of these instruments.

Bottom-up approach

The elaboration of the NAPs passes through successive phases that should be performed to reach the phase of the formulation of the NAPs. As a result,

- National Action Plans should be developed as a result of the NDA and BB,
- the targets and activities identified by SAP should be respected as much as possible in the sectoral programmes,
- national plans for action and investments should take into account the national reports on "pollution hot spots and sensitive areas" as well as the provisions of the LBS Protocol.

The basic objectives of NAPs are to:

Set Integrated Management Objectives

For the priority problems identified earlier, it is important that integrated management objectives be defined via a process involving as many stakeholders as possible. Objectives should be set forth in terms of:

- overall goals, targets and timetables;
- specific targets and timetables for the geographical areas affected; and
- specific targets and timetables for industrial, agricultural, urban and other sectors.

- The process of initiating a national programme of action should endeavour to build upon existing capacity and institutions. An assessment of the national status should provide necessary information for mainstreaming the NAP into the relevant policy and strategy frameworks at the national and administrative region(s) level, into the institutional arrangements of relevant government agencies, and into budget definition processes.

Formulate principles, approaches, measures, priority actions and deadlines for the implementation of SAP within the national framework

The definition and assignation of responsibilities for identified tasks and activities is an ongoing process that evolves in parallel with the development of the NAP.

The SAP team should ensure that responsibilities are clearly defined and assigned throughout the process, with their respective timetables. Because of the multi-disciplinary and cross-sectoral approach the NAP requires, a lack of clarity in the assignment of tasks may result in duplication or fragmentation of work, or oversight of given activities. The definition of a calendar of implementation or timetable will help participants to co-ordinate the delivery of various outputs.

A national programme of action should incorporate a strong monitoring and evaluation component, because:

- Ongoing monitoring and assessment of activities under the national programme are essential for their sustainability and continued relevance;
- Evaluation is necessary both during the implementation of a project and once it is finalised; and,
- Evaluation of the effectiveness of proposed steps and projects sets the basis for the iterative process of adjusting and updating the national programme of action.

Prepare the resulting Investment Portfolio (IP)

A concrete financial strategy, that mobilises public-private partnerships, is required for:

- i) Definition of financial resource needs
- ii) Identification and mobilisation of partners
- iii) Development of Public-Private Partnerships (PPP)

Define the baselines and the priority activities for issues/actions of a transboundary nature

Because the NAP should build upon current information, NDA, databases and inventories, it is strongly recommended that a comprehensive evaluation be undertaken in order to evaluate current status, and identify research and information gaps.

In order to develop a comprehensive framework for action, the NAP should build upon the existing national policy framework. Therefore, an assessment of relevant policies, legislation, and regulations is essential.

Identify NGOs' and stakeholders' role in the process, and

Due to the long-term frame of the implementation of the SAP, mobilizing stakeholders such as municipalities, chambers of commerce and industry, scientific and technical institutions, etc. together with active NGOs in the field of environment and protection of marine ecosystem is of utmost importance.

Regional cooperation also plays a major role in ensuring the transfer of knowledge and know how.

Elaborate monitoring and reporting system

Monitoring and the establishment of an environmental-quality reporting system imply not only the collection and analysis of information that can assist in evaluating project performance and decision-making, but also mechanisms for ensuring that such results are communicated to all stakeholders, given that effective participation is based on access to sufficient and relevant information.

Adoption of the NAP

NAPs, once prepared, will have to be officially adopted by the relevant national authorities and bodies, in order to ensure the necessary legal basis, resources and institutional arrangements for their implementation.

One of the key requirements for the successful implementation of the NAP, and activities or strategies developed within its framework, including actions, is solid political, institutional and financial support from relevant government authorities at all appropriate levels. The establishment of Inter-Ministry committees, which means the involvement of all the competent Ministries in the project, is a fundamental prerequisite in order to ensure the appropriate political support since the inception of the activities and improve prospects of sustainability.

In the countries where National Environmental Action Plans (NEAPs) have been adopted, the National Action Plans for LBS must be consistent with the NEAPs.

3. Pollution hot spots and sensitive areas

In order to implement the activity related to the pollution hot spots in the Mediterranean, and in particular the part related to the preparation of pre-investment studies, an expert meeting (5-6 April 2001) was organized to examine and finalize appropriate criteria for the prioritization of transboundary pollution hot spots. The meeting formulated the criteria for the prioritisation of the pollution hot spots taking into consideration the potential risk of transboundary effects.

