



## 1. INTRODUCTION

Although the environment problems of the oceans have a global dimension, a regional approach to solving them was adopted in the United Nations Conference on the Human Environment (Stockholm, 1972) and in subsequent Governing Council of UNEP decisions. This approach focuses on specific problems of high priority to the States of a given region, thereby responding more readily to the needs of Governments and helping to mobilize more fully their own national resources. It was considered that undertaking activities of common interest to coastal States on a regional basis should, in due time, provide the basis for dealing effectively with the environmental problems of the oceans as a whole.

The Mediterranean region was selected by UNEP as a high priority area and the Mediterranean Action Plan formally adopted by the Governments of the region in Barcelona in February 1975 formed the prototype for similar programmes in other regions, each tailored to specific needs in scope and implementation.

The Mediterranean Action Plan aims at protecting the interests of the governments of the region through the identification and solution of common environmental problems while respecting, and wherever so required, assisting in, the particular requirements of each individual country. From the very beginning, the Mediterranean Governments have actively participated in the formulation and development of the programme at both policy and technical levels, and since 1979 through regular assessed contributions. Periodic intergovernmental meetings are convened to review progress effected in the implementation of agreed workplans, and to introduce appropriate adjustments in tone with the needs of Governments.

The general strategy for pollution prevention and control in the Mediterranean region has been, and still is, firstly to generate a sense of awareness of both common and specific problems through their identification and acceptance in terms of cause-effect relationship, and secondly, to assist in developing the mechanism for their solution or alleviation.

For action at joint regional level Mediterranean countries and EC have adopted in 1976 and ratified the Convention for the protection of the Mediterranean Sea against pollution (Barcelona Convention), which provides the framework for legal agreements covering specific pollution prevention and control aspects. The Barcelona Convention entered into force in 1978 and at present 19 Mediterranean countries and EC are Contracting Parties to the Convention.

## 2. PROTOCOL FOR THE PROTECTION OF THE MEDITERRANEAN AGAINST POLLUTION FROM LAND-BASED SOURCES (LBS PROTOCOL)

The Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution (1976 Barcelona Convention) undertook the obligation to take all appropriate measures to prevent, abate and combat pollution of the Mediterranean Sea area caused by discharges from rivers, coastal establishments or outfalls, or emanating from any other land-based sources within their territories (Article 8).

In order to implement the above obligation and following a series of intergovernmental consultations and expert meetings between 1977 and 1979 the LBS Protocol was adopted in 1980 and came into force in 1983. At present 20 Mediterranean countries and EC are Contracting Parties to LBS Protocol. Annex IV to this Protocol which defines the conditions of application of this Protocol to the pollution from land-based sources transported by the atmosphere was adopted by the Contracting Parties in 1991.

The LBS Protocol lays down (Article 5) that the Contracting Parties shall eliminate pollution of the Protocol area from land-based sources by substances listed in Annex I ("Black list of substances") to the Protocol and that to this end, they shall elaborate and implement, jointly or individually, as appropriate, the necessary programmes and measures, which shall include, in particular, common emission standards and standards of use.

The Protocol also lays down (Article 6) that the Contracting Parties shall strictly limit pollution from land-based sources in the Protocol area by substances or sources listed in Annex II ("Grey list of substances") to the Protocol and that to this end, they shall elaborate and implement, jointly or individually, as appropriate, suitable programmes and measures.

In order to develop a concrete programme for the implementation of the LBS Protocol, the Meeting of Experts of the Technical Implementation of the Protocol was held in 1985. This meeting adopted general guidelines for the implementation of the Protocol as well as specific guidelines for the implementation of articles 5 and 6 of the Protocol. These guidelines are presented below.

