



United Nations
Environment
Programme



UNEP(OCA)/MED WG.32/2
6 November 1991

Original: ENGLISH

MEDITERRANEAN ACTION PLAN

Ad hoc Consultation on Land-based
Sources of Pollution

Athens, 5-6 November 1991

**REPORT OF THE
AD HOC CONSULTATION ON LAND-BASED SOURCES OF POLLUTION**

INTRODUCTION

1. The sixteenth session of the Governing Council of the United Nations Environment Programme (1991), in decision 16/26 A on "Marine Pollution from land-based sources" (Annex I), requested the Executive Director *to continue the preparation of elements for draft strategy options and actions to reduce the degradation of the marine environment from land-based activities*. The decision also calls on the Executive Director *to convene a meeting of government-designated experts to formulate a draft strategy, including a targeted and costed programme of action for reduction of the degradation of the marine environment from land-based sources of pollution and activities in coastal areas, and to complete a targeted and costed action programme for the Mediterranean as an input to the strategy, and as an example for the preparation of an international study*.

2. A document (UNEP(OCA)/WG.12/3)* outlining the strategy options and actions was prepared by the secretariat (Oceans and Coastal Areas Programme Activity Centre - OCA/PAC) for the meeting of government-designated experts, planned to be convened by the Executive Director in Nairobi, 9-13 December 1991. The document includes a preliminary estimate of the costs associated with the protection of the Mediterranean Sea against pollution from land-based sources and activities in coastal areas.

3. The draft of the document was reviewed by an informal consultation of technical and legal experts (Nairobi, 30 September-3 October 1991), who recommended the preparation of specific detailed case studies on the costs and benefits from the reduction of the degradation of the marine environment, as a supplement to the preliminary estimate of the costs associated with the protection of the Mediterranean Sea.

4. In consultation between OCA/PAC, the Co-ordinating Unit for the Mediterranean Action Plan (MEDU) and the relevant national authorities, and taking into account the ongoing integrated coastal zone management pilot projects carried out in the framework of the Mediterranean Action Plan, the Bay of Izmir and the Island of Rhodes were selected by the secretariat as the sites of the case studies.

5. The present consultation is convened by MEDU to launch the preparation of the two case studies which would have to be ready for presentation at the meeting of government-designated experts in December 1991.

6. The participants of the consultation are listed in Annex II.

Agenda item 1: Opening of the meeting

7. The consultation was opened at 9.00 on 5 November 1991 in the Co-ordinating Unit for the Mediterranean Action Plan in Athens, by Mr Salvino Busuttil, Co-ordinator of the Mediterranean Action Plan, who welcomed the participants on behalf of the Executive Director.

Agenda item 2: Organization of work

8. Mr Ljubomir Jeftic, Senior Marine Scientist of the Co-ordinating Unit for the Mediterranean Action Plan, was proposed to chair the consultation. Mr Stjepan Keckes, consultant of UNEP for the preparation of the strategy options for the protection of the marine environment from land-based sources of pollution and activities in coastal areas, was proposed to act as the rapporteur of the consultation.

* provided, as reference document, to the consultation's participants

9. The agenda of the consultation was adopted as proposed by the secretariat (Annex III).
10. The consultation was convened in plenary sessions and in English only.

Agenda item 3: Scope and objective

11. Mr Ljubomir Jeftic highlighted the events leading to the present consultation (see paragraphs 1-5) and briefly reviewed the Mediterranean Action Plan emphasizing activities of special relevance to the subject of the consultation, such as the integrated coastal zone management pilot projects, and the calendar for the implementation of the protocol for the protection of the Mediterranean Sea against pollution from land-based sources.

Agenda item 4: Strategy for the control of marine pollution from Land-based sources

12. Mr Stjepan Keckes reviewed the approach to a global strategy for the control of marine pollution from land-based sources, as it appears in document UNEP(OCA)/WG. 12/3, with special reference to the preliminary estimate of the costs associated with the protection of the Mediterranean Sea.

Agenda item 5: Background information on the case studies

13. Mr Ljubomir Jeftic recalled that within the Coastal Areas Management Programme of the Mediterranean Action Plan, in 1990 agreements were signed between UNEP and the Governments of Greece and Turkey for pilot projects covering the Island of Rhodes and the Bay of Izmir, respectively. According to these agreements in the geographic areas of the pilot projects an attempt is made to apply and implement, in an integrated and cross sectorial way, the various provisions of the Barcelona Convention and its protocols, and of the decisions of the Contracting Parties to the Convention relevant to the Mediterranean Action Plan.