Following the meeting of experts, all Mediterranean countries were consulted in order to provide their consensus on the criteria to be followed. Only minor remarks were made to the criteria to be used for the selection of priority hot spots for the preparation of pre-investment studies. These remarks were incorporated into the proposed criteria by the meeting of experts and formed the material that was sent to the GEF eligible countries, asking them to prepare a country report and to also fill in appropriate tables indicating the potential risk of transboundary effects.

Due to the complexity of the above-mentioned work, MAP/GEF, under the technical responsibility of WHO/MED POL, covered financially the experts from each country, who provided considerable assistance to the whole exercise. It resulted in a rather difficult exercise, which was finalized at the end of December 2001, although it started early in June 2001. At present, eleven GEF eligible countries out of twelve, revised their national reports on pollution hot spots, which were originally compiled in 1997, and provided enough data for the pollution transboundary effect of the mentioned hot spots.

Countries were asked by the GEF Project Management to apply socio-economic criteria, prepared by METAP, for the prioritisation of pollution hot spots for the preparation of pre-investment studies. As of today ten countries have submitted their reports.

The country reports with the data and information on the potential risk of transboundary effects, and on the application of socio-economic criteria for the prioritisation of pollution hot spots, to be selected for pre-investment studies, were considered by the *Ad-hoc* Technical Committee for the Pollution hot spots, at its meeting at the MEDU premises, held in Athens, from 28-29 January 2002.

The priority list of pollution hot spots for the preparation of pre-investment studies was communicated to the counties. The countries were required to express their opinion regarding the proposed hot spot(s) in the country for the preparation of pre-investment study and to provide their position either at national or local level regarding the follow-up investments. This was required in order to avoid the preparation of pre-investment studies for hot spots having high uncertainty for investment. The final priority list of pollution hot spots for the preparation of pre-investment studies was prepared by the *Ad hoc Technical Committee* at its second meeting held in Tirana in March 2002.

Fact-finding missions to the countries have been already been undertaken to Albania, Bosnia and Herzegovina, Egypt, Syria and Turkey. These missions are organized in order to re-validate the selected hot spots, to define the scope of pre-investment studies and to tailor TORs and studies cost in accordance to the hot spot characteristics and complexity. Mission reports, as well as TORs for the preparation of pre-investment studies have been sent to all countries for clearance.

FFEM proposed to support the preparation of pre-investment studies in four countries (Algeria, Lebanon, Morocco and Tunisia), while ICS-UNIDO is supporting the preparation of one pre-investment study in Croatia. FFEM already organized exploratory missions to the countries, but the activities on the preparation of pre-investment studies have not yet been initiated.

So far, two countries are not covered by this activity, namely Libya and Slovenia.

For the selected pollution hot spots, pre-investment studies will be prepared by national teams of experts after the procurement procedure.

A consultation meeting on criteria for pollution sensitive areas was held in November in Athens. Following the recommendations made by the participants on the proposed criteria, a final draft was prepared which will be circulated for comments among the MED POL Coordinators.

4. Pollution Reduction and Baseline Budget of Releases

Guidelines were prepared in close cooperation with RAMOGE for the preparation of Baseline Budget of releases. The Guidelines, that include a database and a software together with an instruction book, detail the procedure to be used to calculate the Baseline Budget of releases on the basis of national data (of emission factors whenever national data are not available).

Five sub-regional meetings were organized to explain the software and discuss the problems, barriers, gaps and possible solutions related to the preparation of the baseline budget in each country. The meetings were held in Syria (for Syria, Lebanon, Egypt and Libya), in Croatia (for Croatia, Slovenia, Bosnia Herzegovina and Albania), in Morocco (for

Morocco, Algeria and Tunisia), in Monaco (for Monaco, France, Italy, Spain and Greece) and in Turkey (for Turkey, Cyprus, Israel and Malta). In each meeting, the secretariat, regional expert and national experts reviewed the process of preparation of the National Diagnostic Analysis (NDA) and the baseline budget of releases as well as the practical use of the database and the software.

A set of support documents is also under preparation dealing with the state-of-the-art methodology for tracking pollution reduction in industrial sites, the necessary national institutional set up to support national administrations in the implementation of the SAP, and the reporting and monitoring under the provisions of the SAP and its operational strategy.