#### General Guidelines for the Development of Programmes and Measures for the Implementation of the Protocol

The following set of general guidelines for the development of programmes and measures for the implementation of the Protocol was adopted by the Contracting Parties in 1985:

- (a) the existing level of pollution of the Mediterranean Sea and the severity of its effects on the Mediterranean ecosystem, human health and amenities should be used as indications guiding the timetable for the formulation of measures;
- (b) the Protocol should be implemented progressively, through a step-by-step process, according to a long-term workplan and timetable agreed by the Contracting Parties;
- (c) the best available information on scientific and technical matters should be used in formulating proposals for measures to be taken under the Protocol;
- (d) the ecological, geographical and physical characteristics of the Mediterranean Sea and its coastal zone, including the absorptive capacity of the marine environment, should be taken into account in formulating the measures;
- (e) the implementation of the Protocol should be linked with and reinforced by the other components of the Action Plan, MED POL in particular;
- (f) the programmes and measures for the implementation of the Protocol shall include common guidelines, standards or criteria, wherever appropriate;
- (g) the measures adopted individually or jointly under the Protocol should take into account the economic capacity of the Contracting Parties;
- (h) assistance should be made available to developing countries in the implementation of the Protocol. Such assistance should include exchange of information in the fields of services and technology, training in pollution control methodologies as well as acquisition of appropriate pollution control technologies on advantageous terms; and

- (i) Annex IV to the Protocol concerning pollution from land-based sources transported by the atmosphere should be prepared in accordance with the provision of Article 4 of the Protocol.

Guidelines for the Elimination of Pollution from Land-Based Sources, in Terms of Article 5, by Substances Listed in Annex I (Black List) to the Protocol

In addition to the general guidelines, the following guidelines were adopted by the Contracting Parties for the development of programmes and measures for the elimination of pollution from land-based sources in terms of article 5 by substances listed in Annex I (Black List) to the Protocol:

- (a) a survey on land-based sources and amounts of pollutants reaching the Mediterranean Sea should be prepared as an updating of the MED POL X exercise;
- (b) for each of the group of substances listed in Annex I to the Protocol, an assessment of the state of pollution in the Mediterranean Sea should be prepared. Such assessments would include, *inter alia*:
- sources of pollution in the Mediterranean Sea;
  - levels of pollution;
  - effects of pollution; and
  - present legal, administrative and technical measures at national and international level;
- (c) such assessments should include all available relevant information from the Contracting Parties (Article 8 of the Protocol), from other components of MAP, in particular MED POL, as well as from other sources (e.g. Paris/Oslo Commission, Baltic Convention, etc.);
- (d) preparatory work should take already existing material fully into account. This would avoid (a) overlap and duplication of work, which would be uneconomic and time-consuming, and (b) the production of sets of standards and criteria which could be at a variance with already-existing norms and, as a result, place a number of countries in a difficult position regarding compliance. Eventually, a certain degree of variance with already existing criteria might very well turn out to be necessary, but this would have to be fully justified; and
- (e) on the basis of such assessments, measures would be proposed which should take into account the provisions of Article 7 of the Protocol.

Guidelines for Limiting Pollution from Land-Based Sources, in Terms of Article 6, by Substances or Sources Listed in Annex II (Grey List) to the Protocol

In addition to the general guidelines, the following guidelines were adopted by the Contracting Parties for the development of programmes and measures for the elimination of pollution from land-based sources in terms of article 6 by substances listed in Annex II (Grey List) to the Protocol:

- (a) a survey on land-based sources and amounts of pollutants reaching the Mediterranean Sea should be prepared as an updating of the MED POL X exercise;

- (b) for each of the group of substances listed in Annex II to the Protocol, an assessment of the state of pollution in the Mediterranean Sea should be prepared. Such assessments would include, *inter alia*:
- sources of pollution in the Mediterranean Sea;
  - levels of pollution;
  - effects of pollution; and
  - present legal, administrative and technical measures at national and international level;
- (c) such assessments should include all available relevant information from the Contracting Parties (Article 8 of the Protocol), from other components of MAP, in particular MED POL, as well as from other sources (e.g. Paris/Oslo Commission, Baltic Convention, etc.);
- (d) on the basis of such assessments, measures would be proposed which should take into account the provisions of Article 7 of the Protocol;
- (e) the proposed measures should also take into account the provisions of Annex III to the Protocol; and
- (f) guidelines for the issue of authorization for discharge should be prepared, based on Annex III to the Protocol as well as on the said assessments and proposed measures.