14. The first results of the pilot projects are already available and should be used as an input into the case studies discussed at the present consultation.

15. A selection of documents and information relevant to the case studies was brought to the attention of the consultation's participants, and copies of the relevant documents were made available to the consultants charged with the preparation of the studies.

Agenda item 6: Elements for the preparation of case studies

16. As possible elements of the case studies, the following were proposed by Mr Stjepan Keckes:

- (a) a general description of the study area, providing basic information on the status of the natural resources of the area, demographic trends, land- and sea-use practices, economic development indicators, etc.;
- (b) an analysis of land-based sources of pollution and activities in coastal areas contributing to the degradation of the marine and coastal terrestrial environment, including:
 - an inventory of coastal point- and non-point-sources and activities;
 - an estimate of the type and amount of pollutants reaching the environment from coastal land-based sources and activities either through direct discharges, or indirectly through atmospheric or riverine transports;

- an estimate of the ecological and human health related impact of the sources and activities;
- (c) an analysis of the actual and potential economic impact of pollution from land-based sources and activities in coastal areas, expressed in monetary terms; indirect impacts due to loss, depletion or depreciation of natural resources or their quality, or due to effect on human health should also be accounted for;
- (d) an analysis of the costs and associated benefits, expressed in monetary terms, from measures which have been introduced to control pollution from land-based sources or activities in coastal areas;
- (e) an analysis of costs and benefits of additional measures (legal, administrative, economic, fiscal, technological, institutional) which would have to be introduced in order to protect the marine and coastal areas and ensure their sustainable development and use.

17. He proceeded by recalling that while it is relatively easy to calculate the cost of pollution control measures, there are serious weaknesses in the various methodologies used in estimating in monetary terms the direct and particularly the indirect economic damage from pollution and the economic benefits from pollution control. Therefore UNEP expects that the two case studies may become a pioneering step towards the development of a methodology which may serve as a basis for the preparation of an economically justifiable global approach to the control of marine pollution.

18. In the ensuing discussion the following views have been expressed:

- (a) the proposed scope of the studies is very ambitious and could be covered only partially in the short time available (3 weeks, i.e. until the beginning of December 1991);
- (b) the elements suggested in paragraph 15 are valid as the ultimate goal of the studies and therefore should be the basis for the terms of reference for the preparation of the studies;
- (c) the case studies should be based on the analysis and interpretation of information available from and through the national counterparts and the Co-ordinating Unit for the Mediterranean Action Plan;
- (d) the "time horizon" of the study should be year 2025, and therefore operating costs resulting from capital investments should be duly taken into account;
- (e) the costs and benefits should not be considered only in terms of financial and economic costs, but in the broader context of costs and benefits for the society;
- (f) there are inherent methodological difficulties to express, in monetary terms, some of the benefits with reasonable degree of precision;
- (g) in analyzing the costs of additional measures which would have to be introduced in order to protect the marine and coastal environment, the provisions envisaged and measures decided by the Barcelona Convention and its protocols, as well as by the meeting of parties to this Convention, should be used as reference points.

19. In conclusion, the consultation recommended that the studies which will be prepared for presentation at the December 1991 meeting of government-designated experts, should be considered as incomplete and preliminary only, and would require a follow-up to complete them after the meeting of experts, taking into account the comments and suggestions made by that meeting.

Agenda item 7: Terms of reference for the preparation of case studies

20. Taking into account the scope and elements suggested for the studies, as well as the comments contained in paragraphs 18 and 19, the consultation expressed its support to the proposal for the preparation of *preliminary studies on the costs and benefits of measures for the reduction of the degradation of the marine environment from land-based sources of pollution and activities in coastal areas* of the Bay of Izmir and the Island of Rhodes. The following were agreed as terms of reference for the preparation of the studies:

- (a) each study will be prepared by an expert team, consisting of a UNEP consultant and one or more national experts, all of them participating in their personal capacity;
- (b) the Rhodes study will be prepared by Mr Giakos Constantinides, supported by Ms Persa Foliati-Tsolakidis; the Izmir study will be prepared jointly by Mr Ferenc Juhasz and Mr Turgut Balkas;
- (c) if necessary, in consultation between the secretariat and the consultants/experts identified above, additional experts may be engaged in order to analyse specific problems relevant to the subject of the studies;
- (d) the contents of the studies should reflect the five substantive elements described in paragraph 15; an outline, common to both studies, is attached as Annex IV;
- (e) the length of each study should be between 15 and 20 standard (single space) pages, including a 2-3 page executive summary; in addition, annexes, tables, figures and references could be attached to the report, as necessary;
- (f) the drafts of the studies should be sent by the consultants (one hard copy and a diskette) to Mr Ljubomir Jeftic in such a way that they are received not later than the morning of 2 December 1991 in his office;
- (g) Mr Ljubomir Jeftic will arrange for the finalization of the studies in English as information documents for the meeting of government-designated experts planned to be convened in Nairobi, 9-13 December 1991 (see paragraph 2); Mr Peter Schröder will take care of the translation of the executive summaries of the studies into the languages of that meeting;
- (h) Messrs Constantinides and Juhasz will be invited to the meeting of the government-designated experts in order to present the salient results of the studies and to participate in the discussions of the meeting.

Agenda item 8: Adoption of the report

21. The draft report of the consultation was reviewed and adopted by the consultations's participants with modifications, as it appears in this document.

Agenda item 9: Closure of the meeting

22. The consultation was closed by the Chairman of the consultation at 12.30 on 6 November 1991.

ANNEX I

16/26. OCEANS AND COASTAL AREAS

A. MARINE POLLUTION FROM LAND-BASED SOURCES

The Governing Council,

Taking note of paragraphs 4 and 6 of decision 1/20 of 31 August 1990 of the Preparatory Committee for the United Nations Environment Programme, in co-operation with relevant organizations of the United Nations system, to consider making an evaluation of proposals for the further development of scientific, technical and financial co-operation for the protection of the marine environment from land-based sources of pollution and to consider undertaking an evaluation of the 1985 Montreal Guidelines for the Protection of the Marine Environment from Land-based Sources of Pollution,

Taking note also of paragraph 5 of Preparatory Committee decision 2/18 by which the Committee notes with appreciation that the United Nations Environment Programme is preparing a proposal on strategy options and actions to reduce the effects of land-based sources of pollution, including *inter alia*, sewage related discharges and other activities threatening marine and coastal environment,

Taking note further of the outcome of the Intergovernmental Meeting of Experts on Land-based Sources of Marine Pollution, held in Halifax, Canada, from 6 to 10 May 1991,

Recognizing the importance of the United Nations Convention of the Law of the Sea for the protection of the marine environment,

1. **Requests** the Executive Director to continue the preparation of elements for draft strategy options and actions to reduce the degradation of the marine environment from land-based activities, in close co-operation with the secretariat of the United Nations Conference on Environment and Development, other United Nations organizations and taking fully into account the experience gained by the regional seas programmes of the United Nations Environment Programme and by other regional co-operative programmes on efforts to reduce the degradation of the marine environment from land-based sources of pollution and activities in coastal areas as well as the outcome of the Halifax meeting;

2. **Decides** to invite the Preparatory Committee for the United Nations Conference on Environment and Development at its third session to give policy guidance to a meeting of Government-designated experts to be convened to formulate a draft strategy, including a targeted and costed programme of action for reduction of the degradation of the marine environment from land-based sources of pollution and activities in coastal areas;

3. **Authorizes** the Executive Director to convene, subject to the availability of resources, such a meeting and to initiate preparations without delay;

4. **Further authorizes** the Executive Director to complete a targeted and costed action programme for the Mediterranean as an input to the strategy and as an example for the preparation of an international study, in view of the comprehensive data which already exist for that area and the very limited time available;

5. **Further requests** the Executive Director to report on the outcome of the meeting of Government-designated experts, through the Secretary-General of the United Nations Conference on Environment and Development, to the Preparatory Committee at its fourth session;

6. **Endorses** the co-sponsorship of the intergovernmental panel on global investigation of pollution in the marine environment by the United Nations Environment Programme and the Intergovernmental Oceanographic Commission of the United Nations Educational, Cultural and Scientific Organization.

