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Long-term Programme for Pollution Monitoring and Research

in the Mediterranean Sea (MED POL - PHASE II)

PROGRESS REPORT ON THE IMPLEMENTATION OF RESEARCH ACTIVITIES

DURING 1981-1983 AND ACTIVITIES PLANNED FOR 1984-1985

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INTRODUCTION

1. The Long-Term Programme for Pollution Monitoring and Research (MED POL - PHASE II) of the Mediterranean Action Plan (MAP), which was endorsed at the Second Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its Related Protocols, Cannes, 2-7 March 1981 (UNEP/IG.23/11), defined the research and study topics whose development is required for the successful achievement of the programme.

2. These activities are carried out by Mediterranean research centres primarily on a direct contractual basis or as a contribution from centres and organizations offered by the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its Related Protocols.

3. A report on the implementation of the research activities of MED POL - PHASE II and proposals for 1984-1985 was prepared by the secretariat (UNEP/WG.91/4 and UNEP/WG.91/4/Add.1), in close collaboration with all the Co-operating Agencies, (FAO, WHO, UNESCO, IOC, WMO, and IAEA) for the Second Meeting of the Working Group for Scientific and Technical Co-operation (Athens, 21-25 November 1983). The Working Group, who was invited to provide the secretariat with comments on its contents, endorsed the document and asked the secretariat to present it, expanded and updated, to the Contracting Parties at their forthcoming meeting.

4. The present document represents the response to that request and is meant for presentation at the Extraordinary Meeting of the Contracting Parties (Athens, 10-13 April 1984), for information.

ACTIVITIES IMPLEMENTED IN THE 1981-1983 PERIOD

5. As a follow-up to the First Meeting of the Working Group for Scientific and Technical Co-operation (Athens, 28 September - 2 October 1981) a document was prepared by the secretariat (UNEP/WG.62/4/Rev.1) containing the basic criteria for the development of the research activities which had been defined as part of the Long-term Programme for Pollution Monitoring and Research in the Mediterranean Sea (MED POL - PHASE II).

6. That document, calling for research proposals to be submitted to the MED UNIT through the agreed channels, was distributed to all National Co-ordinators for MED POL (4 December 1981) and Mediterranean scientists who had participated in MED POL - PHASE I.

7. Research proposals reached the secretariat through the National Co-ordinators for MED POL. Research proposals received directly from scientists or institutions were sent by the secretariat to the relevant National Co-ordinators, for information and comments. Research proposals received after the indicated deadline were also processed by the secretariat.

8. As at 15 February 1984, a total of 138 proposals were received from 15 countries and the EEC. 119 proposals were retained and processed (see table 1).

9. In processing the research proposals received, the secretariat was guided by the recommendations of the First Meeting of the Working Group, i.e.:

- proposals related to activities 'B', 'C' and 'E' were evaluated but none of them was approved for implementation;
- the scientific and technical quality of all other proposals, as well as their financial implications, were analysed by the relevant Co-operating Agencies, in close consultation with the secretariat;
- in approving the proposals, priority was given to proposals directly relevant to the implementation of the monitoring activities; and
- the financial assistance provided for the approved projects was considered only as supplementing the cost of their implementation, which was expected to be covered mainly by national resources.

10. The assignment of funds to the various proposals was very difficult due to the limited overall budget (\$250,000 for the whole research component during 1982), the large number of individual proposals, the often very high level of requested assistance and the uneven distribution of proposals between the various activities and the various countries.

11. Nevertheless, through direct negotiations between the Co-operating Agencies and the Principal Investigators, seventy-two proposals were cleared by the secretariat and funds were provided (see annex I to this document), taking into account the principles referred to in paragraph 9 above. As at 15 February 1984, 39 proposals were further extended for a second year.

12. The progress in the activities were presented by the secretariat at the Second Meeting of the Working Group for Scientific and Technical Co-operation (Athens, 21 - 25 November 1983) (see documents UNEP/WG.91/4 and UNEP/WG.91/4/Add.1). The Group noted the results accomplished and, on the basis of the recommendations proposed by the secretariat, further elaborated on the procedure to be followed in the implementation of future research activities.

13. In the following paragraphs more details are given on the major results accomplished through the implementation of the various research proposals for each activity.

Table 1: Summary table of research proposals processed
by the MED UNIT as at 15 February 1984

COUNTRY	ACTIVITIES												TOTAL
	A	B	C	D	E	F	G	H	I	J	K	L	
ALGERIA	1	-	-	1	-	-	1	1	-	-	-	-	4
CYPRUS	-	-	-	-	-	-	-	-	-	1	-	-	1
E.E.C.	-	-	-	-	-	-	-	-	-	-	-	1	1
EGYPT	2	-	1	-	1	-	1	-	-	-	2	1	8
FRANCE	1	-	-	1	-	-	2	-	1	-	1	3	9
GREECE	-	1	-	1	-	2	2	-	1	-	-	1	8
ISRAEL	2	-	-	2	-	-	1	-	-	-	-	-	5
ITALY	4	-	-	1	-	4	6	-	6	1	3	9	34
LEBANON	-	-	-	-	-	-	-	-	1	-	-	-	1
LIBYA	-	-	-	-	-	-	-	-	-	-	-	-	-
MALTA	-	-	-	-	-	-	1	-	-	-	-	-	1
MONACO	-	-	-	-	-	1	-	-	-	-	-	1	2
MOROCCO	-	-	-	-	-	-	-	-	-	-	-	1	1
SYRIA	-	-	-	-	-	-	-	-	-	-	-	-	-
SPAIN	4	-	-	1	-	-	-	-	-	-	-	-	5
TUNISIA	1	-	-	-	-	-	-	1	1	-	1	-	4
TURKEY	1	-	1	-	-	2	1	1	1	-	2	-	9
YUGOSLAVIA	5	-	-	3	-	3	3	4	3	-	3	2	26
TOTAL	21	1	2	10	1	12	18	7	14	2	12	19	119

Note: Additional 19 proposals, were either withdrawn by the Principal Investigator, or returned by the secretariat as inadequate.

Activity 'A'

14. This activity deals with the development of sampling and analytical techniques for marine pollution monitoring and research. The objectives of the activity are twofold: firstly, to provide the material and data for the development of reference methods for the various monitoring parameters, for use by laboratories participating in the programme and eventually for adoption by the Contracting Parties as formal standard methods. Secondly, to study and determine the various environmental and related factors which may affect the final results.