### 3. PROGRAMME OF ACTIVITIES (1986-1995) FOR THE IMPLEMENTATION OF THE LBS PROTOCOL

#### 3.1. Calendar of activities

The Meeting of Experts of the Technical Implementation of the LBS Protocol adopted the Programme Calendar (1986-1995) of activities for the progressive implementation of articles 5, 6 and 7 of the Protocol. The Programme Calendar was approved by the Fifth Ordinary Meeting of the Contracting Parties (1987) and is presented below:

#### Programme Calendar (1986-1995) of Activities for the Implementation of the Land-Based Sources Protocol

Objective (LBS Protocol)	Specific Target	Target Year	Implementation
<u>Protocol on LBS</u>	Progressive implementation of the LBS Protocol, elaboration and implementation of suitable programmes and measures with the Contracting Parties with a view to the full implementation in the target year	1995	MAP/CP*
	1. Establishment of a mechanism for regular consultation with industry	1990	MAP/UNIDO/CP

Objective (LBS Protocol)	Specific Target	Target Year	Implementation
	2. Ratification of LBS Protocol by all Contracting Parties	1988	MAP/CP
Protocol and Annexes	3. Completion and Revision of the Glossary of terms of LBS Protocol	1986	MAP/WHO/CP
Annex I	4. Compilation of the list of substances falling within each of the Groups of Annex I to the Protocol	1986	MAP/IRPTC/CP
Annex II	5. Compilation of the list of substances falling within each of the Groups in Annex II to the Protocol	1986	MAP/IRPTC/CP
Article 5; Annex I	6. Assessment of the state of pollution in the Mediterranean Sea by used lubricating oils and proposed measures	1986	MAP/UNIDO/CP
Articles 5 and 6; Annex I and II	7. Survey of land-based sources and amounts of pollutants reaching the Mediterranean Sea	1986	MAP/WHO/CP
Article 6; Annex II	8. Assessment of the state of microbial pollution in the Mediterranean Sea and proposed measures for shellfish and shellfish growing waters	1986	MAP/WHO/CP
Article 7, para. 1(a)	9. Evaluation of benefits and limitations of submarine pipelines, whether or not associated with treatment plants, for discharge of liquid effluents	1986	MAP/WHO/CP
Article 13	10. Formulation of procedure for collection and submission of information from the Parties on measures taken, results achieved and difficulties encountered in application of the Protocol	1986	MAP/WHO/CP
Article 6	11. Draft guidelines for issue of authorizations for discharge of liquid wastes into the Mediterranean	1987	MAP/WHO/CP
Article 5; Annex I	12. Assessment of the state of pollution in the Mediterranean Sea by cadmium and cadmium compounds and proposed measures	1987	MAP/FAO/CP

Objective (LBS Protocol)		Specific Target	Target Year	Implementation
Article 5; Annex I	13.	Assessment of the state of pollution in the Mediterranean Sea by organohalogen compounds and proposed measures	1987	MAP/FAO/CP
Article 5; Annex I	14.	Assessment of the state of pollution in the Mediterranean Sea by mercury and mercury compounds and proposed measures	1987	MAP/FAO/CP
Article 7, para. 1(a)	15.	Comparative review of various types of treatment existing in Mediterranean area for wastewaters, with a view to their re-use or discharge into the sea	1987	MAP/WHO/CP
Article 7, para. 1(a)	16.	Compilation of detailed information on existing legislative measures regarding discharge of wastes through submarine outfalls in Mediterranean countries together with similar information from selected countries outside the region, to enable comparison and evaluation of applicability	1987	MAP/WHO/CP
Article 7, para. 1(b)	17.	Identification and categorization of effluents requiring special and/or separate treatment and listing of such treatment and/or other requirements normally associated with or advisable for such effluents	1987	MAP/WHO/CP
Article 5; Annex I	18.	Assessment of the state of pollution in the Mediterranean Sea by persistent synthetic materials which may float, sink or remain in suspension, and proposed measures	1988	MAP/UNIDO/CP
Article 5; Annex I	19.	Assessment of the state of pollution in the Mediterranean Sea by organophosphorus compounds and proposed measures	1988	MAP/FAO/CP
Article 5; Annex I	20.	Assessment of the state of pollution in the Mediterranean Sea by organotin compounds and proposed measures	1988	MAP/FAO/CP
Annexes I, II	21.	Completion and revision of list of substances included in groups contained in annexes I and II to the Protocol	1988	MAP/IRPTC/FAO/ CP
Article 7, para. 1(a)	22.	Evaluation of <i>in situ</i> investigations on selected submarine outfalls to determine their technical efficiency and cost-effectiveness	1988	MAP/WHO/CP

