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**MEDITERRANEAN ACTION PLAN**

3<sup>rd</sup> Review Meeting of MED POL - Phase III Monitoring Activities

Palermo (Sicily), Italy 12-15 December, 2005

**PRELIMINARY REVIEW OF MONITORING AND ASSESSMENT  
IN MED POL PHASE IV**



## *Introduction*

The purpose of this document is to stimulate a first discussion on issues that need to be examined and possibly revised in the framework of the future organization of MED POL Phase IV monitoring and assessment activities.

The outcomes of the Evaluation of MED POL Phase III, the need to formulate the operational aspects of MED POL Phase IV adopted by the 14<sup>th</sup> Meeting of the Contracting Parties held in Slovenia in November 2005, the first results and achievements of the implementation of the Strategic Action Programme (SAP) and other policy and scientific developments at the regional and international levels in fact oblige the Secretariat to make a thorough review of issues related to monitoring and assessment and integrate them in a new up-to-date context.

As a result, the new monitoring and assessment strategy indicated in MED POL Phase IV should be developed in the framework of the ecosystem approach to management of human activities and taking into full account the requirements of the Convention and the Protocols.

This document will not especially elaborate the implication of the application of the ecosystem approach nor the role of MED POL for monitoring and assessment within that context. Although it appears that MED POL may have a wider role, the actual operational details will be gradually developed during the coming biennium through a joint project with the European Commission which will include several meetings and consultations with Mediterranean authorities and experts. As explained in a document which was prepared (UNEP(DEC)/MED WG.264/Inf.3) the application of the ecosystem approach will be tested in the region, probably in the Adriatic region, and will include wide collaboration between MED POL and all relevant bodies and organizations. There will be therefore several opportunities to discuss the issue although the present meeting could certainly be an initial forum for first comments and remarks.

Considering their relevance of MED POL monitoring activities for policy and management purposes, their integration in the context of the requirements of the LBS Protocol and, for more operational aspects, in the context of the implementation of the SAP and the National Action Plans, has to be carefully reviewed and strategic and operational changes be made. In other words, the new activities that are going to be developed should also be able to directly respond to the monitoring needs of the LBS and the SAP.

Concerning the LBS Protocol, the key issues that should be considered for the appropriate planning of future monitoring and assessment activities are still contained in its Art. 8 and include:

- 1) the systematic assessment of levels of pollution of the Mediterranean coastal waters taking into account the sectors of activities and categories of substances listed in Annex I of the Protocol ; and
- 2) the evaluation of the effectiveness of action plans, programmes and measures implemented under the Protocol to eliminate pollution.

## *The assessment of levels of pollution*

The first issue (1) has been and will continue to be a basic element of MED POL. However, in the effort of making the activities more effective in the future, the difficulties encountered in their implementation (basically through national monitoring programmes) have to be carefully reviewed with the aim to find alternative solutions. As the evaluation of MED POL Phase III also highlighted, gaps were in fact encountered in the geographical coverage of the Mediterranean coastal waters. Gaps were also encountered in the coverage of the substances indicated in the LBS Protocol and the SAP. As a result, it is imperative to find adequate solutions for the future

and fill the gaps. Two are the activities proposed by the Secretariat to the Contracting Parties that were approved and that will be developed during the biennium.

a) The organization of sub-regional surveys to understand the contamination level of coastal waters of the Mediterranean with a wide range of parameters. This will also facilitate the identification of specially contaminated areas at the regional scale that would assist both the Secretariat and the countries to identify priority substances for the development of actions and management plans which, in relation to the future application of the ecosystem approach, might be different at different regions and scales. For this new activity, which requires cooperation and joint work with other similar regional initiatives, a tentative road map for its organization and implementation is presented in Annex I to this document.

b) The organization of more comprehensive national monitoring programmes in terms of geographical and parameters coverage with harmonized objectives and criteria and regular provision of data/reports to MED POL by all the countries, taking into consideration other relevant international and regional initiatives. A more adequate coverage of hot spots, a more meaningful coverage of parameters, a link to dumping sites, etc., would surely facilitate the preparation of regional periodical assessments of pollution levels and of eutrophication at the coastal waters (State of Marine Environment Reports) including the status and trends at the identified hot spots. Intense and country-tailored negotiations and the organization of capacity building would be required to 1) identify and possibly solve policy and/or institutional problems and 2) to develop/improve the capacity of laboratories to measure key contaminants in their coastal waters and in required matrices.

#### *The evaluation of effectiveness of action plans, measures and programmes*

In order to fulfill the requirements of the LBS Protocol in respect to issue (2) above, which represents the main meeting point between the monitoring activities and the SAP implementation, a complete monitoring system would be necessary including monitoring of inputs/estimation of loads, compliance with national /international regulations, temporal trends in contamination (or pollution) level at identified hot spots (bays, estuaries, coastal strips under the pressure of combined inputs, etc). Considering that some of the above mentioned activities have already been tackled (with different degrees of coverage and success) by both the SAP and the regular monitoring activities of Phase III, a strong coordination should be achieved and overlaps avoided. The scales of the monitoring system could be regional and national/local.