Microbiological parameters

15. Eight research proposals were received on this topic of which six have been cleared and are operational under agreements with WHO. Basically, they cover the main factors affecting the determination of bacterial indicators and pathogenic organisms in coastal recreational and shellfish-growing waters. Ongoing projects cover the following study-topics:

- determination of indicator organisms and pathogens in coastal waters;
- fluctuations of bacterial indicator organisms at different sampling times throughout the day;
- comparative efficiency of different incubation temperatures in the determination of bacterial indicators;
- comparative studies on different techniques for determination of bacterial indicators;
- revival of bacterial indicator organisms following thermal stress, and
- relationships between densities of indicator organisms and pathogens in seawater.

Analysis of chemical contaminants in marine organisms

16. Seven proposals were received on this topic in spite of the fact that reference methods for the determination of heavy metals and chlorinated hydrocarbons in marine organisms are already available. All Principal Investigators who submitted such proposals have been asked by FAO to participate in an exercise, which is at present taking place, for the purpose of testing such methods. Six of those Investigators have agreed to participate, together with other laboratories designated by their respective National Co-ordinator. A consultation meeting will be convened (Rome, 4-8 June 1984), after the completion of the testing exercise, to discuss the results of the exercise and recommend possible modifications to the existing reference methods Nos. 6-14.

Activity 'B'

17. The aim of this research activity is to develop reporting formats and computational techniques for the overall assessment of the amounts of pollutants entering the marine environment from land-based sources and dumping operations.

18. As a follow-up to the recommendations of the First Meeting of the Working Group for Scientific and Technical Co-operation (UNEP/WG.62/4 Rev.1), no projects were implemented in connexion with this activity since this topic should be discussed in relation to the implementation of the protocol on land-based sources.

Activity 'C'

19. This research activity is designed to formulate scientific rationales for the environmental quality criteria of substances listed in annexes I and II of the land-based sources protocol and to develop emission standards, standards of use and guidelines for those substances.

20. As a follow-up to the recommendations of the First Meeting of the Working Group for Scientific and Technical Co-operation (UNEP/WG.62/4 Rev.1), no projects were implemented in connexion with this activity, since this topic should be discussed in relation to the implementation of the protocol on land-based sources

Activity 'D'

21. This activity is designed to provide the necessary data on the correlation between the quality of seawater and seafood and health effects, thus enabling the eventual formulation and adoption of appropriate environmental quality criteria, as well as any specific action necessary at the national level. Research is proceeding along two main lines:

Coastal water quality

22. This activity deals with the correlation between coastal recreational water quality and the health of swimmers. It includes both an assessment of the state of pollution of recreational waters and clinical and related investigations on samples of user populations. Three research proposals were received for this activity, all of which have been cleared and are operational under agreement with WHO. These cover the following study topics:

- relationships between the microbial quality and the health of swimmers;
- prevalence of Pseudomonas aeruginosa and Staphylococcus aureus in polluted beaches and correlation with bacterial indicator organisms, and
- Studies on the incidence of pathogenic fungi in polluted beaches and their relevance to public health.

Methylmercury in Mediterranean seafood and its effect on populations at risk

23. Following recommendations by the Contracting Parties, a project to evaluate the problem of methylmercury in Mediterranean seafood and its effects on exposed population sectors was formulated. The project was discussed at a WHO/UNEP Consultation Meeting (Athens, 13-17 September 1982), convened also in the framework of WHO/EURO's Chemical Safety Programme with which the project is related.

24. The activity as finally agreed on, involves (a) the selection of appropriate pilot zones, (b) analysis of mercury in seafood, (c) nutritional studies and human hair analysis in selected sample populations and (d) chemical epidemiological studies in the indicated groups. WHO is organising this activity with the collaboration of FAO in the appropriate aspects.

25. Five proposals were received for this activity, three of which (all covering one pilot zone) have been cleared and are being implemented under agreement with WHO (2 projects) and FAO (1 project). They cover the following study topics:

- dietary studies on selected population groups in coastal areas;
- analysis of human hair and other tissues for methylmercury in selected population groups in coastal areas, and
- analysis of selected species of seafood for methylmercury in a number of coastal areas of the pilot zone.

26. A number of contacts with institutions in other countries have been made and a Consultation meeting on biological monitoring of methylmercury in Mediterranean populations is being convened in Yugoslavia in September 1984 to review the protocols on human hair analysis and chemical studies and to assure implementation of the whole project on a wider basis.

Activity 'E'

27. The purpose of this activity is the development of proposals for guidelines and criteria governing the application of the land-based sources protocol as requested in article 7 of the protocol.

28. As a follow-up to the recommendations of the First Meeting of the Working Group for Scientific and Technical Co-operation (UNEP/WG.62/4/Rev. 1), no projects were implemented in connexion with this activity, since this topic should be discussed in relation to the implementation of the land-based sources protocol.

Activity 'F'

29. This activity, needed for the understanding of the distribution of pollutants through the Mediterranean and for the development of contingency plans, is technically co-ordinated by IOC. The objectives of the activity are:

- to promote and investigate studies of the oceanographic processes that play a leading role in the surface circulation and vertical transport of water masses, and

- to assist in the development of various types of models of the afore-mentioned processes.

30. Five projects in line with the above objectives were cleared and funds were provided on the basis of their technical, scientific and financial implications.

31. In connexion with the implementation of this research activity, efforts are also being made by IOC, in order to gather information on additional ongoing work relevant to oceanographic processes and to harmonize all the national and international efforts in the field.

Activity 'G'

32. The objective of this activity is to determine lethal and sublethal effects of selected substances listed in annexes I and II of the land-based sources and the dumping protocols under all possible aspects of their occurrence in the marine environment, including acute and chronic toxicity, persistence, bioaccumulation, carcinogenicity and mutagenicity. Those annexes include such substances as organohalogens, organophosphorus compounds, organo-tin compounds, organosilicon compounds, heavy metals with emphasis on mercury and cadmium, petroleum hydrocarbons, radioactive wastes, etc.

33. A total of twenty proposals were received, out of which twelve have been cleared and are being implemented under agreement with FAO, and three under agreement with WHO. These are concerned with research on the toxicity of oil dispersants, organohalogens and some heavy metals. More specifically the following study topics and/or experiments are covered by the ongoing projects:

Oil dispersants:

- acute and sublethal effects of crude oil, dispersants and chemically dispersed oil on plancton, fish, bivalves and other organisms under static and flow conditions;
- transfer of C14 labelled detergent through the food chain using the herbivore isopod Idotea balthica basteri and the predator fish Scorpaena notata, and
- genotoxicity of oil dispersants.