5. Monitoring

Since the launching of MED POL, the monitoring activities have been the main assessment tool to follow the respect of anti pollution norms and to determine levels and trends of pollution. Already indispensable for the formulation of pollution control measures, the monitoring component appears now a fundamental instrument for the proper implementation of the SAP. Considering in fact that the general objectives of the MED POL Phase III monitoring activities are:

- to present periodical environmental state assessments for Mediterranean hot spots and coastal areas to provide information for decision makers on the basic environmental status of the areas which are under anthropogenic pressures,
- to determine temporal trends of some selected contaminants for assessing the effectiveness of actions and policy measures, and
- to enhance the control of pollution by means of compliance to national/international regulatory limits,

It is clear that the monitoring activities become a prerequisite for the success of the SAP since they represent a direct means to follow the achievements of the pollution reduction objectives of the programme.

The components of the MED POL III Monitoring Programme have been designed as to achieve the above objectives by establishing a common strategy at the Mediterranean scale to be implemented through national monitoring programmes.

The trend monitoring component aims at following the site-specific temporal trends of the selected contaminants at hot spots and coastal/reference areas. The selected group of parameters for this type of monitoring generally corresponds to the contaminants listed in Annex I of the LBS Protocol, i.e. total mercury, cadmium, other heavy metals and toxic/persistent organic compounds to be determined in biota and sediments.

Trend monitoring of loads aims at providing estimates of inputs of some major groups of pollutants, hazardous substances and nutrients into the marine environment via point (rivers, municipal and industrial effluents) and non-point (atmospheric) land-based sources. The major parameters selected for this type of monitoring are total suspended sediment, biochemical/chemical oxygen demands, total phosphorus/nitrogen, total mercury/cadmium and other heavy metals depending on the nature of the effluents, halogenated hydrocarbons, phenols, detergents and faecal coliforms.

Biological effects monitoring (monitoring with biomarkers) has been included in the monitoring programmes as pilot activities to test the available methodology to be used as an early-warning tool to detect any destructive effects of pollutants to the organisms at the initial stage of exposures.

A new component regarding the monitoring of state of eutrophication in the Mediterranean marine sites is being included in MED POL Monitoring Programme. The monitored sites of interest will be those already known as eutrophication hot spots and, in addition, potentially risk areas under the direct impact of anthropogenic inputs of nutrients and organic material.

The control component of the monitoring is supported by the compliance monitoring of health-related conditions at bathing and shellfish/aquaculture waters, effluents and hot spots. In order to achieve this activity, countries are expected to prepare compliance reports for their bathing waters, effluents etc. by means of comparing measured values with the existing limit values mentioned in their national legislation and/or international and regional measures.

Although the parameters selected for the MED POL monitoring activities were mainly chosen on the basis of the lists provided in the existing legislations including the LBS Protocol, the levels and trends of some of the hazardous substances used in the MED POL monitoring programmes might be also utilized as state indicators. Similarly, most of the parameters in loads monitoring can be considered as pressure indicators. Furthermore, the selection of the parameters for the new eutrophication monitoring programme of MED POL was also made taking into account the existing state and impact indicators already being used in and outside the Mediterranean region.

Capacity building programmes supporting all the components of monitoring have been underway since the launching of MED POL and have included direct technical and financial assistance to the countries, quality assurance (QA) programmes and research and support for the scientific follow-up of emerging environmental issues.

The present national monitoring programme of MED POL Phase III has been launched in 1999. At present, eight countries have ongoing monitoring programmes and an adequate reporting performance. The selection of monitoring areas has mainly been done by the countries to cover the identified hot spots.

However, still many countries have not prepared a monitoring programme in the framework of MED POL. Some of these countries are known to have very well established national monitoring programmes whereas others do not have regular monitoring activities.

Considering that the existence of a national environmental monitoring network is a fundamental need for any country when formulating and revising a national action plan, national authorities and stakeholders should make every effort to ensure the proper formulation and implementation of a monitoring programme. This is extremely important for obtaining the expected results from most of the action planned in the SAP. In order to assist the countries in this direction, the MED POL Secretariat will soon provide a typology of the outputs of its monitoring activities to the national SAP authorities to show in which way its components can be integrated in, and provide a substantial contribution to, the SAP pollution control and prevention actions. Concerning the ongoing monitoring programmes, it is clear that a slight adaptation in the choice of parameters may be necessary to enable the full coverage of all the substances listed in the SAP.

