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CO-ORDINATED MEDITERRANEAN POLLUTION MONITORING AND

RESEARCH PROGRAMME (MED POL)

ADMINISTRATIVE REPORT:

FEBRUARY 1975 - SEPTEMBER 1978

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INTRODUCTION

The Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL) was launched as part of the Mediterranean Action Plan initiated at the Intergovernmental Meeting on the Protection of the Mediterranean, convened by UNEP in Barcelona from 28 January to 4 February 1975¹⁾. The activities approved at this meeting were later elaborated in detail, expanded and modified following the recommendations and the decisions of numerous expert and intergovernmental meetings, referred to in the text of this document.

This document is only an administrative report on the implementation of the MED POL and MED POL-related activities, covering the period February 1975 - September 1978. The description of the MED POL programme, as well as the scientific results obtained until September 1978, are contained in documents UNEP/IG.14/INF.3 and UNEP/IG.14/INF.5 respectively.

BACKGROUND

The 1975 Intergovernmental Meeting in Barcelona approved, as part of MED POL, seven pilot projects:

- MED POL I : Baseline Studies and Monitoring of Oil and Petroleum Hydrocarbons in Marine Waters;
- MED POL II : Baseline Studies and Monitoring of Metals, Particularly Mercury and Cadmium, in Marine Organisms;
- MED POL III : Baseline Studies and Monitoring of DDT, PCBs and Other Chlorinated Hydrocarbons in Marine Organisms;
- MED POL IV : Research on the Effects of Pollutants on Marine Organisms and their Populations;
- MED POL V : Research on the Effects of Pollutants on Marine Communities and Ecosystems;

MED POL VI : Problems of Coastal Transport of Pollutants;

MED POL VII : Coastal Water Quality Control.

Since then, the following projects have been added, or are considered to be added to MED POL, as collateral or supporting activities:

MED POL VIII: Biogeochemical Studies of Selected Pollutants in the Open Waters of the Mediterranean;

MED POL IX : Role of Sedimentation in the Pollution of the Mediterranean Sea;

MED POL X : Pollutants from Land-Based Sources in the Mediterranean;

MED POL XI : Intercalibration of Analytical Techniques and Common Maintenance Services;

MED POL XII : Input of Pollutants into the Mediterranean Sea Via Atmosphere;

MED POL XIII: Modelling of Marine Systems.

Under the overall co-ordination of UNEP, these projects are carried out by co-operative networks of national institutions designated by their national authorities as participants in the programme. The day-to-day guidance to these institutions is provided by specialized bodies of the United Nations system which are assisted, in some projects, by national institutions designated as Regional Activity Centres (RAC) for these projects.

PROGRESS IN IMPLEMENTATION

MED POL I : BASELINE STUDIES AND MONITORING OF OIL AND PETROLEUM HYDROCARBONS IN MARINE WATERS (IOC/WMO/UNEP)

The operational document for this pilot project was developed at a joint IOC/WMO/UNEP Consultation (Msida, 8-13 September 1975)²⁾ which was attended by 36 participants from 12 Mediterranean countries.

At present 14 countries³⁾ have expressed a wish to participate in the pilot project and nominated 28 national laboratories as participants in the network dealing with the pilot project (Annex I).

The work on this project was started during 1976 and, by the end of November 1978, 13 research agreements had been signed with institutions designated as participants in the project, 3 cleared and are ready for signature, while the remaining 12 research agreements are still being negotiated.

On the basis of the research agreements signed, a training programme has been initiated. To date a total of 20 m/m training has been granted, of which, by the end of November 4 m/m have been completed. The participating laboratories are aided by field and laboratory equipment, such as fluorescence spectrophotometers, neuston nets, sampling bottles and solvents.

Methodological guidelines for the implementation of the project, based on those prepared for IGOS, have been developed^{4), 5)}.

The methodological questions related to the project and the preliminary results obtained through the pilot project were presented and reviewed at the IOC/WMO/UNEP Mid-term Review Meeting (Barcelona, 22 - 26 May 1977)⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)^{8), 9)}, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)¹⁰⁾.