Objective (LBS Protocol)	Specific Target	Target Year	Implementation
Article 7, para. 1(d)	23. Survey of situation currently existing with regard to products, installations and other processes within the region actually or potentially causing significant pollution of marine environment	1988	MAP/WHO/UNIDO/CP
Article 4	24. Preparation of draft Annex IV to the Protocol concerning pollution from land-based sources transported by the atmosphere	1988	MAP/WMO/CP
Article 5; Annex I	25. Assessment of the state of pollution in the Mediterranean Sea by radioactive substances and proposed measures	1988	MAP/IAEA/CP
Article 5; Annex I	26. Assessment of the state of pollution in the Mediterranean Sea by substances proven carcinogenic, teratogenic or mutagenic and proposed measures	1989	MAP/WHO/CP
Article 6; Annex II	27. Assessment of the state of pollution in the Mediterranean Sea by pathogenic microorganisms and proposed measures	1989	MAP/WHO/CP
Article 7, para. 1(d)	28. Compilation and evaluation of already existing international experience of use of alternative products and processes. In this regard, experiences on recycling and re-use of solid and liquid wastes will be taken into account	1989	MAP/WHO/UNIDO/CP
Article 6; Annex II	29. Assessment of the state of pollution by crude oils and hydrocarbons of any origin and proposed measures	1990	MAP/IOC/IMO/CP
Article 6, Annex II	30. Assessment of the state of pollution in the Mediterranean Sea by zinc, copper and lead with proposed measures	1990	MAP/FAO/CP
Article 6; Annex II	31. Assessment of the state of pollution in the Mediterranean Sea by nickel, chromium, selenium and arsenic with proposed measures	1990	MAP/FAO/CP
Article 7, para. 1(d)	32. Identification and categorization of alternative products, installations and other processes capable of reducing pollution of Mediterranean marine environment	1990	MAP/WHO/UNIDO/CP



Objective (LBS Protocol)	Specific Target	Target Year	Implementation
Article 6; Annex II	33. Assessment of the state of pollution in the Mediterranean Sea by inorganic compounds of phosphorus and elemental phosphorus and proposed measures	1991	MAP/IOC/CP
Article 6, Annex II	34. Assessment of the state of pollution in the Mediterranean Sea by non-biodegradable detergents and other surface-active substances and proposed measures	1991	MAP/FAO/CP
Article 6; Annex II	35. Assessment of the state of pollution in the Mediterranean Sea by thermal discharges and proposed measures	1991	MAP/FAO/CP
Article 7, para. 1(a)	36. Common guidelines for determination of length, depth and position of pipelines for coastal outfalls, taking into account in particular, methods used for pre-treatment of effluents	1991	MAP/WHO/UNIDO/ CP
Article 7, para. 1(b)	37. Compilation of a Mediterranean inventory of effluents requiring special and/or separate treatment including type, category, amount, locality and existing treatment, if any, together with, wherever possible, those local characteristics influencing the effects of such effluents on marine environment and feasibility of separate and/or special treatment	1991	MAP/WHO/UNIDO/ CP
Article 7, para. 1(b)	38. Formulation of draft common guidelines, standards and criteria for special requirements for effluents necessitating separate treatment	1991	MAP/WHO/UNIDO/ CP
Article 7, para. 1(d)	39. Survey on yield and cost/benefit of application of alternative products and processes	1991	MAP/WHO/UNIDO/ CP
Article 6; Annex II	40. Assessment of the state of pollution in the Mediterranean Sea by acid or alkaline compounds of such composition and in such quantity that they may impair quality of sea-water and proposed measures	1992	MAP/IOC/CP

