

Monitoring Strategies of Marine Pollution

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ABSTRACT

"Monitoring", in the context of the assessment and protection of the marine environment, has been defined as the repeated measurement of an activity or a contaminant or of its direct or indirect impact. In practical terms, monitoring can fall within the following three categories :

- monitoring for regulation purposes (control);
- monitoring of levels and trends;
- monitoring for scientific purposes.

The monitoring for scientific purposes is generally the main step for establishing monitoring of levels and trends which in turn provides useful information for defining the parameters of control (monitoring for regulation purposes).

In order to define the monitoring programmes of the marine environment, the following operational objectives, which have a high degree of universality, must be taken into consideration:

- Protection of human health;
- Protection of marine life and its environment;
- Assessment of levels and trends.

Monitoring activities concerning the quality of the marine environment were developed around the world as the scientific knowledge of the problems which had given rise to such activities was acquired. In fact sometimes monitoring activities preceded such knowledge. It is thus legitimate to review the strategies, underlying monitoring programmes. However, such a review and possible revision presupposes a critical look at the results obtained in pursuing the objectives set.

In this context, the author has carried out an in-depth assessment of the monitoring component of the "Long term monitoring and research programme on pollution in the Mediterranean Sea" (MED POL Phase II) of the United Nations Environment Programme (UNEP).

The main recommendations based on this assessment are the following:

- Monitoring objectives must be reformulated in a more coherent way in order to make planning more comprehensible and effective;
- It is necessary to reaffirm the crucial role of the monitoring of pollution sources;
- The first essential phase is to establish beyond the shadow of a doubt the baseline contamination levels, before establishing permanent programmes for certain areas of special concern;
- A biological effects monitoring programme must be devised and implemented within the MED POL framework;
- The quality assurance programme for results must not only be continued but reinforced as well;
- At the same time, all research efforts which might add to the general knowledge of the marine environment must be encouraged in order to promote the optimization of monitoring programmes.