6. Capacity building

In order to facilitate and assist the national authority responsible for the implementation of the SAP a number of guidelines and plans have been prepared and dispatched to MEDPOL NFPs as follows:

- Guidelines for rivers monitoring which describes the state of the art of the monitoring of rivers. The guidelines cover all aspects of river monitoring programmes.
- Guidelines for indicators of ecosystem stress. The guidelines outlined the major indicators already in use to describe a stress of an ecosystem and propose a comprehensive strategy for the use of biomarkers and benthic ecosystem as relevant indicators on the basis of real data.
- Regional plan for reduction of 50 % BOD from industrial sources. The plan focuses on how the Mediterranean countries individually could reduce 50 % of BOD hot spots. It also proposes technology and estimation of cost of reduction.
- Regional plan for management of nine pesticides and PCBs including regional inventories for these substances. The plan is elaborated on the basis of the assessment of management and inventories of POPs in the region. The elaboration of National Action Plans for management of POPs is the corner stone of the Regional Plan. The Plan includes also a detailed information on how to prepare the NAPs taking into consideration the provisions of Stockholm convention and the SAP targets.
- Regional plan for management of hazardous waste including regional inventories of hazardous waste. The Plan was based on the provisions of Basel convention and the importance of updating regularly the national inventories and stress on the enhancement of the role of regional center for hazardous wastes management set up by Basel conventions.

The first draft of the regional guidelines on (i) sewage treatment and disposal, (ii) municipal wastewater reuse, (iii) industrial wastewater, and (iv) coastal litter, have been prepared. The guidelines will be reviewed by a team of experts in the respective fields, and following their recommendations and comments, the final draft will be tabled for discussion during the proceedings of two meetings of Mediterranean experts, as envisaged in the project document. The meetings to review the regional guidelines will be held in March and April 2003 respectively.

A regional course to train the trainers on Sewage Treatment was held in Athens, last year. Seventeen trainers from Mediterranean countries attended with the view to organize similar training courses in their countries based on the same training material already translated into respective languages. So far, the national training courses have taken place in Libya (in Arabic), Croatia with Slovenian participation (in Croatian), and in Albania, based however on a more particular subject like treatment by stabilization ponds, to meet better their requirements. Two more national training courses are scheduled for Algeria and Syria.

A regional training course for trainers on environmental inspections was held in Nicosia, Cyprus, from 4-8 November. Sixteen trainers from Mediterranean countries have attended the course, who in turn, will organize similar national training course in their countries, based on the original material prepared for the training.

A workshop on wastewater reuse guidelines and practices was held in Iraclio, Crete, on 25 September 2002 within the context of the "Regional Symposium on water recycling in Mediterranean Region". During the workshop the proposed guidelines were discussed, while the suggestions that were made will be taken into consideration when formulating the final draft for circulation to the MED POL Coordinators. A document on wastewater reuse practices in the Mediterranean was also prepared.

An update of the wastewater treatment plants in Mediterranean coastal areas with more than 10,000 inhabitants, will take place in 2003 with the aim to collect the latest

available information on the subject and compare it with the report on the same subject, which was prepared in 1999 and published in 2000.

The regional workshop on Environmental Impact Assessment (EIA), scheduled to be organized by METAP in September 2001, was postponed to June 2002, while the "train the trainers" workshops at national level for environmental impact assessment were held in February and March 2002.

The regional and the national training courses for rivers monitoring, scheduled for 2002, will be organized during 2003.

Concerning cleaner production techniques and practices, RAC/CP has prepared the following regional guidelines in order to assist national authorities for the implementation of the SAP and as reference for the preparation of National Action Plans (NAPs):

- Regional guidelines for the application of BEPs for the rational use of fertilisers and the reduction of losses of nutrients from agriculture. The Guidelines cover a set of BEPs related to agricultural fertilizers used in the different agricultural systems existing in MAP countries. They are not restricted to mineral fertilizers and also cover the nutrients used in agriculture so as to achieve high nutrient use efficiency and reduce emissions to the environment. The approach taken is to move to sustainable agricultural systems, accommodating them to the needs of existing and future agricultural systems of the area.

In addition, first drafts were prepared of (a) Regional Guidelines for the application of BATs and BEP in industries, (b) Regional Guidelines for the application of BATs and BEPs in industrial installations which are sources of BOD, nutrients and suspended solids and (c) Regional Plan for the reduction by 20% by 2007 of the generation of hazardous wastes from industrial installation. These drafts will be reviewed by experts and their comments will be included to elaborate the final draft.