Objective (LBS Protocol)	Specific Target	Target Year	Implementation
Article 6; Annex II	41. Assessment of the state of pollution in the Mediterranean Sea by substances which have, directly or indirectly, an adverse effect on oxygen content of marine environment, especially those which may cause <i>eutrophication and proposed measures</i>	1992	MAP/IOC/CP
Article 6; Annex II	42. Assessment of the state of pollution in the Mediterranean Sea by barium, uranium and cobalt with proposed measures	1992	MAP/FAO/CP
Article 6; Annex II	43. Assessment of the state of pollution in the Mediterranean Sea by cyanides and fluorides and proposed measures	1993	MAP/WHO/CP
Article 6; Annex II	44. Assessment of the state of pollution in the Mediterranean Sea by substances which, though of a non-toxic nature, may become harmful to marine environment or may interfere with any legitimate use of the sea owing to quantities in which they are discharged and proposed measures	1993	MAP/IOC/CP
Article 6; Annex II	45. Assessment of the state of pollution in the Mediterranean Sea by organosilicon compounds and substances which may form such compounds in marine environment, excluding those which are biologically harmless or are rapidly converted into biologically harmless substances and proposed measures	1993	MAP/FAO/CP
Article 6; Annex II	46. Assessment of the state of pollution in the Mediterranean Sea by antimony, tin and vanadium with proposed measures	1994	MAP/FAO/CP
Article 6; Annex II	47. Assessment of the state of pollution in the Mediterranean Sea by substances which have a deleterious effect on the taste and/or smell of products for human consumption derived from aquatic environment, and compounds liable to give rise to such substances in marine environment and proposed measures	1994	MAP/FAO/CP
Article 6; Annex II	48. Assessment of the state of pollution in the Mediterranean Sea by biocides and their derivatives not covered in Annex I and proposed measures	1994	MAP/FAO/CP

Objective (LBS Protocol)		Specific Target	Target Year	Implementation
Article 6; Annex II	49.	Assessment of the state of pollution in the Mediterranean Sea by titanium, boron and silver and proposed measures	1995	MAP/FAO/CP
Article 6; Annex II	50.	Assessment of the state of pollution in the Mediterranean Sea by molybdenum, beryllium, thallium and tellurium with proposed measures	1995	MAP/FAO/CP

\*CP = Contracting Parties

### 3.2. Genoa Declaration

The Contracting Parties to the Barcelona Convention adopted in 1985 the Genoa Declaration committing them to ten targets to be achieved as a matter of priority during the second decade of the Mediterranean Action Plan (1986-1995). The targets specifically relevant in the context of the LBS Protocol are:

- (a) Establishment of reception facilities for dirty ballast waters and other oily residues received from tankers and ships in ports of the Mediterranean;
- (b) Establishment as a matter of policy of sewage treatment plants in all cities around the Mediterranean with more than 100,000 inhabitants and appropriate outfalls and/or appropriate treatment plants for all towns with more than 10,000 inhabitants;
- (c) Applying environmental impact assessment as an important tool to ensure proper development activities;
- (f) Concrete measures to achieve substantial reduction in industrial pollution and disposal of solid waste; and
- (j) Substantial reduction in air pollution which adversely affects coastal areas and the marine environment with the potential danger of acid rains.

### 4. COMMON MEASURES FOR CONTROL OF POLLUTION

As stipulated in articles 5 and 6 of the LBS Protocol, the Contracting Parties shall elaborate necessary measures in order to implement these articles. The calendar of activities which is presented in Chapter 3 of this document envisages that by 1995 common measures will be adopted for all substances listed in Annexes I and II to the LBS Protocol.

The calendar envisages that a detailed assessment be prepared for each of the pollutant or groups of pollutants listed in the annexes of the protocol, accompanied by concrete proposals for measures which may be needed for their control.

As of the end of 1993 the Contracting Parties adopted thirteen common measures which are presented below. The work on the preparation of other common measures is continuing.