MED POL II : BASELINE STUDIES AND MONITORING OF METALS,
PARTICULARLY MERCURY AND CADMIUM, IN MARINE
ORGANISMS (FAO(GFCM)/UNEP)

The operational document for this pilot project was formulated at a joint FAO(GFCM)/UNEP Expert Consultation (Rome, 23-27 June 1975)¹¹⁾ attended by 35 participants from 13 Mediterranean countries.

Fifteen countries¹²⁾ have expressed a wish to take part in the pilot project and nominated 35 national laboratories as participants in the network dealing with the pilot project (Annex I).

The work on this pilot project started in late autumn 1975 and, by the end of November 1978, 30 research agreements had been signed, 1 cleared and ready for signature, while the remaining 4 research agreements are still being negotiated with institutions designated as participants in the project.

As part of the pilot project's implementation, a training programme has been initiated. To date a total of 45 m/m has been granted, of which by the end of November 1978, 25 m/m have been completed. In

addition, participating research centres have already received equipment (11 atomic absorption spectrophotometers and other instruments) and material to facilitate their participation in the pilot project.

Guidelines for sampling and analyses of biological material and for the use of biological accumulators in marine pollution monitoring have been prepared¹³⁾,¹⁴⁾,¹⁵⁾ for the use of participants in the pilot project.

A common reference methodology for analytical procedures to be followed in measuring the concentration of metals was adopted by participants in the project. The comparability of the results obtained by the various research centres is assured by a mandatory and permanent intercalibration exercise through which reference materials and standards are distributed to the participants in the project.

The methodological questions related to the project and the results obtained from the first phase of the pilot project were presented and reviewed at the FAO(GFCM)/UNEP Mid-term Expert Consultation (Dubrovnik, 2 - 6 May 1977)¹⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)¹⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)¹⁸⁾,¹⁹⁾, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)²⁰⁾.

MED POL III : BASELINE STUDIES AND MONITORING OF DDT, PCBs
AND OTHER CHLORINATED HYDROCARBONS IN MARINE
ORGANISMS (FAO(GFCM)/UNEP)

The operational document for the pilot project was developed by the same Expert Consultation¹¹⁾ that formulated the preceding pilot project.

Currently, 14 countries¹⁷⁾ have nominated 29 national laboratories to participate in the pilot project (Annex I).

The first samples to be analysed were collected in late autumn 1975 and, by the end of November 1978, 22 research agreements had been signed, 1 cleared and is ready for signature, while the remaining 6 research agreements are still being negotiated.

Since not too many Mediterranean research institutions have been able to analyse marine samples for chlorinated hydrocarbons, a total of 34 m/m training was granted to the participants in the pilot project and by the end of November 1978, 8 m/m of training had been carried through. Eight gas chromatographs have been delivered to selected Mediterranean laboratories in addition to other types of equipment and material necessary for monitoring of chlorinated hydrocarbons.

Guidelines for sampling and analyses of biological material and for the use of biological accumulators have been prepared¹³⁾,¹⁴⁾,¹⁵⁾ for the use of participants in the pilot project.

A common reference methodology for analytical procedures to be followed in measuring the concentration of chlorinated hydrocarbons was adopted by participants in the project. The comparability of the results obtained by the various research centres is assured by a mandatory and permanent intercalibration exercise through which reference materials and standards are distributed to the participants in the project.

Methodological questions and the first results obtained through the project were presented and reviewed at the FAO(GFCM)/UNEP Mid-term Expert Consultation (Dubrovnik, 2 - 6 May 1977)¹⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)¹⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)¹⁸⁾,¹⁹⁾, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)²⁰⁾.

MED POL IV : RESEARCH ON THE EFFECTS OF POLLUTANTS ON MARINE ORGANISMS AND THEIR POPULATIONS (FAO(GFCM)/UNEP)

The operational document for this pilot project was developed at a joint FAO(GFCM)/UNEP Expert Consultation (Rome, 30 June - 4 July 1975)²¹⁾ attended by 25 participants from 13 Mediterranean countries.

At present 13 countries²²⁾ have expressed a desire to participate in the pilot project and nominated 28 national laboratories as participants in the network dealing with the pilot project (Annex I).

The work on this pilot project started in late autumn 1975 and, by the end of November 1978, 16 research agreements had been signed, 3 cleared and are ready for signature, while the remaining 9 research agreements are still being negotiated with institutions designated as participants in the project.