Organohalogens and polyaromatic hydrocarbons:

- isolation of halogenated organic compounds as well as halogen peroxidases including activity determination from sessile marine organisms mainly algae and sponges;
- development of biological tests such as evaluation of relative neurotoxicity of haloterpenoids and related compounds by specific tests such as electroretinogram determination;

- physiological and biochemical response to PCB pollution of Mytilus galloprovincialis, Crangon crangon and Idotea balthica in a wide range of salinities and temperatures;
- acute and chronic toxicity of PCBs and chlorinated insecticides on various marine organisms; and
- activation of polyaromatic hydrocarbons to mutagenic compounds.

Heavy metals:

- effects of Zn, Cd and Hg on the genetic structure of molluscs and shrimps;
- selenium-mercury interactions in marine shrimps with emphasis on toxicological effects of both elements;
- release and kinetics of various mercurial compounds from shrimps pretreated with selenium using ^{203}Hg and ^{75}Se as tracers; and
- long-term toxicity tests exposing Mytilus galloprovincialis to low concentrations of Cd and Zn.

Other:

- the use of trout hepatic benz-a-pyrene hydroxylase activity in measuring quantitatively the level of pollution;
- xenobiotic metabolising capabilities of Mytilus galloprovincialis exposed to phenobarbital, meticholanthrene and PCBs;
- mutagenicity of selected marine pollutants, and
- the pathways of selected mutagenic and carcinogenic compounds through trophic levels in the marine environment.

Activity 'H'

34. This activity deals with research on eutrophication and concomitant plankton blooms needed to assess the feasibility of alleviating the consequences and damage from such recurring blooms. The objectives of this activity are to investigate:

- the levels, periodicity, and causes of irregular plankton blooms appearing in highly eutrophicated areas;
- the quantitative relationships between productivity, biomass and structure of eutrophic communities and pollution-borne abiotic factors, and
- the potential toxicity of red-tides and irregular plankton blooms in relation to their taxonomic and biochemical compositions.

35. Eight proposals have so far been received out of which seven have been cleared and are being implemented under agreement with FAO. More specifically the following study topics are covered by the ongoing projects.

- levels, periodicity and causes of irregular plankton blooms in Central Adriatic, Gulf of Trieste and Tunisian waters;
- quantitative relationship between productivity, biomass and structure of plankton communities, and
- correlation of biological and hydrographic parameters with dissolved organic matter.

36. In addition, UNESCO is preparing draft guidelines for the assessment of receiving capacity for eutrophication substances and for the monitoring of long-term trends of eutrophication.

37. Under the umbrella of this activity a Workshop on Jelly-Fish Blooms in the Mediterranean was convened in Athens from 31 October to 4 November 1983. As a result of the Workshop, more work in this field was considered necessary and all interested governments were asked to co-operate. As a follow up, in collaboration with all MED POL National Co-ordinators, a small consultation meeting (Athens 6-7 February 1984) was convened by the Co-ordinating Unit in order to prepare an operational document for a more complete Mediterranean programme, to be used by scientists and institutions who wanted to participate, in the framework of MED POL - PHASE II. The operational document (UNEP/IG.49/INF.5) is now brought to the attention of the Contracting Parties for their consideration.

Activity 'I'

38. This activity envisages the study of ecosystem modifications in areas influenced by pollutants and in areas where ecosystem modifications are caused by large scale coastal or inland engineering activities. Its objective is the investigation of pollution-induced changes of Mediterranean coastal ecosystems leading to significant modifications of their trophic state and structure, and how they can be controlled by environmental protection.

39. Sixteen proposals have been received out of which twelve have been cleared and are being implemented under agreement with FAO. More specifically, the following study topics are covered by the on-going projects:

- verification of the wealth-conditions of some Posidonia meadows of North-Western Mediterranean;
- evaluation of the pollutant sensitivity of some epiphytes living exclusively on marine phanerogames (mainly hydroids and bryozoans);
- evaluation of Mytilus galloprovincialis and Brachidontes variabilis populations inside the meso- and infra-littoral biocoenoses of hard substrata;

- the determination of pollution-induced ecosystem modifications in the Adriatic (including studies of phytoplankton, zooplankton, phytobenthos and fish), and
- the derivation of ecotypes through the analysis of similarities and regularities of macrozoobenthic populations in different geographical scales, by means of objective ordination and classification methods.

Activity 'J'

40. This activity deals with the effects of thermal discharges on marine and coastal ecosystems including the study of associated effects. The objectives of the activity are:

- the evaluation of the short-term effects (mortality rate) and of long-term effects (perturbation of the life cycle, such as reproduction, growth etc.) of the mechanical and thermal shocks and of the combined chlorination on the physiological processes in selected species;
- the evaluation of the effects of thermal discharges on marine communities and ecosystems (elimination of species, replacement etc.), and
- the investigation of the potentialities of using discharges for breeding and raising selected marine animals.

41. Three research proposals were received out of which two have been funded as case studies and are being implemented under agreement with FAO. The third proposal was concerned with the development of scientific criteria for a code-of-good-practice in siting of thermal effluents and was therefore considered related to the activities of the GESAMP Working Group on Biological Effects of Thermal Discharges in the Marine Environment which are closely followed and taken into account. The two proposals cleared deal with the effects of thermal discharges from power plants on coastal organisms as follows:

- effects of thermal effluents on the littoral, benthic and fish communities in the Vassilikos/Moni area, Cyprus, and
- effects of thermal effluents on biotic communities on the meso-littoral plane and on the upper belt of the infra-littoral plane at Torvaldaliga (Civitavecchia-Roma).

Activity 'K'

42. This activity is concerned with the biogeochemical cycle of specific pollutants, particularly those relevant to human health (mercury, lead, survival of pathogens etc.). The objectives of the activity are:

- to understand the fate of selected pollutants introduced in the Mediterranean marine environment in order to assess their impact on human health, marine biota and the marine ecosystem;

- to provide adequate quantitative data on pollutant flows between the ambient and the organisms at various levels within the trophic network, to allow for detailed mass-balance computations, and
- to estimate the survival capacity of selected pathogenic organisms and the modalities of their affecting human health.

43. FAO, WHO and IAEA are responsible for the technical coordination and implementation of this activity depending on the individual proposal and the specific pollutant concerned. At present, eleven projects are being implemented under agreement with FAO (six), WHO (three) and IAEA (two) covering the following topics:

- construction of a mathematical model of the biogeochemical cycles of mercury and selenium;
- transfer of heavy metals (lead, mercury and cadmium) in the marine food chain;
- determination of the die-away rate of selected pathogens along the path of sewage effluents with respect to distance and time, as well as of the effect of diurnal variations and varying physico-chemical factors;
- anthropogenic influences on the distribution and fluxes of the various chemical species of lead into the marine environment, and
- accumulation and transfer processes of radionuclides in the marine biota.