Common Measures for the Control of Land-Based Sources of Pollution in the Mediterranean

1. Interim environmental quality criteria for bathing waters (1985) (Article 7.1(c))
2. Interim environmental quality criteria for mercury (1985) (Article 7.1(c))
3. Measures to prevent mercury pollution (1987) (item 4 of Annex I)
4. Environmental quality criteria for shellfish waters (1987) (Article 7.1(c))
5. Measures for control of pollution by used lubricating oils (1989) (item 6 of Annex I)
6. Measures for control of pollution by cadmium and cadmium compounds (1989) (item 5 of Annex I)
7. Measures for control of pollution by organotin compounds (1989) (item 3 of Annex I)
8. Measures for control of pollution by organohalogen compounds (1989) (item 1 of Annex I)
9. Measures for control of pollution by organophosphorus compounds (1991) (item 2 of Annex I)
10. Measures for control of pollution by persistent synthetic materials (1991) (item 7 of Annex I)
11. Measures for control of radioactive pollution (1991) (item 9 of Annex I)
12. Measures for control of pollution by pathogenic microorganisms (1991) (item 7 of Annex II)
13. Measures for control of pollution by carcinogenic, teratogenic and mutagenic substances (1993) (item 8 of Annex I)

Work on preparation of other common measures for the control of pollution is continuing for the items listed above.

**5. COMMON GUIDELINES**

The LBS Protocol lays down (Article 7) that the Contracting Parties shall progressively formulate and adopt, in cooperating with competent international organisations, common guidelines and, as appropriate, standards or criteria dealing in particular with:

- (a) the length, depth and position of pipelines for coastal outfalls, taking into account, in particular, the methods used for pretreatment of effluents;
- (b) special requirements for effluents necessitating separate treatment;

- (c) the quality of sea-water used for specific purposes that is necessary for the protection of human health, living resources and ecosystems;
- (d) the control and progressive replacement of products, installations and industrial and other processes causing significant pollution of the marine environment; and
- (e) specific requirements concerning the quantities of the substances listed in annexes I and II discharged, their concentration in effluents and methods of discharging them.

The following of the above mentioned activities have been implemented:

- (a) guidelines for submarine outfalls for Mediterranean small- to medium-sized communities were prepared;
- (b) special requirements for effluents necessitating separate treatments
  - guidelines for treatment and disposal of effluents containing substances listed in Annexes I and II to the LBS Protocol were prepared;
- (c) quality of water used for specific purposes
  - covered by common measures for bathing waters and shellfish waters;
- (d) progressive replacement of products
  - the work on these guidelines was suspended; and
- (e) specific requirements for Annex I and II substances
  - covered by common measures specifying emission standards.

## **6. OVERVIEW OF THE ACHIEVEMENTS AND SHORTCOMINGS IN THE IMPLEMENTATION OF THE LBS PROTOCOL IN THE MEDITERRANEAN**

In this section the achievements and shortcomings in the implementation of the LBS Protocol in the Mediterranean in the twelve years since its entrance into force will be reviewed.

### **6.1. Achievements**

The following results can be considered as achievements in the implementation of the LBS Protocol:

- detailed calendar of activities to be implemented in the period from 1986 to 1995 was adopted in 1985 (see section 3.1. of this document);
- specific targets relevant to control of pollution from land-based sources to be achieved by 1995 were defined in the Genoa Declaration (see section 3.2. of this document);

- detailed assessments of the state of pollution in the Mediterranean Sea by substances listed in Annexes I and II of the Protocol were prepared for 17 categories of substances;
- common measures for the control of pollution in the Mediterranean Sea for 13 categories of substances from the Annexes I and II of the LBS Protocol were adopted by the Contracting Parties (see section 4 of this document);
- common technical guidelines, as required by article 7 of the Protocol were prepared (see section 5 of this document);
- a new annex of the Protocol (Annex IV) dealing with the pollution from land-based sources transported by the atmosphere was adopted in 1991;
- a new survey of the land-based sources of pollution is under way and information was so far received from 7 countries;
- marine pollution monitoring and research programme (MED POL) carried out in the framework of MAP is gradually refocusing on problems of direct relevance to the control of pollution from land-based sources;
- significant number of Mediterranean scientists and technicians were trained in the analytical techniques for the measurements of marine pollution; and
- a large number of scientific projects did present at scientific meetings their results regarding the measurements of the land-based sources of pollution and their effects.