A regional training course to train trainers on cleaner production techniques was held in Barcelona, on 30 September-4 October 2002. A total of 15 participants from Mediterranean countries and designated by GEF NFPs attended the course with the view to organise similar training courses in their countries and to take into account cleaner production techniques as a useful tool included in the NAPs.

7. Public participation

A publication on the SAP for the wide public is in preparation. The first draft of the text was prepared before the end of 2001. The preparation of the layout for this publication is ongoing and the final print will be ready at the end of 2002.

The draft report-survey on the status of three components of the strategy on Information, Awareness and Public Participation in the East Adriatic countries (Croatia, Slovenia, Bosnia-Herzegovina, Albania) and Turkey, Malta, Cyprus and Israel was prepared and submitted for review and final drafting to a workshop organized in May 2002 in Split, with the participation of experts from the countries involved. The outcome of the workshop, a report and a set of recommendations represent the sub-regional component of the Mediterranean Strategy.

The outcome of the meeting will be merged with the existing sub-regional components leading to the final proposal of the Mediterranean Strategy on Information, Awareness and Public Participation. This will take place through two main activities: a

meeting to harmonize the sub-regional components and a meeting to review their merging into one regional strategy.

8. Reporting

In the framework of the SAP and its Operational document, a reporting system including reporting formats is being prepared. It contains the following elements:

- Progress monitoring of SAP activities
- Compliance with SAP requirements
- Evaluation of performance
- Public information

Progress monitoring will be based on the assessment of the level of implementation of all those activities needed for the preparation of National Action Plans (NAP). These activities include the preparation of National Diagnostic Analysis (NDA), National Baseline Budget (NBB), national priorities for action, institutional building-up and an evaluation of NAP performance.

Elements for progress monitoring

Preparation of NAPs

- review of existing NAP if any, and its harmonisation with SAP requirements
- conformity of new NAP with SAP requirements
- description of objectives, principles and targets

Preparation of NDA

- definition of hot spots, sensitive areas, drainage basins into the Mediterranean Sea
- inventory of industrial installations releasing SAP priority pollutants (according to the sectors listed in Annex I of LBS Protocol)
- identification of areas of concern (major pollution sources, level of degradation of physical environment)

Preparation of NBB

- level of preparation on national level
- level of preparation on local level (administrative regions)
- expected date to be finalised
- adoption and/or modification of emission factors needed for the calculation of pollutants releases (criteria for modification)
- procedures for NBB up-dating (every 5 years)

Priority list of actions

Institutional building-up

Evaluation of NAP performance

Compliance monitoring registers the releases of SAP priority pollutants into the Mediterranean Sea from industrial land-based sources and tracks the reductions. The quantities mentioned in NBB will be used as reference and the quantitative reductions over the years will be reported. Compliance monitoring will also concern the development of activities under the urban development component of the SAP, namely, urban waste water and solid waste management.

Elements for compliance monitoring

NBB for each pollutant

- total quantities in hot spots, sensitive areas, other areas of concern
- total quantities in each drainage basin/administrative region
- water recipients in the drainage basin in which the pollutant is discharged
- cumulative quantities at the national level
- industrial pollution sources and relative releases

Quantities and reductions of each pollutant

- total quantities in hot spots, sensitive areas, other areas of concern
- total quantities in each drainage basin/administrative region
- water recipients in the drainage basin in which the pollutant is discharged
- cumulative quantities at the national level
- industrial pollution sources and relative releases
- reduction of quantities released (% to those referred in NBB)

On the basis of the results of both process and compliance monitoring, an **evaluation** of the prevailing situation at national level has to be elaborated, in order to define the country's performance towards meeting the SAP targets. There are 3 key levels of information to be collected, in order to have an overall comprehensive picture of the country's performance: a **reference layer** with aggregated quantitative data of pollutants release and compliance with SAP targets, a **comparative table** of actual releases with those envisaged by the set regulatory framework (predicted quantities according to effluent standards) and a **review** of the introduction of the various NAP elements such as environmental management systems envisaged in the various sectoral programmes, priority actions etc., namely to which extent their application has contributed to the registered progress (i.e. reduction of pollutants releases).