Activity 'L'

44. Under the umbrella of this activity, studies are promoted on various important pollutant-transfer processes in the Mediterranean basin; in particular, transfer of pollutant loads at the river-sea and air-sea interfaces, through sedimentation and through the straits linking the Mediterranean with other seas. Six research proposals are being implemented under agreement with IOC (3) and IAEA (3) covering:

- transfer of various pollutants in the coastal and estuarine areas through organic matter at the nepheloid layer and by particle sedimentation;
- pollutant (mostly heavy metals) transfer by sedimentation in open sea areas, and
- flux of metallic elements at the air/sea interface and through the water column.

ACTIVITIES PLANNED FOR 1984 AND 1985 AND PROCEDURES TO BE FOLLOWED FOR
SUBMISSION OF RESEARCH PROPOSALS

45. The following activities and procedures to be followed for submission of research proposals were endorsed by the Second Meeting of the Working Group for Scientific and Technical Co-operation, for 1984 and 1985 (UNEP/WG.91/12).

Activities planned for 1984 and 1985

46. The twelve research and study topics which were adopted by the Contracting Parties as the research component of MED POL - PHASE II (see section II above) will be continued and thus have to be taken into account by scientists who wish to present research proposals.

47. The following additional activities or recommendations, specific for individual research activities will be developed and should be also taken into account by scientists when submitting research proposals.

- Activity 'A'. Project proposals related to development and testing of methods for mandatory monitoring parameters should have priority. Allocation for Activity 'A' could also be used in connexion with the cost of the meetings (workshops) related to testing and intercalibration of sampling and analytical techniques.
- Activities 'B', 'C' and 'E'. The commencement of these research activities and the content of their programme will be based on the progress of the work of the group responsible for the implementation of the land-based sources protocol.
- Activity 'D'. In view of the progress made through MED POL in the evaluation of the environmental quality of bathing beaches and shellfish-growing waters, as well as of the levels of mercury in seafood, efforts should be continued and intensified to obtain the additional epidemiological knowledge needed for the full understanding and interpretation of data obtained up until now. Two small expert group meetings are planned to be convened to further research in each of these fields.
- Activity 'F'. In addition to the work proposed to be carried out through project proposals, IOC will collect and analyse information on oceanographic processes relevant to the surface circulation and vertical transport in the Mediterranean.
- Activities 'G' and 'I'. Two small workshops are planned to be convened in 1984 and 1985 respectively to evaluate the first results of the approved projects and to discuss methodological problems related to these activities.
- Activity 'H'. The results of the Workshop on Jelly-fish Blooms in the Mediterranean, held in Athens from 31 October to 4 November 1983, will be used for the further development of this activity.^{1/}

^{1/} A Mediterranean project on jelly fish is being proposed to the Contracting Parties for their consideration (UNEP/IG.49/INF.5).

- Activity 'J'. The activity of GESAMP's Working Group on Biological Effects of Thermal Effluents in the Marine Environment will be closely followed and taken into account in approving project proposals in this field.
- Activity 'K'. A workshop is planned to be convened in 1984 to review the biogeochemical cycle of mercury in the Mediterranean in order to provide additional information needed for the assessment of mercury pollution in the Mediterranean.
- Activity 'L'. In addition to the work proposed to be carried out through the research proposals, the activity of GESAMP's Working Group on Interchange of Pollutants between the Atmosphere and the Oceans will be used to formulate a pilot project which will provide the basis for monitoring of air-borne pollutants.

Procedures to be followed for submission of research proposals

48. The Research Centres participating in the research activities are to be designated by the National Co-ordinators for MED POL (see annex III) as collaborating MED POL institutions, whether they participate or not in the monitoring components.
49. As to the implementation of the research activities the following general procedures were adopted by the Working Group for Scientific and Technical Co-operation as guidelines for the participation in the programme:
- All research proposals should reach the secretariat (forms to be used and attached as Annex II), with the endorsement of the relevant MED POL National Co-ordinator, not later than 15 March of each year. Project proposals reaching the secretariat after that date would only be considered for financial support in the following year. This procedure would allow for proper planning of resources and would allow the secretariat to draw the attention of the Contracting Parties to research subjects not covered by proposals.
 - The secretariat, in collaboration with the Co-operating Agencies, would evaluate each proposal and inform officially, by the end of June of each year, the originator of the proposal and the National Co-ordinator about the acceptance or the refusal of the proposal, as well as the size of support allocated to the project.
 - Regardless of the duration of the project indicated at the beginning, funding will be ensured for a period of twelve months, with the possibility of additional funding subject to receipt of a satisfactory progress report.
 - Support provided through MED POL should continue to have a catalytic function, and most of the cost of each project should be covered by the Governments, or other sources at the disposal of the project.
 - A single project should not receive more than US\$ 10,000 over any twelve month period, without explicit approval of the Working Group.

: When no adequate proposals have reached the secretariat for certain types of research activities approved by the Contracting Parties, the secretariat may actively solicit proposals from Mediterranean research centres, in particular on topics essential for the successful implementation of the monitoring component of MED POL.

SUMMARY BUDGET

50. Table 2 summarizes the expenditures and the commitments related to MED POL research activities for the 1982-1985 period, as endorsed by the Second Meeting of the Working Group for Scientific and Technical Co-operation (Athens, 21-25 November 1983):

Table 2: Expenditures and allocations for MED POL research activities during 1982-1985 (in US \$)

	<u>1982</u> Expenditures	<u>1983</u> Authorized allocations	<u>1984</u> Proposed allocations	<u>1985</u> Proposed allocations
SUBCONTRACTS				
Activity A	(24.500) <u>2/</u>	38.000	30.000	30.000
B	-	8.000	16.000	18.000
C	-	8.000	16.000	18.000
D	-	90.000	20.000	30.000
E	-	9 000	16.000	18.000
F	-	42.800	16.000	18.000
G	11.000	63.000	16.000	18.000
H	3.000	44.000	20.000	20.000
I	6.500	32.500	10.000	15.000
J	-	15.000	10.000	10.000
K	9.500	61.000	20.000	20.000
L	13.000	86.700	20.000	30.000
Sub-total	43.000	497.000	210.000	245.000
MEETINGS				
Activity A	-	10.000	10.000	10.000
D	-	-	10.000	10.000
G	-	-	10.000	-
H	-	(35.000) <u>3/</u>	-	-
J	-	-	-	10.000
K	-	-	10.000	-
Sub-total	-	10.000	40.000	30.000
GRAND TOTAL	43.000 <u>1/</u>	507.000 <u>1/</u>	250.000	275.000