To facilitate the participation of the nominated research centres in the work, a total of 26 m/m training was granted up to November 1978 of which 17 m/m have been completed. Additional assistance provided to the participants included donation of specific laboratory equipment (e.g. research microscopes, analytical balances, and laboratory centrifuges) and material.

Several manuals have been developed^{13), 15), 19)} as guidelines for the participants in the pilot project.

Methodological questions and the preliminary results relevant to this project were presented and reviewed at the FAO(GFCM)/UNEP Mid-term Expert Consultation (Dubrovnik, 9 - 13 May 1977)¹⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)^{8), 9)}, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)¹⁰⁾.

MED POL V : RESEARCH ON THE EFFECTS OF POLLUTANTS ON MARINE COMMUNITIES AND ECOSYSTEMS (FAO(GFCM)/UNEP)

The operational document for this pilot project was formulated at the same Expert Consultation¹¹⁾ that developed the previous pilot project.

At present, 13 countries²⁰⁾ have expressed a wish to participate in the project and nominated 22 national laboratories as participants in the network dealing with the pilot project (Annex I).

The work started in late autumn 1975 and, by the end of November 1978, 14 research agreements had been signed, 1 cleared and is ready for signature, while the remaining 9 research agreements are still being negotiated.

The training programme for participants in this pilot project is under way. Until November 1978, a total of 19 m/m training up to November 1978 was agreed upon of which 5 m/m have already been fulfilled. Further assistance is provided to many of the participants in this project by donation of equipment and material, which include such items as salinometers, dredge samplers, portable pH meters and many others.

The preliminary results of this project and the methodological questions related to it were presented and reviewed at the FAO(GFCM)/UNEP Mid-term Expert Consultation (Dubrovnik, 9 - 13 May 1977)¹⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)^{8), 9)}, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)¹⁰⁾.

MED POL VI : PROBLEMS OF COASTAL TRANSPORT OF POLLUTANTS
(IOC/UNEP)

The operational document for this pilot project was developed in Msida by the same Expert Consultation²⁾ that formulated the pilot project on Baseline Studies and Monitoring of Oil and Petroleum Hydrocarbons in Marine Waters (MED POL I).

At present 13 countries²¹⁾ have expressed a desire to participate in the project and nominated 23 national laboratories as participants in the network dealing with the pilot project (Annex I).

The work on this project started in 1976 and, by the end of November 1978, 10 research agreements had been signed, 3 cleared and are ready for signature, while the remaining 10 research agreements are still being negotiated with institutions designated as participants in the project.

The need for training was early recognized and as an aid to the participants in the project 16 m/m of training were granted up to the end of November 1978, of which 2 m/m have been completed. As a further aid, current meters, salinometers and other types of equipment were, or soon will be, put at the disposal of the institutions participating in the project.

Methodological guidelines for the implementation of the project have been developed⁴⁾.

The first results of the project and the relevant methodological problems were reviewed and discussed at the IOC/WMO/UNEP Mid-term Review Meeting (Barcelona, 23 - 27 May 1977)⁶⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)⁸⁾,⁹⁾, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)¹⁰⁾.

MED POL VII : COASTAL WATER QUALITY CONTROL (WHO/UNEP)

The operational document for this pilot project was prepared at a joint WHO/UNEP Expert Consultation (Geneva, 15-19 December 1975)²²⁾ attended by 35 participants from 15 countries.

At present 13 countries²³⁾ have expressed a desire to participate in the project and nominated 30 national institutions as participants in the network dealing with the pilot project (Annex I).

The work on this pilot project started in late autumn 1976 and, by the end of November 1978, 23 research agreements had been signed, 2 were cleared and ready for signature, while 4 research agreements were still being negotiated.

The training programme for participants in this pilot project is under way. A total of 40 m/m training was approved up to the end of November 1978, of which 6 m/m of individual training have been accomplished. More emphasis was given to group training in the form of seminars and workshops. Assistance to the research centres participating in the pilot project was provided, including laboratory equipment and material.

For the use of participants in the project, guidelines and manuals were prepared and adopted by participants in the project for monitoring the quality of recreational and shellfish growing waters^{(24), (25), (26), (27), (28)}.