Evaluation of performance

Reference layer for each pollutant

- actual quantities of pollutants releases on national level for the reference year (tonnes/year)
- quantities of pollutants releases on national level stated in NBB (tonnes/year)
- reduction of quantities released (% to those referred in NBB)
- deviation from stated SAP target (%)

Comparative table for each industrial sector and pollutant released

- actual quantities released (tonnes/year)
- maximum permissible quantities according to authorisation/permit (tonnes/year)
- degree of deviation of actual releases from maximum permissible quantities (%)

Reference layer for waste water treatment plant

- actual number of waste water treatment plants
- number of waste water treatment plants to be built according to the NAP
- deviation from stated SAP target (%)

Reference layer for solid waste disposal facilities

- actual number of environmentally solid waste management systems

- number of environmentally sound waste management systems to be implemented according to the NAP
- deviation from stated SAP target (%)

Progress and results achieved at national and regional level should be collated in a comprehensive set of information and regularly published aiming at the **information of the general public, NGOs etc.** The objective of this action will be to stimulate public awareness and sensitivity of all those involved in environmental protection including donors, the scientific community and key players in the decision making process (economical, industrial associations), in order to enhance the mechanisms needed to promote pollution reductions.

Elements of the public information

Technical aspects

- hot spots, sensitive areas in each administrative region
- progress achieved in reduction of pollutants releases
- measures applied so far (NAP, sectoral programmes, technical projects)

Financial aspects

- total budget and time table needed for the completion of the technical projects
- financial resources spent so far for the implementation of the various projects

Problems - proposals

- inadequate legislative/regulatory framework
- delays in the preparation/execution of actions needed
- difficulties in fund raising and cash flow
- comments on the existing situation
- proposals for amelioration actions

Other reporting activities

The Pollutant Release and Toxic Register

The PRTR reporting system is a tool to track the releases and transfers off site of pollutants from industrial activities into air, water and soil. This system represents a means for governments to track generation, release and fate of various pollutants over a given time. A PRTR can therefore be an important tool for national environmental policy and encourages the implementation of cleaner technologies. PRTRs can be complementary to industry programmes such as ISO 14000 and EMAS.

As a result of the implementation of a PRTR pilot project in Alexandria –Egypt a set of Guidelines are being produced for the implementation at the Mediterranean regional level of the PRTR system.

Indicators of marine Pollution

As mentioned under the Chapter on monitoring, the Secretariat is at present working with regional experts to develop, on the basis of the work ongoing at the EEA and MCSD, a set of marine pollution Indicators to be considered in the reporting systems under the provisions of MEDPOL Phase III and SAP.

9. Long-term financial sustainability of SAP

Why does SAP need financial sustainability?

The SAP was created with the aim to protect marine environment, including its biological resources and diversity, from the effects of harmful land-based activities. This complex aim is an extremely difficult task. In order to reach this aim, there is a number of tools, instruments and techniques that might be used. Among them, economic instruments take a particularly important place. All leading world institutions and organisations active in the field of environmental protection recommend their use. It is recognised that in today's society, the role of economy in environmental protection is crucial. Its environmental problems are mainly caused by the wrong economic development policies. All decisions made with regards to development or protection of the environment are highly inter-related and actually depending on economy. Many on-going projects are turning to economic instruments as a tool that might provide financial resources for continuation of the projects, or project's sustainability. The SAP has recognised the importance of economic instruments for environmental protection from the very beginning.

Appreciating the overall objective of the SAP, as well as the priorities of the LBS Protocol, an activity within the GEF Project was launched with the following goals:

- To develop and assist in implementing economic instruments for the sustainable implementation of the SAP;
- To assist in making actions of combating the land-based pollution, in a long term, self-financing at the national level; and
- To demonstrate the economic benefits of more integrated approaches to management.

Economic instruments, also called instruments of change, can encourage behavioural change among polluters and consumers of natural resources, while also rising revenues for environmental protection. Therefore, benefits of using economic instruments in the SAP are manifold. The basic benefits may be presented as follows:

- Change of behaviour of polluters;
- Change of behaviour of consumers of natural resources;
- Raising revenues; and
- Better and more integrated approach to management of natural resources.

What has been done up to now?

During the 2000-2002 period, PAP/RAC, in charge of this component within the GEF Project, has undertaken a number of activities that could be sorted in the following groups:

- Setting up the activity and fact-finding;
- Definition of pilot projects;
- Information exchange and public awareness raising.