1/ Unspent balance of 1982 was transferred to 1983 as authorized by UNEP/IG.43/6, paragraph 71

2/ Budgeted under Chapter 3 of MAP budget

3/ Workshop on Jelly-fish Blooms budgeted under Chapter 1 of MAP budget

REFERENCES

- UNEP/IG.23/11 Report of the Second Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols and Intergovernmental Review Meeting of Mediterranean Coastal States on the Action Plan.(Cannes, 2-7 March 1981).
- UNEP/WG.62/4 Rev. 1 Basic Criteria for the Development of Research Activities.
- UNEP/IG.43/6 Report of the Third Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution and its Related Protocols.(Dubrovnik, 28 February - 4 March 1983).
- UNEP/WG.91/12 Report of the Second Meeting of the Working Group for Scientific and Technical Co-operation for MED POL. (Athens, 21-25 November 1983).
- UNEP/WG.91/4 and 91/4 Add.1 Progress Report on the Implementation of Research Activities during 1981-1983 and Proposals for 1983-1985. .
- UNEP/IG.49/INF.5 Project on Jelly-Fish in the Mediterranean Sea (Report of a Consultation on a jelly-fish project in the Mediterranean Sea. (Athens, 6-7 February 1984)

ANNEX I

List of Ongoing Projects

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'A'</u>		
ITA 19 L.E.N.A. CNR-Centro di Radiochimica e Analisi per Attivazione 27100 PAVIA	Nuclear methods for trace elements determination in environmental related matrices (M. GALLORINI)	IAEA
ITA 29 Lab. di Igiene del Territorio, Istituto Superiore di Sanità Rome	Research on the hygienic conditions of coastal waters and beaches in a sample zone with reference to the density of microbial indica- tors and of pathogen bacteria and evaluation of sampling and control criteria and microbial pollution's impact on coastal environment (L. VILLA)	WHO OMS
SPA 02 Conselleria d' Ecologia i Medi Ambient, Badalona	Evolución de la contaminación bacteriana de origen fecal en el litoral Badalonés, a lo largo del día y a su vez en el tiempo (F. LUCENA-GUTIERREZ)	WHO OMS
SPA 04 Conselleria d' Ecologia i Medi Ambient, Badalona	Diferencias de eficacia en la recuperación de Estreptococos fecales en las temperaturas de incubación de 37° y 44° C (F. LUCENA-GUTIERREZ)	WHO OMS
TUN 02 Service de Bacte- riologie des Eaux et produits ali- mentaires, Tunis	Etude comparative de la valeur spécifique des coliformes fécaux et des Streptocoques fécaux comme marqueurs de la pollution fécale des eaux de baignade sur le littoral tunisien (A. CHADLI)	WHO OMS
YUG. 09 Centre for Marine Research Rudjer Boskovic Institute Zagreb	Development of X-ray emission spectroscopy as multi-elemental analytical techniques for monitoring marine pollutants (V. VALKOVIC)	IAEA

List of Ongoing Projects (Cont'd ...2)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'D'</u>		
GRE 08 Department of Bacteriology Athens	Relation between densities of indicators organisms and microbial pathogens in seawater (J. PAPADAKIS)	WHO
ISR 06 Environmental Health Lab., Jerusalem	Epidemiological Study of the relationship between microbial quality of the coastal sea- water and the health of swimmers (B. FATTAL)	WHO OMS
ISR 08 The A. Felix Public Health Laboratory Tel-Aviv	Prevalence of staphylococcus aureus and Pseudomonas aeruginosa in coastal water of Israel (Y. YOSHPE-PURER)	WHO
SPA 03 Lab. Municipal Badalona	Estudio exhaustivo de los hongos que se presentan en una playa contaminada; importancia relativa según la incidencia sobre la salud. Aproximacion a uno y indicador fungico (J. IZQUIERDO)	WHO OMS
YUG 26 Institute of Public Health Dept.of Nutrition Zagreb	The analysis of mercury and methylmercury in seafood in various parts of the Mediterranean (R. BUZINA)	FAO
YUG 27 Institute of Public Health Dept.of Nutrition Zagreb	Evaluation of methylmercury in Mediterranean populations and related health hazards (R. BUZINA)	WHO OMS
YUG 28 Institute of Public Health Dept.of Nutrition Zagreb	Analysis of human hair for assessing exposure and possible health hazards in Mediterranean populations due to methylmercury in seafood (L. KOSTA)	WHO OMS

List of Ongoing Projects (Cont'd ...3)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'F'</u>		
GRE 01 Dept. of Hydraulics Univ. of Thessaloniki	Development of mathematical models for horizontal transport of pollutants in coastal areas of the Mediterranean Sea (J. GANOULIS)	IOC COI
ITA 23 Istituto di Fisica Univ. of Roma	Vertical transport processes of marine water near the Italian coasts (E. SALUSTI)	IOC COI
TUR 01 Dept. of Marine Science, METU Erdemli, İçel	Oceanographic processes in the Northeastern Levantine coastal waters (U. UNLUATA)	IOC COI
TUR 02 METU Erdemli, İçel	Pollutant transport processes at Goksu, Seyhan and Ceyhan river mouths (E. OZSOY)	IOC COI
YUG 06 Dept. of Physical Oceanography Split	Low-frequency current field oscillations in the coastal zone of the Central Adriatic (M. GACIC)	IOC COI
<u>ACTIVITY 'G'</u>		
EGY 04 Dept. of Environ. Sciences, UNARC Alexandria	Acute and chronic toxicology of widely used dispersants, PCB's, chlorinated pesticides and their combinations to marine biota and their biomagnification in Alexandria region (A.K.H. EL-SEBAE)	FAO
FRA 01 Station Marine d'Endoume Marseille	Recherches sur toxicité, le persistance, le bio-accumulation, la carcinogenicit� et le mutag�nicit� (R. KAIM-MALKA)	FAO