Interim microbiological criteria for coastal waters have been adopted by participants in the project and were recommended to be used in assessment of the sanitary quality of recreational waters.

The results of the project and the methodological problems were presented and reviewed at the WHO/UNEP Mid-term Review Meeting (Rome, 30 May - 1 June 1977)⁽²⁹⁾, at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁽⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)^{(8), (9)}, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)⁽¹⁰⁾.

MED POL VIII : BIOGEOCHEMICAL STUDIES OF SELECTED POLLUTANTS IN THE OPEN WATER OF THE MEDITERRANEAN (IAEA/IOC/UNEP)

The project formally started in October 1976 as a specific extension of earlier work carried out by the IAEA International Laboratory of Marine Radioactivity in Monaco.

In addition to the IAEA Laboratory in Monaco, which is the co-ordinator of the project, five research institutions from five Mediterranean countries⁽³⁰⁾ participate in collecting, analysing and interpreting data on pollution of open waters (Annex I).

Five cruises have been completed in the framework of this project by scientists from Egypt, Greece, Israel, Monaco, Spain, Turkey and Yugoslavia and effectively covered all the principal open waters of the Mediterranean, with the major exception of the Adriatic. The

ATLANTIS II cruise from Suez to Malta (14-23 April 1977) collected 36 open ocean samples at various depths and 10 samples of sediments from four stations. The USNS KANE cruise (11-18 April 1977) from Greece to Monaco collected over 100 water samples from the surface down to the bottom. The USNS HAYES undertook a cruise (13-23 June 1977) from Greece to Corsica. The eight-day SHIKMONA cruise from Haifa to Crete (5-12 July 1977) collected water samples, plankton and sediments, and the CORNIDE DE SAAVEDRA completed a cruise (15-26 July 1977) from Civitavecchia, near Rome, to Barcelona.

Under the sponsorship of ICSEM, the CALYPSO visited several Mediterranean countries and made investigations relevant to the pollution of the Mediterranean Sea. The samples obtained by this cruise have been analysed as part of the open water programme.

The scientific programme for a 4-6 month cruise (MED CRUISE) of Mediterranean scientists has been formulated under the co-ordination of the IAEA Monaco laboratory but did not receive the support of the Mediterranean Governments.

The results obtained through MED POL VIII were presented and reviewed at the Mid-term Review Meeting on the Progress of the MED POL and Related Projects of the Mediterranean Action Plan (Monaco, 18 - 22 July 1977)⁷⁾, at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)⁸⁾,⁹⁾, and at the Joint ICSEM/UNEP Workshop on Pollution of the Mediterranean (Antalya, 24 - 27 November 1978)¹⁰⁾.

MED POL IX : ROLE OF SEDIMENTATION IN THE POLLUTION OF THE MEDITERRANEAN SEA (UNESCO/UNEP)

The project was initiated in October 1975 and was partly integrated into the activities carried out under project MED POL X.

Through an expert group meeting in May 1976³¹⁾ the technical details of the project were identified, including the substance to be monitored and a small number of rivers was suggested for sediment sampling.

As assistance to the participants in this project, guidelines were prepared³²⁾ for sampling methods and for the use of selected analytical techniques.

Collection of sediment samples and their analysis has been carried out on a restricted number of rivers. In some cases, sediment samples were sent to the International Laboratory of Marine Radioactivity (IAEA, Monaco), for analysis. In addition, technical and financial assistance is being provided to the countries requesting it.

MED POL X : POLLUTANTS FROM LAND-BASED SOURCES IN THE MEDITERRANEAN
(WHO/ECE/UNIDO/FAO/UNESCO/IAEA/UNEP)

The document specifying all project operations was prepared by a series of inter-agency consultations and agreed upon among the six co-operating agencies and UNEP.

Concurrence of Mediterranean Governments for participation in the project was sought by UNEP in March 1976 and the majority of the riparian countries designated a special contact point for this task. UNEP focal points provided the contact in the remaining countries.

The project was a joint undertaking to which each co-operating agency contributed according to its field of expertise and geographical representation as follows:

- municipal waste sources, including tourist development areas, disposal and management practices: WHO;
- industrial waste sources, disposal and management practices: ECE and UNIDO, respectively;
- assessment of pollution stemming from agricultural run-off: FAO;
- waste loads carried by rivers as well as the contribution of suspended sediments: UNESCO;
- the amount of radio-active discharges in the Mediterranean: IAEA.