## 6.2. Shortcomings

Despite the above mentioned achievements, results in the implementation of the Protocol are modest and the main points of concern with the slow progress in the implementation are given below:

- *although the precise information is not available there are strong indications that the adopted measures for the control of land-based sources of pollution were not systematically converted into national legislation;*
- *after five years since launching the revised survey of the land-based sources of pollution in the Mediterranean, less than half of the Contracting Parties submitted the required information;*
- *although no precise information is available there are strong indications that the targets relevant to the control of the land-based sources of pollution, set in the Genoa Declaration, are far from being achieved;*
- *monitoring of land-based sources of pollution were established in the framework of National MED POL Monitoring Programmes only in several Contracting Parties; and*
- *although precise information is not available there are strong indications that in number of developing Mediterranean countries the national infrastructure for the implementation and enforcement of the control of land-based sources of pollution is not adequate.*

## 7. PROGRAMME OF ACTION FOR THE CONTROL OF LBS OF POLLUTION IN THE MEDITERRANEAN

This section of the document contains general principles of the programme of action and proposals for concrete actions.

### 7.1. General Principles

The following general principles are proposed:

- integrated coastal zone and watershed management, based on sound planning and policies for management of the coastal environment and its resources, is the most effective general framework within which solutions for the control of pollution from land-based sources and activities in coastal areas should be sought;
- the application of the precautionary principle requiring that in case of uncertainty more restrictive technical and managerial measures should be applied, should be mandatory;
- an anticipatory rather than a reactive approach is necessary to protect the marine environment from pollution and activities in coastal areas. Clean production technologies and the minimization of wastes is the main avenue to be followed;
- no activity or project which may affect the quality of the environment should be undertaken without taking into account its likely environmental impact, related social and economic costs and benefits, and long-term effects. Therefore, environmental impact assessment (EIA) should be made mandatory for all projects, activities and programmes which may have significant environmental implications;
- environmental impact assessment with predictive capabilities and the application of the precautionary principle are not the only tools to be used in environmental planning and management. Among the other, equally important tools, environmental accounting, cost-benefit analysis, comparative analysis of alternative development options, risk assessment and management and contingency planning should be mentioned;
- the costs for maintenance of a clean environment should be primarily born, in the form of user fees, by those who benefit in any way from its use. At present in many instances these fees are merely symbolic and do not reflect the real costs involved;
- specific taxes collected in many Mediterranean countries from the tourists through their hotel and restaurant bills, as well as the nautical tax collected from pleasure boats, are in fact a sort of user fee. Ostensibly they are meant to be used, at least partly, for the maintenance of the environmental quality but most frequent only a very small fraction of the collected tax is used for that purpose; and
- pricing policies and practices, if properly applied, are an important regulatory instrument contributing to the protection of the marine environment. By subsidising the price of goods and commodities (e.g. fresh water, fertilizers, pesticides) which ultimately appear as, or lead to, increased pollution, the users are not stimulated to refrain from their excessive use; and

## 7.2. Concrete Actions

### 7.2.1 At the national level

In the framework of National Environment Action Plans, and at all events, the governments should formulate and approve action plans to prevent and combat pollution from land-based sources. Such plans should include:

- (a) the setting up or the strengthening of a public administration specialised in the prevention and fight against pollution and the provision of adequate funds for its funding;
- (b) the creation or the strengthening of bodies of environmental inspectors in possession of specific training and administrative authority;
- (c) the establishment or the strengthening of a system for issuing permits related to polluting activities or establishments;
- (d) the setting up or the strengthening of a system of administrative and/or penal sanctions for the application of the legislation related to pollution;
- (e) the creation or the strengthening of economic instruments deriving from the "pollution pays" principle;
- (f) a calendar for the full implementation of the common measures against pollution adopted by the Contracting Parties as well as the Genoa Declaration;
- (g) the setting up of an information system on land-based sources of pollution; and
- (h) provision for mandatory country reporting on the implementation of national action plans, including the monitoring of compliance.

### 7.2.2 At the regional level

The Contracting Parties should jointly formulate and adopt an action plan for the reduction of the pollution from land-based sources which will include quantitative objectives and a calendar of implementation.

In order to meet the regional and national objectives of reduction of the pollution from land-based sources, it is essential that the multilateral and bilateral financing sources operating in the region for the protection of the environment allocate greater funds. That will assume an improved cooperation in particular between MAP, the METAP Programme and the European Union.