List of Ongoing Projects (Cont'd ...4)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
ACTIVITY 'G' (Cont'd)		
GRE 02 Zoological Lab. Univ. of Athens	Studies on toxicity of oil dispersants and of oil dispersants mixture to various marine organisms. Combined effects of dispersants and some heavy metals (M. MORAITOU-APOSTOLOPOULOU)	FAO
GRE 07 Zoological Lab. Univ. of Athens	L'influence toxique des dispersants (M.J. CASTRISI-CATHARIOS)	FAO
ISR 07 Lab. of Population Biology Univ. of Haifa	The genetic structure of marine organisms as a detector and monitor of marine pollution (E. NEVO)	FAO
ITA 06 Dept. of Environ- mental Mutage- nesis & Carcino- genesis Inst. of Hygiene Univ. of Genoa	Mutagenicity, genotoxicity, interactions and metabolism of chemical compounds in the marine organisms (S. DE FLORA)	WHO OMS
ITA 21 Inst. of Marine Biology, CNR Venice	Physiological and biochemical response of marine organisms to PBC pollution in a wide range of environmental factors (L. DALLA VENEZIA)	FAO
ITA 28 Environmental Mutagenesis Dept. CNR - Pisa	Mutagenic and carcinogenic studies of marine pollution (G. BRONZETTI)	WHO OMS
ITA 30 Faculty of Medi- cine Univ. of Rome	Research into the toxicity, persistence, bio-accumulation and mutagenicity of hydrocarbons, detergents and some heavy metals in the sea (Tyrrhenian and Adriatic areas) (G.P. DE RENZI)	WHO OMS

List of Ongoing Projects (Cont'd ...5)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
ACTIVITY 'G' (Cont'd)		
ITA 31 Gruppo Ricerca Oceanologica Genova	Enzymic aspect of the xenobiotic-metabolizing systems in <i>Mytilus galloprovincialis</i> Lam. (A. VIARENGO)	FAO
MAL 01 Dept of Maths Univ. of Malta Msida	Research on the effects of oil dispersants on marine organisms (V. AXIAK)	FAO
TUR 05 Dept of Biological Sciences, METU Ankara	Design and development of "Bio-Test" methods that will be used to assay the pollutants listed in the annexes of the Protocols, with respect to their toxicity residual effects, bio-degradabilities, mutagenicities and carcinogenicities (H. BAGCI)	FAO
YUG 05 Lab. of Biology IOF, Split	Research on the effects of oil dispersants on marine organisms (M. TUDOR)	FAO
YUG 21 Center for Marine Research, Rudjer Boskovic Inst. Zagreb	Toxicity and bioaccumulation of pollutants in marine organisms (M. OZRETIC)	FAO
YUG 23 Inst. for biological Medical Inv. of SR Montenegro Titograd; and Dept of Marine Biology of Ocean. Kotor	Halogen containing Terpenoids and related substances in marine organisms (M. GASIC)	FAO

List of Ongoing Projects (Cont'd ...6)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'H'</u>		
ALG 04 Dept.de Production Primaire C.R.O.P.	Eutrophisation et floraisons concomitantes de plancton, dans le port d'Alger (F. AID)	FAO
TUN 04 Lab. d'Ocean. et pollution marine Salambo	Eutrophisation et floraisons concomitantes de plancton (M.S. HADJ ALI)	FAO
TUR 08 Inst. of Marine Sciences 9 Eylül Univ. Bornova/Izmir	Elemental transfer process and eutrophication in Buyuk Menders Delta (Great Meander Delta) and their offshore distribution, Eastern Aegean-Turkey (E. IZDAR)	FAO
YUG 03 Inst. of Oceanogr. and Fisheries Split	Eutrophication and concomitant placton blooms in the coastal area of the Central Adriatic (I. MARASOVIC)	FAO
YUG 08 Center for Marine Research Rudjer Boskovic institute 41001 Zagreb	Relationships between phytoplankton blooms and dissolved organic matter in the Northern (V. ZUTIC)	FAO
YUG 13 Center for Marine Research, Rovinj Institute for Physiologische Chemie Mainz and Rudjer Boskovic Institute Zagreb	The correlation between levels and effects of mutagenic pollutants in marine environment	WHO
YUG 24 Biological Inst. Univ. of Kardelj Ljubljana	Eutrophication and concomittant plankton blooms Occurrence and development of plankton blooms in the Gulf of Trieste (the eastern part) as a possible consequence of pollution-induced eutrophication (N. FANUKO)	FAO

List of Ongoing Projects (Cont'd ...7)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'I'</u>		
CYP 01 Dept. of Fisheries Nicosia	Study of Littoral, Benthic & fish communities in the Vasilikos-Moni area in relation to the effect on those of pollution from thermal effluents (A. DEMETROPOULOS)	FAO
FRA 03 Station Marine d'Endoume Marseille	Elaboration de critères fondamentaux pour la surveillance écologique continue long terme de la pollution (G. STORA)	FAO
ITA 07 Dipt. Protezione Ambientale, CNEN Rome	Data collection, application and development of methods for the assessment of modifications in ecosystems (G. ZURLINI)	FAO
ITA 08 Inst. di Zoologia Univ. Genova	Evaluation of the conditions of some Posidonia meadows in the North-Western Mediterranean sea and eventual effects of pollutants on the associated fauna (M. SARA)	FAO
ITA 13 Ist. di Zoologia Fac. di Scienze Univ. di Roma Roma	Effects of thermal effluent on sea-shore organisms at Torvaldaliga (Civitavecchia-Roma) (E. TARAMELLI-RIVOSECCHI)	FAO
ITA 22 Ist. di Scienze Univ. Catania	Relations between pollutions and biocoenoses in the roadstead of Augusta (Eastern Sicily) (S. DI GERONIMO)	FAO
ITA 24 Inst. of Zoology Univ. of Pisa	Effects of pollution on the benthos (G. COGNETTI)	FAO

List of Ongoing Projects (Cont'd ...8)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'I'</u> (Cont'd)		
ITA 26 Istit. di Scienze Ambientali Marine Gruppo Ricerca Oceanologica Univ. di Genova Genova	Conditions actuelles des biocoenoses benthiques du plateau ligure et des îles de l'Archipel toscan (G. ALBERTELLI)	FAO
LEB 01 CNRS Beyrouth	Modifications des écosystèmes par la pollution (S. LAKKIS)	FAO
TUN 01 Service Biologie Inst. Pasteur Tunis	Modification des écosystèmes par la pollution (C. CAPAPE)	FAO
TUR 07 Inst. of hydrob. Ege Univ. Bornova/Izmir	The effects of pollution on the benthic and pelagic ecosystems in the Bay of Izmir (A. KOCATAS)	FAO
YUG 02 Inst. of Oceanogr. Split	Pollution-induced ecosystem modification in the coastal area of the Central Adriatic (D. REGNER)	FAO
YUG 07 Inst. of Oceanogr. Split	Investigation of zooplakton communities in the Northern Adriatic Sea (A. BENOVIC)	FAO
YUG 19 Rudj. Boskovic Institute Rovinj	Monitoring of ecosystems modifications in the Northern Adriatic sea induced by eutrophication and anthropogenic activities (D. ZAVODNIK)	FAO