During the first phase of the project, ending October 1976, common methodology was developed for the collection of compatible data from Mediterranean countries. This includes standard forms for reporting on municipal, industrial and agricultural pollution sources as well as on rivers and nuclear installations.

During the second phase of the project, ending July 1977, sectoral surveys of existing information on all the above-listed categories of pollution sources were being conducted in almost all countries concerned, either directly through collaborating national institutions or with the assistance of consultant missions. Detailed source inventories have been established which will contribute to the assessment of the contribution of pollutants from land-based sources to the total pollution load of the Mediterranean.

A comprehensive summary report providing a quantitative picture of all waste sources and pollutant categories for the entire basin was prepared, reviewed by the Meeting of Experts on Pollutants from Land-Based Sources (Geneva, 19 - 23 September 1977) and presented in

its final form to the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, January 1978)³³).

MED POL XI : INTERCALIBRATION OF ANALYTICAL TECHNIQUES AND COMMON MAINTENANCE SERVICES (IAEA/FAO/IOC/UNEP)

This project is a basic and vitally important supporting activity to a large number of MED POL projects.

Intercalibration

The homogeneous samples for the intercalibration of analytical techniques used in monitoring metals and chlorinated hydrocarbons were made available for the participants in MED POL II and MED POL III by the IAEA International Laboratory of Marine Radioactivity in Monaco which acts as an intercalibration centre.

The MA-M-1 (oyster) sample was distributed in 1976; the SP-M-1 (sea-plant) and MA-A-1 (copepod) samples in 1977 and MA-A-2 (fish) sample in 1978. The status, as of 15 September 1978 for reporting the results of participating Mediterranean research centres in MED POL II and MED POL III are given in Annex II to this report.

The intercalibration exercise on the MA-M-1 (oyster) sample was completed in 1977, that on SP-M-1 (sea-plant) and MA-A-1 (copepod) is near completion and that on MA-A-2 (fish) is in the result reporting stage. The summary of the results of the evaluation is included in document UNEP/IG.14/INF.5.

Participants in MED POL I are taking part in the intercomparison exercise within the framework of the IGOSS Petroleum Monitoring Pilot Project which started in January 1977. Chrysene is distributed to all participants in MED POL I through the Regional Activity Centre for MED POL I in Malta, as reference material for intercomparison of dissolved/dispersed petroleum hydrocarbons.

Common maintenance services

An electronics service engineer, recruited in October 1976 and operating from the IAEA Monaco Laboratory, was trained at the factories producing the equipment (atomic absorption spectrophotometers, gas chromatographs, recording current meters) which was put at the disposal of selected participants in MED POL.

Through regular visits of the service engineer to research centres where these instruments have been installed, care has been taken of their proper installation and routine maintenance. In addition to these regular routine visits, there have been frequent visits based on emergency calls from several centres for urgent repairs.

The service of the engineer was not limited to the instruments installed through MED POL, but was also available for the reparation of other instruments used in the MED POL projects.

Until mid-November 1978, through the assistance of the common maintenance services, ten atomic absorption spectrophotometers and six gas chromatographs have been installed at research centres in various parts of the Mediterranean. Twenty-five visits have been paid by the maintenance engineer to fifteen institutions in Algeria, Cyprus, Greece, Israel, Malta, Morocco, Tunisia, Turkey and Yugoslavia (Annex II).

MED POL XII : INPUT OF POLLUTANTS INTO THE MEDITERRANEAN SEA VIA ATMOSPHERE (WMO/IAEA/WHO/UNIDO/ECE/UNEP)

This project, suggested by several Mediterranean expert groups⁷⁾ and intergovernmental meetings⁹⁾, is still in the planning phase.

The first outline of a possible approach to the problems was formulated by the World Meteorological Organization (WMO) in consultation with IAEA, ECE, UNIDO, WHO and UNEP.