The outputs in setting up the activity and fact finding could be summarised as follows:

- Expert meeting on the development and implementation of economic instruments for the sustainable implementation of Strategic Action Programme to Address Pollution from Land-Based Activities in the Mediterranean Region; Split, Croatia, July 13, 2000;
- Expert Meeting on Development of Economic Instruments for the Sustainable Implementation of the SAP, Split, May 18-19 2001;

- Questionnaire on application of Economic Instruments for combating land-based pollution in the Mediterranean coastal areas, and Filling-in Instructions for the Questionnaire, June 2001;
- Project Implementation Plan for the Development of Economic Instruments for Sustainable Implementation of SAP, June 2001;
- Questionnaires on Application of Economic Instruments for combating land-based pollution filled in Bosnia and Herzegovina, Albania, Turkey, Slovenia, Egypt, Morocco, Lebanon, Algeria and Croatia;
- Analysis of the Application of Economic Instruments for Combating Land-based Pollution in the Mediterranean Coastal Area, November 2001; and
- Instructive Seminar on Application and Development of economic instruments for the Sustainable Implementation of the SAP, December 2001.

A number of pilot projects in Mediterranean countries were envisaged with the basic objective of showing how the project's proposals could be tested in concrete settings. The following has been achieved:

- Pilot Project Application Form was prepared, October 2001;
- Pilot Project Proposal: Implementation of economic instruments for a sustainable operation of wastewater utilities in the Mediterranean region of Bosnia and Herzegovina, Sarajevo, October 2001;
- Pilot project proposal: Introduction of the sewage water charges for the protection of the Ionian coast of Albania as part of the Mediterranean, Tirana, November 2001;
- Pilot project proposal: Development of economic instruments regarding collection, transport, treatment and disposal of used oils and oily waters from ships in the Adriatic region/ pilot project for the Kvarner bay, Zagreb, November 2001;
- Pilot Project Proposal: Utilisation des instruments économiques au niveau du sous bassin versant côtier Algérois "Oued El Harrach", Alger, December 2001;
- Pilot Project Proposal: The use of economic instruments for the integrated coastal lake management in Egypt, a pilot project on lake Burullus, Cairo, December 2001;
- Pilot Project Proposal: Rehabilitation and restructuration of Nador industrial zone, Morocco, December 2001;
- Pilot Project Proposal: Combination of waste water treatment for a sugar factory and domestic waste waters of an urban centre used in agriculture, Morocco, October 2001;
- Pilot Project Proposal: Combating the land-based pollution in the coastal sea of the town of Hvar, Split, December 2001;
- Pilot Project Implementation Plans; and
- Workshop on SAP Pilot Projects Launching.

The implementation of the project segment on information exchange and public awareness raising started in 2002 and the following has been achieved:

- Brochure "Advantages of using economic instruments" was prepared and translated in several languages;
- Questionnaires for the new Web data base distributed and responses received; and
- Web site "Sustainability of SAP" was opened.

In the period 2000 - 2002 the biggest emphasis was placed on the implementation of the pilot projects because they would be the bases for proposing the programme for a long-term sustainability of SAP. Seven pilot projects on development and implementation of economic instruments were selected in 2001. The first results of the pilot projects' implementation will be presented during November/December 2002, in the form of Diagnostic Analysis. Each of the countries with the pilot project has organised or will

organise a training course on economic instruments where the pilot project will also be presented to the wider group of national stakeholders.

The first training course was held in October 2002, in Opatija, Croatia. The training course was attended by 40 participants from different Ministries, scientific institutions and public and private companies, as well as the stakeholders of the pilot projects. The training course was very successful in raising awareness on the issues the pilot project deals with, prompting the Ministry for the Protection of the Environment and Physical Planning to propose changes in the Law on protection of the environment. An eco-tourist charge, the economic instrument that is to be introduced in Hvar, has no legislative base at the moment. With the revision of the law, such instrument will be recommended for the local authorities in towns and cities where tourism creates environmental problems.

Another Croatian pilot project, dealing with used oils and oily waters from the ships, has for the time being no legislative base for the introduction of economic instrument. However, this project has raised attention to this problem, as well as to the European Union's directive to be soon in place, according to which each port should have the infrastructure for the acceptance and treatment of these waste materials. According to the same directive, each ship entering the European ports will have to pay a fee, without regard to the fact if the vessel is using this service or not. The application of this instrument is considered for the Rijeka port and for other Croatian and Mediterranean ports as well. It could be concluded that both Croatian pilot projects have caused generation of political will, and therefore it is very probable that one of them, if not both, will cause the change in legislation. Those involved in environmental protection are aware of the dimension of such a job.

On 5 November 2002, the presentation to the authorities has been held in Konjic for the pilot project of Bosnia and Herzegovina. The main issue of the Bosnia project is enforcement of the economic instruments that already exist. This is a frequent problem in most of the Mediterranean countries.