List of Ongoing Projects (Cont'd ...9)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'K'</u>		
EGY 03 UNARC Alexandria	Biogeochemical cycles of specific pollutants Survival of pathogens in the Mediterranean (F. EL-SHARKAWI)	WHO OMS
EGY 07 UNARC Alexandria	Biogeochemical cycles of specific pollutants (I.H. EL-SOKKARY)	FAO
FRA 06 Fac. des Sciences St. Jérôme Marseille	Contrôle des métaux lourds dans les écosystèmes littoraux et les chaînes alimentaires marines (N. VICENTE)	FAO
ITA 01 Dipt. Protezione CNEN Rome	Modelling of the biogeochemical cycle of mercury in the Mediterranean (M. BERNHARD)	FAO
ITA 25 Inst. Anatomia Comparata Univ. Siena	Contaminants in resident and migratory birds of the Mediterranean basin (A. RENZONI)	FAO
ITA 36 Ist. Anatomia Comparata Univ. Siena	Biogeochemical cycle of mercury and selenium (A. RENZONI)	FAO
TUN 03 Inst. Pasteur Tunis	Survie des entero-bactéries pathogènes (Salmonella), des Vibrions (NAG vibrions et vibrions parahémolyticus) et des germes marqueurs de pollution fécale (Coliformes et Streptocoques fécaux) en relation avec certains facteurs physico-chimiques (pH, température, salinité, oxygène dissous DBO ₅ , DCO du milieu marin) (S. JEKOV)	WHO OMS

List of Ongoing Projects (Cont'd ...10)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'K'</u> (Cont'd)		
TUR 03 Marine Sc. Inst. METU, Erdemli	Biogeochemical cycle of Mercury in the North-eastern Mediterranean - Southern coast of Turkey (I. SALIHOGLU)	FAO
TUR 09 Inst. Marine Sc. 9 Eylül Univ. Bornova/Izmir	Pollutant transfer process and biogeochemical cycles of specific pollutants at the selected location of Candarli Gulf, Turkey (E. IZDAR)	FAO
YUG 11 Center for Marine Research Rudjer Boskovic Institute, Zagreb	Anthropogenic influence on the distribution and fluxes of lead species into the marine environment (M. BRANICA)	IAEA AIEA
YUG 20 Rud.Boskovic Inst. Rovinj	Survival of some intestinal pathogens in the marine environment (D. FUKS)	WHO OMS
YUG 22 Inst. Biological & Medical Invest. of SR Montenegro, Titograd; Dept. of Marine Biology and Oceanography, Kotor; and Inst.Boris Kidric - Vinca Belgrade	Accumulation and Transport of Radionuclides in the Biota of the South Adriatic Region (N. AJDACIC)	IAEA AIEA

List of Ongoing Projects (Cont'd ...11)

INSTITUTE INSTITUT	TITLE OF PROJECT AND PRINCIPAL INVESTIGATOR TITRE DU PROJET ET NOM DU CHERCHEUR PRINCIPAL	AGENCY ORGANISME
<u>ACTIVITY 'L'</u>		
FRA 05 C.N.R.S. Gif-sur-Yvette	Air/sea and water column metallic pollutant transfer in the Mediterranean Sea (P. BUAT-MENARD)	IAEA/WMO AIEA/OMM
FRA 07 Univ. Perpignan	Rôle des couches néphéloïdes et des colloïdes organiques dans le transport des métaux lourds (Pb, Cd, Cu, Zn) du milieu estuarien au milieu marin. Exemple du Rhône (A. MONACO)	IOC COI
GRE 04 Univ. of Athens	Study of the transport of particles (measurement of the flux of particles from surface coastal and estuarine waters; use of particle interceptor traps) (M.J. SCULLOS)	IOC COI
ITA 16 Water Quality Br. CNR Rome	Study of factors controlling the fate and effects of some pollutants carried out from the Tiber river to the sea (T. LA NOCE)	IOC COI
ITA 32 Gruppo Ricerca Oceanologica - Genova 16132 Genova	Chemistry and dynamics in the transport of heavy metals in particulate matter in Ligurian and Tyrrhenian sea (R. FRACHE)	IAEA
YUG 10 Center for Marine Research Rudjer Boskovic Institute Zagreb	The role of sediments and suspended matter in the transfer of selected pollutants in the Northern Adriatic Basin (V. PRAVDIC)	IAEA AIEA

ANNEX II

Forms to be Used for Submission of Project Proposals

RESEARCH CONTRACT PROPOSAL/PROPOSITION DE CONTRAT DE RECHERCHE



PROGRAMME DES NATIONS UNIES POUR
L'ENVIRONNEMENT
UNITED NATIONS ENVIRONMENT PROGRAMME
Unité de Coordination du Plan
d'action pour la Méditerranée
Co-ordinating Unit for the
Mediterranean Action Plan

Leoforos Vassileos Konstantinou 48
11635 Athens - GREECE
Tel. 7244536 Telex: 222611 MEDU GR
Cables: UNITERRA ATHENS

1. NAME AND ADDRESS OF INSTITUTE/NOM ET
ADRESSE DE L'INSTITUT:

2. DEPARTMENT WHERE RESEARCH IS TO
BE PERFORMED
DEPARTEMENT OU LES TRAVAUX SERONT
EXECUTES:

3. TITLE OF PROJECT/TITRE DU PROJET:

4. PROJECT PERSONNEL/PERSONNEL CHARGE DE L'EXECUTION DU PROJET:

A. Principal Investigator/
Chercheur responsable du travail:

(Name/Nom)

(Position held/poste actuel)

Academic degrees held/Titres universitaires:

Previous experience/Travaux antérieurs:

Recent publications (within the past 2-3 years)/Publications récentes (deux
ou trois dernières années):

5. SCIENTIFIC BACKGROUND OF THE PROJECT/CONTEXTE SCIENTIFIQUE DU PROJET

- A. Related Work already performed or in progress at Institute/Travaux s'y rapportant déjà exécutés ou en cours d'exécution à l'Institut:

B. References to relevant Literature/Documentation publiée sur la question:

6. SCIENTIFIC SCOPE OF THE PROJECT/ PORTEE SCIENTIFIQUE DU PROJET:

A. Research Objectives/Objectifs de la recherche:

B. Detailed workplan for first year, including proposed methods or techniques/Plan de travail détaillé pour la première année, avec indication des méthodes ou techniques que l'on se propose d'utiliser:

7. PLEASE LIST FACILITIES (buildings, equipment - Including type and name of manufacturer, and materials) PRESENTLY AVAILABLE WHICH WOULD BE USED FOR THE PROJECT/INDIQUEZ LES MOYENS (bâtiments, matériel - en précisant le modèle, et le nom du constructeur - et fournitures) DEJA DISPONIBLES QUI SERVIRAIENT A L'EXECUTION DU PROJECT:

8. BUDGET. Estimate for first year of project (please show all amounts in US (\$)/BUDGET. Estimations pour la première année d'exécution du projet (indiquer tous les montants en dollars):

Rate of exchange used/Taux de change appliqué:

\$ 1/1 dollar =

A. Project personnel and estimated percentage of total working time to be devoted to project/Personnel affecté au projet et estimation, en pourcentage, du total des heures de travail qui seront consacrés au projet:		Estimated project costs/ Coûts estimatifs du projet
Personnel/Personnel	Time/Temps (%)	
1.		\$
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
Sub-total/Total partiel:		\$

B. Additional Equipment/Matériel supplémentaire:

Item/Article	Estimated project costs Coûts estimatifs du projet
1.	\$
2.	
3.	
4.	
5.	
6.	
Sub-total/Total partiel:	\$

C. Expendable Supplies/Fournitures consommables:

Item/Article	Estimated project costs Coûts estimatifs du projet
1.	\$
2.	
3.	
4.	
5.	
6.	
7.	
8.	
Miscellaneous supplies/Fournitures diverses	
Sub-total/Total partiel:	\$

D. Travel/transportation (please indicate for what purpose/indiquer à quelle fin):

Destination and means of travel or transport/ Destination et mode de voyage ou de transport	Estimated project cost / Coûts estimatifs du projet
1.	\$
2.	
3.	
Sub-total/Total partiel:	\$

E. Other Costs/Autres dépenses :

Item/Article	Estimated project cost / Coûts estimatifs du projet
1.	\$
2.	
3.	
Sub-Total/Total partiel	\$

F. Total - All Costs (Budget Items A - E)/Total - Toutes dépenses :
 (rubriques A - E du budget)

Total estimated project cost/Coût estimatif total du projet \$

\$

=====

9. SUMMARY OF CONTRIBUTION REQUESTED FROM MEDITERRANEAN TRUST FUND
(MTF)/SOMMAIRE DES CONTRIBUTIONS DEMANDEES AU FONDS D'AFFECTATION SPECIAL
POUR LA MEDITERRANEE (M.T.F.):

9.1 Salaries/Salaires

(Indicate which items by referring to numbers 1 to 10 of 8 A)/
(Indiquer quels articles du 1 à 10 du 8):

_____ \$ _____

9.2 Equipment/Equipement

i) expendable (Indicate which items by referring
to numbers 1 to 6 of 8 B)/Consommable (Indiquer
quels articles en se référant aux nos 1 à 6 de
8 B):

_____ \$ _____

ii) non-expendable (Items costing more than \$250)
(Indicate which items by referring to numbers
1-8 of 8 C)/non consommable (des articles dont
la valeur est plus de \$ 250) (Indiquer quels
articles en se référant aux nos 1 à 8 du 8 C):

_____ \$ _____

9.3 Travel/Voyages (Indicate which items by referring to
numbers 1 to 3 of 8 D)/(Indiquer quels articles en
se référant aux nos 1 à 3 du 8 D):

_____ \$ _____

9.4 Other/Autres (Indicate which items by referring to
numbers 1 to 3 of 8 E)/(Indiquer quels articles en
se référant aux nos 1 à 3 du 8 E):

_____ \$ _____

Total amount requested from MTF/Contribution totale du
MTF:

_____ \$ _____

10. MTF CONTRIBUTIONS CAN BE PAID IN CASH OR IN KIND. CASH PAYMENTS ARE MADE BY CHEQUE PAYABLE TO THE ORDER OF THE INSTITUTE OR BY BANK TRANSFER BOTH IN LOCAL CURRENCY. IF CONTRIBUTION IN LOCAL CURRENCY IS NOT ACCEPTABLE EXPLAIN BELOW. INDICATE FORM OF PAYMENT PREFERRED FURNISHING THE RELEVANT DETAILS E.G. ACCOUNT NO./LA CONTRIBUTION DU FONDS D'AFFECTION SPECIAL MEDITERRANEEN PEUT ETRE FAITE EN ARGENT LIQUIDE OU EN MATERIEL. PAIEMENT EN ARGENT LIQUIDE SE FAIT EN MONNAIE LOCALE PAR CHEQUE A L'ORDRE DE L'INSTITUT OU PAR TRANSFERT BANCAIRE. SI LA CONTRIBUTION EN MONNAIE LOCALE N'EST PAS ACCEPTABLE LE SPECIFIER CI-DESSUS. INDIQUER FORME DE PAIEMENT PREFEREE EN FOURNISSANT DETAILS PERTINENTS, PAR EX. NO. DE COMPTE BANCAIRE;

11. DOES INSTITUTE HAVE INDEPENDENT LEGAL PERSONALITY?/
L'INSTITUT A-T-IL LA PERSONNALITE JURIDIQUE? yes/Oui No/Non

If not, with whom would contract be made?/
Dans la négative, avec qui le contrat sera-t-il passé?

12. ON WHAT DATE IS INSTITUTE PREPARED TO BEGIN PROJECT?/
A QUELLE DATE L'INSTITUT SERA-T-IL PRET A ENTREPRENDRE L'EXECUTION DU PROJET?

13. PRINCIPAL INVESTIGATOR/LE CHERCHEUR RESPONSABLE DU TRAVAIL:		HEAD OF INSTITUTE/LE DIRECTEUR DE L'INSTITUT:	
Signature/Signature	Date/Date	Signature/Signature	Date/Date

ANNEX III

List of National Co-ordinators

ALGERIA

Mr. Smaïl KRIM
Maitre-Assistant en Microbiologie à
l'Université d'Alger
c/o Ministère Algérien des Affaires
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Academy of Scientific Research
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EUROPEAN ECONOMIC COMMUNITY

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FRANCE

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Chargé de Mission à la Direction de la
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Monsieur Joseph NAGGEAR
Président du Conseil national de la
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Beirut

Tel: 934 763, 830 125
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Mr. Francis M.E. LA FERLA
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Bighi
Kalkara

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Telex: 469796 GENTEL MC

MOROCCO

Monsieur Mohamed MALITI
Chef de la Division Environnement
Membre du Conseil national de l'environnement
Ministère de l'Habitat et de l'Aménagement
du Territoire
Rabat-Chellah

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SPAIN

Monsieur Joaquín ROS
Subdirector General Medio Ambiente
Ministerio de Obras Publicas y Urbanismo
Departamento de Medio Ambiente
Madrid

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Telex: 22325 MINO-E

SYRIA

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Directeur
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