MED POL XIII : MODELLING OF MARINE SYSTEMS IN THE FRAMEWORK OF MED POL (UNESCO/FAO/IOC/UNEP)

Several scientific and expert group meetings on ecosystem modelling^{34), 35)} have been convened since 1973 by UNESCO and this activity was expanded after 1976 with assistance from UNEP. At the Expert Consultation in Paris, working groups were proposed, each concerned with one specific region in the Mediterranean. The group for the north-western Mediterranean gathered at Banyuls-sur-Mer, January 1977, and elaborated the framework in which studies of marine processes would have to be undertaken.

At the Mid-term Review Meetings on individual pilot projects of MED POL in Dubrovnik (May 1977)¹⁶⁾, Barcelona (May 1977)⁸⁾ and Monaco (July 1977)⁷⁾, it was recommended that an interdisciplinary task team should be created to formulate conceptual models for the most critical pollutants in the Mediterranean, to advance these to the level of mathematical models for certain Mediterranean areas by using data generated in the various pilot projects of the Mediterranean Action Plan, and to test their predictive capabilities as a management tool.

Based on the guidance received at the Intergovernmental Review Meeting of Mediterranean Coastal States on the Mediterranean Action Plan (Monaco, 9 - 14 January 1978)⁹⁾, an outline of a project on modelling has been drawn up jointly with UNESCO. The project focuses attention on hydrodynamic, biogeochemical and ecosystem modelling.

INSTITUTIONAL AND FINANCIAL ARRANGEMENTS

The institutional arrangements relevant to the described projects are described in document UNEP/IG.14/INF.3.

The financial support to the same projects is provided from various sources:

- UNEP (indirectly through joint projects with the specialized bodies of the United Nations system responsible for the implementation of the project and directly through internal UNEP projects);
- specialized bodies of the United Nations system (mainly in the form of services and staff time);
- Governments of the Mediterranean States (as direct support to their national institutions participating in the projects);
- national institutions participating in the project (as staff time, services, shiptime, equipment and materials).

While it is difficult to provide precise figures for the financial support provided to the projects from the Governments of the Mediterranean States and from the institutions participating in the projects, the contribution from UNEP and the specialized bodies of the United Nations system are listed in Table 1 of Annex IV to the document UNEP/IG.14/4.

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- 28) Monitoring of Recreational Coastal Water Quality and Shellfish Culture Areas. Report of a Joint WHO/UNEP Seminar (Rome, 4 - 7 April 1978). WHO 1978.
- 29) Mid-term Review of the Joint WHO/UNEP Co-ordinated Pilot Project on Coastal Water Quality Control in the Mediterranean. Report of the meeting of principal investigators of collaborating laboratories (Rome, 30 May - 1 June 1977). WHO 1977.
- 30) France, Greece, Israel, Malta and Spain
- 31) Pollutants from Land-Based Sources in the Mediterranean: Pollutants entering the Mediterranean through rivers (UNESCO/UNEP Meeting of Experts, Paris, 17 - 21 May 1976). UNESCO, 1976
- 32) Role of Sedimentation in the Pollution of the Mediterranean Sea: Assessment of Knowledge and Development of Guidelines (UNESCO/UNEP Meeting of Experts, Rome, 20 - 23 December 1976). UNESCO, 1977.
- 33) Pollutants from Land-Based Sources in the Mediterranean. (Report prepared in collaboration with ECE, UNIDO, FAO, UNESCO, WHO, IAEA). UNEP/IG.11/INF.5. UNEP 1977.
- 34) Marine Ecosystem Modelling in the Eastern Mediterranean: Report of a UNESCO Workshop held in Alexandria, 2 - 8 December 1974. UNESCO Reports in Marine Science No. 1. UNESCO 1977.
- 35) Marine Ecosystem Modelling in the Mediterranean: Report of the Second UNESCO Workshop on Marine Ecosystem Modelling. (Dubrovnik, 18 - 22 October 1976). UNESCO Reports in Marine Science No. 2. UNESCO 1977.

PARTICIPANTS IN THE CO-ORDINATED MEDITERRANEAN POLLUTION
MONITORING AND RESEARCH PROGRAMME (MED POL)

This Annex contains the reproduction of computerized information on the participants in the pilot projects of the Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL) and an information on the Regional Activity Centres (RAC) for MED POL projects.