What results could be expected in the future?

The expected direct results of the project are manifold:

- Enhanced government capability to identify, develop and implement various types of economic instruments suitable for related country;
- Prepared National Action Plans for implementation of economic instruments in 12 GEF eligible Mediterranean countries; and
- Guidelines for development and application of economic instruments for combating the land-based pollution in the Mediterranean countries.

Other expected indirect results of this project are the following:

- Generation of the political will for change;
- Actual change in national legislation and regulation;
- Change in management practices;
- Improvement of environmental databases;
- Capacity building of national and local institutions;
- Training of government officials and non-government stakeholders;
- Public participation;
- Co-operation with and training of NGOs; and
- Networking.

It is important to recognise that introducing economic instruments is a long, complex and difficult task. Economic instrument can be applied only if based on existing legislation. It

is of crucial importance to have developed system of implementation, enforcement, collection, monitoring and evaluation of economic instruments. This means that an economic instrument could be applied only if there is legislative and institutional framework for its application. Unfortunately, this is not the case in many Mediterranean countries. That is why raising awareness on benefits of using economic instruments and capacity building for implementation of these instruments are of essential importance for combating land-based pollution of Mediterranean sea.

Also, it is important to keep in mind that earmarking of revenues raised through implementation of existing economic instruments is not the case in most of the Mediterranean countries. Most of the revenues go to the central budget. This means that even if economic instrument is implemented there is no guarantee that the revenues collected with this instrument will be used for environmental protection. This condition has been placed as pivotal in the framework of the pilot projects. However, there is no possibility to make this an obligation for the authorities. Still, it is believed that the authorities do recognise environmental problems, and that the revenues collected will be used in a proper way.

10. Other Activities related to SAP

Inspectors

The guidelines on environmental inspections are ready and have been already reviewed by a team of experts. Thereupon, they were sent to the MED POL National Coordinators to collect comments for incorporation into the text. The final draft will be presented to the MED POL Coordinators meeting in May 2003.

In order to better implement the above guidelines, these will be followed by a set of four reference guides related to Human Infrastructure, Sampling, General Issues and Management, which are ready and will be soon at the disposal of the Contracting Parties, with a view to supply more information.

After two expert's missions to Libya and Syria for discussing and collecting data on the environmental inspection systems, two plans for strengthening the national inspection systems have been drawn up respectively. These are under discussion with the national authorities, thereby identifying the most suitable activities.

Bathing Waters

As it was agreed during a consultation meeting on bathing waters last year, in order to harmonize the activity with other existing regulations, a meeting will be convened with the aim to prepare new guidelines on bathing waters as soon as the European Commission formulates its final proposal on the subject.

11. Updating the Transboundary Diagnostic Analysis(TDA)

The aim of the TDA is assess the major and the impacts of major sources of transboundary pollution in the Mediterranean together with an analysis of possible management issues to reduce theses impacts.

The process of updating the TDA started in 2001 with the selection and contracting of regional experts for the preparation of different chapters of the TDA. In this context, thirteen

experts and a team leader have been selected according to their experiences in the subject and contracted to update and prepare the following chapters:

- 1- The Mediterranean region
- 2- Sources of transboundary materials
 - 2-1- Rivers
 - 2-2- Ports
 - 2-3- Agriculture runoff
 - 2-4- Airborne deposition
 - 2-5- Industry
 - 2-6- Exploitation of sea bed
 - 2-7- Maritime transport
 - 2-8- Urban centers
 - 2-9- Mariculture
- 3- Assessment of the impacts of transboundary materials
 - 3-1- Living marine sources
 - 3-2- Critical habitats and sensitive areas
 - 3-3- Land use and tourism
 - 3-5- Health
- 4- Assessment of the state of management issues
 - 4-1- Environmental regulations
 - Barcelona Convention and its Protocols
 - Multilateral Environmental Agreements
 - Mediterranean Commission for Sustainable Development
 - Public participation
 - 4-2- Coastal zone management
- 5- Overall evaluation of the impacts
- 6- Future perspectives of development in the region and potential impacts on the pollution issues in the Mediterranean
- 7- The principle of shared and differentiated responsibilities for land-based pollution reduction in the Mediterranean
- 8- Issue/Impacts matrix – scoring exercise
- 9- Recommendations

The TDA report is in the editing phase by the team leader, and it is expected to be completed by December 2002. It will be send to the Contracting Parties for comments after a review of its content by regional experts.