Concerning the regional scale, the sub-regional surveys mentioned earlier in this document may provide indirect information of the effectiveness of the measures taken at a regional level. However, this approach embeds two major difficulties. First of all, in order to respond to this purpose the surveys should be repeated periodically and the activity is obviously costly. Secondly, since the pollution reduction measures are basically the result of the reduction of inputs of certain substances from industrial discharges (and municipal discharges in some cases), even if through the surveys the reduction target appears as fully achieved, there is a high probability that the other anthropogenic pollution sources (rivers, inputs from diffuse sources) and/or natural sources affecting the coastal waters dominate in the area thus hiding the improvement made at the industrial/municipal effluent. As an alternative approach, the possibility to identify and use regionally-based indicators should be explored and tested in the region.

Concerning the national/local scale, a well designed temporal trend monitoring activity conducted at each hot spot site will serve to understand the effects of pollution reductions at that site. In order to achieve the goal at the national level, all major hot spots should be included in the monitoring network giving priority to the areas/sites where there is a management plan (action plan) for the back laying catchments area or for individual industrial/municipal

discharges. Depending on the monitoring matrix selected for the specific site, hot spot definition hence the identification of monitoring station(s) might change (as suggested in the revised sediment monitoring strategy). The regular revision of the list of national hot spots should be included within the process of monitoring and assessment at the national level.

More at the local scale, the first and most direct method to monitor the effectiveness of reduction measures is to systematically monitor the discharge and assess the compliance with the national regulations in force. This is an activity that is (or should be) carried out by the industries and municipalities themselves on a regular basis. Ideally, the data should be asked by the environment protection authorities who will avoid duplication of monitoring efforts and costs. In parallel (or alternatively), the authorities could also plan and conduct periodical surveys at the source before and after the reduction measures are taken.

As it was said earlier, in the context of the monitoring of the effectiveness of the pollution reduction measures taken, extensive work was also carried out in the framework of the SAP, which should now be considered in the planning of a new integrated monitoring system for MED POL Phase IV.

In this context, MED POL has in fact developed a reporting system in the framework of SAP that would indicate the level of compliance to the agreed targets having as reference basis the National Baseline Budget of emissions and releases (NBB) from point sources calculated for the year 2003. All countries have by now prepared their NBB and the data has been downloaded into a database. The reporting system is being tested and it would be integrated in the over all MAP Reporting System related to the Barcelona Convention and its Protocols. As a result, there is the need to re-consider the entire approach to compliance and possibly propose a new one. The Meeting may consider discussing the further development of the work carried out in the framework of the SAP as it could, with the appropriate adaptations, respond alone to the requirements of the LBS Protocol.

#### *Monitoring of rivers and diffuse sources*

Two additional sources of pollution into the marine environment should be adequately addressed in the future according to the LBS Protocol and the SAP: diffuse sources and rivers.

Monitoring of rivers has been discussed on several occasions in the framework of MED POL. The Secretariat believes that the issue, as it is dealt within the framework of MED POL Phase IV, is for the time being adequate. MED POL Phase IV in fact proposes to carry out mandatory monitoring of river estuaries only but, when the estuary appears to be a hot spot, it calls for the countries to carry out monitoring in the river itself to identify the specific pollution sources. In view of the preparation of the operational aspects of MED POL Phase IV, the Meeting may comment on this specific issue. During the biennium 2004-2005, regional and national capacity building programmes were successfully carried out on the issue of river monitoring to prepare the future implementation of this activity.

From an overall assessment of the work carried out in the region on the quantification of riverine inputs, it appeared that only few countries have established quantification programmes of the inputs of total materials (sediments). The issue should be reviewed and discussed in view of its inclusion in future monitoring activities and the important contribution that it provides to the implementation of the SAP targets.

As for diffuse sources, in spite of the enormous amounts of substances estimated to be discharged, e.g. Nitrogen, no comprehensive quantification programmes are being implemented in the region. The European Union Countries through the EURO HARP programme have tested

at a pilot phase the validity of nine models that could be used to estimate the inputs of nutrients from diffuse sources in the coastal areas. MED POL , with the cooperation of IOC, has also tested a general model for estimation based on the river basin approach.

As a result, the meeting may wish to discuss the issue and suggest how to tackle it in the framework of MED POL Phase IV.

## Annex I

### **Tentative Road Map for the organization of sub-regional surveys in Mediterranean coastal waters**

- 2005 Deployment / recovery of cages at NW Mediterranean within MYTILOS/leg 1  
Preliminary planning and preparation of proposal for MYTIMED  
Analysis of collected samples/ data evaluation
- 2006 Deployment / recovery of cages at SW Mediterranean within MYTILOS/leg 2  
Organization of MYTIMED for the NE Mediterranean including the Aegean Sea  
Preparation of proposals for Adriatic and SE Mediterranean and identification of donors  
Analysis of collected samples/ data evaluation
- 2007 Deployment / recovery of cages at NE Mediterranean within MYTIMED  
Organization of surveys for Adriatic Sea and SE Mediterranean  
Analysis of collected samples/ data evaluation
- 2008 Deployment / recovery of cages at Adriatic and SE Mediterranean  
Analysis of collected samples/ data evaluation
- 2009 Continuation to analysis/data evaluation
- 2010 Preparation of the Report on Contamination Status of Mediterranean Coastal waters