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INFORMATION ON PARTICIPANTS IN MED POL AND RELATED PROJECTS

PARTICIPATING INSTITUTION	PROJECT	PRINCIPAL INVESTIGATOR	STATUS OF AGREEMENT	STARTING DATE OF WORK
<u>ALGERIE</u>				
Centre de Recherches océanographiques et des Pêches Jetée Nord B.P. 90 ALGER	Med II	M. A. Aissi	signed 18.10.76	Sept. 1976
tel: 62.73.11, 62.66.59	Med V	Dr. R. Semroud	signed 18.10.76	Jan 1977
Directeur: Dr. Rachid Semroud	Med XI	intercalib. for Med II		oyster, sea-plant, copepod and fish analyses reported
	RAC V	Dr. R. Semroud	signed 23.5.77	
<u>CYPRUS</u>				
Fisheries Department Ministry of Agriculture and Natural Resources Tasmatarchou Poulion 5-7 NICOSIA	Med I	Mr. A. Demetropoulos	signed 23.4.77	May 1976
tel: 021-403279	Med II	Mr. A. Demetropoulos	signed 11.8.76	Sept. 1976
Mr. Andreas Demetropoulos Fisheries Officer	Med III	Mr. A. Demetropoulos	signed 20.12.77	after comp- letion of training and installation of equipment
	Med IV		negotiating	
	Med V	Mr. A. Demetropoulos	signed 11.8.1976	March 1976
	Med VI	Mr. A. Demetropoulos	signed 29.6.77	Nov. 1976
	Med XI	intercalib. for Med II		sea-plant, copepod analyses reported
<u>EEC</u>				
Centre Commun de Recherche (C.C.R.) d'Ispra Communauté Economique Européenne Rue de la Loi 200 8-1049 Bruxelles BELGIUM	Med			
tel: 735.00.40 / 735.80.40				
Directeur Général: M. Villani				

EGYPT

Institute of Oceanography
and Fisheries
Mediterranean Branch
Kavet Bey
ALEXANDRIA

tel: 801-553, 801-449

Deputy Director:
Dr. Talaat Hasnem

Med I	Dr. S.D. Wanby	signed 20.3.77	Jan. 1977
----------	-------------------	-------------------	-----------

Med II	Dr. H.I. Emara	signed 23.1.77	Dec. 1976
-----------	-------------------	-------------------	-----------

Med III	Dr. M. M. Abbas Aly	signed 23.1.77	Dec. 1976
------------	------------------------	-------------------	-----------

Med IV	Dr. H.H. Saleh	signed 23.1.77	Dec. 1976
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Med V	Dr. M. L. El-Henyawi	signed 23.1.77	Dec. 1976
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Med VI	Dr. M.A. Gerges	signed 20.3.77	May 1976
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Med XI	intercalib. for Med II		
-----------	---------------------------	--	--

intercalib.
for Med III

RAC VI	Dr. M.A. Gerges	signed 14.11.77	
-----------	--------------------	--------------------	--

Centre for Post-graduate Studies
and Research
Alexandria University
Horreya Avenue - Shatby
P.O. Box 832
ALEXANDRIA

tel: 22908, 25007

Director:
Prof. A. R. El-Sadr

Med I	Dr. I.S. El-Kholy Dr. S. El-Adawy	negotiating	
----------	--	-------------	--

Med II	Prof.Dr. I.El-Sokkary	negotiating	
-----------	--------------------------	-------------	--

Med III	Prof.Dr.A.H. El-Sebae	negotiating	
------------	--------------------------	-------------	--

Med IV	Prof.Dr. A.Ezzat	negotiating	
-----------	---------------------	-------------	--

Med V	Prof.Dr. Y.Halim	negotiating	
----------	---------------------	-------------	--

Med VI	Prof.Dr.S.H. Sharaf-El-Din	negotiating	
-----------	-------------------------------	-------------	--

Med VII	Prof.Dr.F.M. El-Sharkawi	signed 28.9.78	May 1978
------------	-----------------------------	-------------------	----------

Med XI	intercalib. for Med II		
-----------	---------------------------	--	--

intercalib.
for Med III

FRANCE

Laboratoire de Chimie
appliquée à l'expertise
Faculté de Pharmacie,
Université de Montpellier I
Avenue Charles Flahault
8.P. 1103
34060 MONTPELLIER, CEDEX
tel: (67) 635582