8th meeting
31 May 1991

ANNEX II

LIST OF PARTICIPANTS

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ANNEX III

AGENDA

1. Opening of the Meeting
2. Organization of work
3. Scope and objective
4. Strategy for the Control of Marine Pollution from Land-based Sources
5. Background information
 - 5.1. Island of Rhodes
 - 5.2. Bay of Izmir
6. Elements for the preparation of case studies
7. Terms of reference for the preparation of case studies
8. Adoption of the report
9. Closure of the Meeting

ANNEX IV

PRELIMINARY STUDY ON THE COSTS AND THE BENEFITS OF MEASURES FOR THE REDUCTION OF THE DEGRADATION OF THE ENVIRONMENT FROM LAND-BASED SOURCES OF POLLUTION AND ACTIVITIES IN COASTAL AREAS OF THE BAY OF IZMIR/ISLAND OF RHODES

(OUTLINE)

- Executive summary
- 1.0 Background (see appendix 1 of Annex IV)
- 2.0 Introduction
- 3.0 Study area
 - 3.1 Physical environment - setting, resources
 - 3.2 Development trends - population, economic activities, pressures, etc.
- 4.0 Land-based sources of pollution and activities in coastal areas contributing to the degradation of the marine and coastal terrestrial environment (municipal, tourism, industry, construction, mining, etc.)
 - 4.1 Inventory of sources and activities
 - 4.2 Estimate of the type and amounts of pollution, including pollution reaching the marine environment through rivers and the atmosphere
 - 4.3 Estimated impacts on the natural environment and human activities (Table I - Inventory)
- 5.0 Overall environmental and health damage
 - 5.1 Valuation issues
 - 5.2 Monetised effects/damage
 - 5.3 Non-monetised effects - Qualitative effects
- 6.0 Costs and associated results/benefits of measures already taken
 - 6.1 Costing issues
 - 6.2 Approximate magnitudes of costs (Table II)
 - 6.3 Approximate magnitudes of monetised benefits (Table II)
 - 6.4 Approximate magnitudes of non-monetised benefits
 - 6.5 Emerging points
- 7.0 Costs and anticipated results/benefits of future measures
 - 7.1 Expenditure requirements
 - 7.2 Anticipated benefits (monetised/non-monetised) (Table III)
 - 7.3 Sustainable development prospects
 - 7.4 Emerging points
- 8.0 Concluding statements and qualifications
- 9.0 Limitations of the present case-study and ways of addressing them

Appendix 1

1.0 BACKGROUND

1. The sixteenth (1991) session of the Governing Council of the United Nations Environment Programme (UNEP), in decision 16/26 A on "Marine Pollution from land-based sources", requested the Executive Director *to continue the preparation of elements for draft strategy options and actions to reduce the degradation of the marine environment from land-based activities*. The decision also calls on the Executive Director *to convene a meeting of government-designated experts to formulate a draft strategy, including a targeted and costed programme of action for reduction of the degradation of the marine environment from land-based sources of pollution and activities in coastal areas, and to complete a targeted and costed action programme for the Mediterranean as an input to the strategy, and as an example for the preparation of an international study*.

2. The informal consultation of technical and legal experts (Nairobi, 30 September-3 October 1991), when reviewing the *draft strategy for the reduction of the marine environment from land-based sources of pollution and activities of coastal areas* being prepared for the meeting of government-designated experts referred to in the preceding paragraph recommended the preparation of specific detailed case studies on the costs and benefits from the reduction of the degradation of the marine environment, as a supplement to the preliminary estimate of the cost associated with the protection of the Mediterranean Sea.

3. In consultation between the Oceans and Coastal Areas Programme Activity Centre of UNEP, the Co-ordinating Unit for the Mediterranean Action Plan (MEDU) and the relevant national authorities, and taking into account the ongoing integrated coastal zone management pilot projects carried out in the framework of the Mediterranean Action Plan, the Bay of Izmir and the Island of Rhodes were selected by UNEP as the sites of the case studies.

4. An ad hoc consultation was convened by MEDU (Athens, 5-6 November 1991) to launch the preparation of the two case studies which will have to be ready for presentation at the meeting of government-designated experts in December 1991. The consultation concluded (UNEP(OCA)/MED WG.32/2) that due to the time constraints the studies which will be prepared should be considered as incomplete and preliminary only, and would require a follow-up to complete them after the meeting of experts, taking into account the comments and suggestions made by that meeting. The present document should be viewed and judged in this context.