Directeur:
Prof. Robert Mestres

Med I	Dr. C. Causse	signed 15.5.77	Nov 1975
Med III	Prof. R. Mestres	signed 22.12.76	Dec. 1976
Med XI	intercalib. for Med III		analyses reported

Laboratoire central
d'Hygiène alimentaire
Direction des Services
vétérinaires
Ministère de l'Agriculture
43 Rue de Dantzig
75015 PARIS
tel: 5318210

Directeur:
Dr. Jean Pantaléon

Med II	M. G. Cumont	signed 14.4.77	March 1977
Med XI	intercalib. for Med II		sea-plant, copepod analyses reported

Laboratoire d'Océanographie
physique
Muséum d'Histoire naturelle
43-45 Rue Cuvier
75231 PARIS, CEDEX
tel: 707.85.44, 707.19.00

Directeur:
Prof. Henri Lacombe

Med VI	Prof. B. Saint-Guilly	negotiating	
-----------	--------------------------	-------------	--

Centre d'Etudes et de
Recherches de Biologie
et d'Océanographie
médicale (CERBOM)
Parc de la Côte
Avenue Jean Lorrain 1
06300 NICE
tel: 893292-897249

Directeur:
Dr. Maurice Aubert

Med VII	Dr. A. Fruchart	signed 2.8.78	June 1978
------------	--------------------	------------------	-----------

Station zoologique de
Villefranche-sur-Mer
Station marine de
Villefranche-sur-Mer
La Darze
06230 VILLEFRANCHE-SUR-MER
tel: (93) 807165, 808112

Directeur:
Prof. Paul Bougis

Med I		negotiating	
Med VI		negotiating	

Laboratoire de Chimie analytique
et Toxicologie
Faculté de Pharmacie
Université de Montpellier I
Avenue Charles Flahault
8.P. 1103
MONTPELLIER, CEDEX
tel: (67) 635432

Directeur:
Prof. Suzanne Brun

Med II	Prof. S. Brun	signed 28.12.76	Dec. 1976
-----------	------------------	--------------------	-----------

FRANCE (Cont.)

Institut français du Pétrole
1 et 4 Avenue de Bois Préau
92502 RUEIL MALMAISON

tel: 967.11.10, 794.02.14

Directeur:
Dr. Jean-Claude Balaceanu

Med
I

M. P.
Renault

signed
29.3.77

Jan. 1977

Institut scientifique et technique
des Pêches maritimes (ISTPM)
Rue de l'Île d'Yeu
S.P. 1049
44037 NANTES CEDEX

tel: (40) 749981

Directeur:
Dr. Claude Maurin

(I.S.T.P.M.)
Centre de Sète
1 Rue Jean Vilar
34200 SETE

tel: (67) 742299

Chef du Centre:
Dr. Yves Fauvel

Med
I

negotiating

Med
II

Dr. Y.
Thibaud

signed
7.9.76

Sept. 1976

Med
III

Dr. C.
Alzieu

signed
7.9.76

Sept. 1976

Med
VII

cleared
19.6.78

Med
XI

intercalib.
for Med II

oyster,
sea-plant,
copepod and
fish analyses
reported

intercalib.
for Med III

analyses
reported

Laboratoire Arago
66650 Banyuls-sur-Mer

tel: 383009, 383119, 383040

Directeur:
Dr. Jacques Soyer

Med
VI

Dr. J.
Soyer

signed
3.5.77

Jan. 1977

Station marine d'Endoume
et Centre d'Océanographie
Rue de la Batterie-des-Lions
13007 MARSEILLE

tel: 521294

Directeur:
Prof. Jean-Marie Pères

Med
IV

Dr. G.
Seillan

signed
13.12.76

Oct. 1976

Med
V

(a) Dr. F.
Blanc et
Dr. M.
Leveau
(b) Dr. D. Seillan-
Santini

(a) signed
13.12.76

(a) Jan. 1977

(b) signed
13.12.76

(b) Jan. 1977

RAC
IV

Prof. J.-M.
Pères

signed
20.5.77

Laboratoire de Physique et Chimie
marines
Université Pierre et Marie Curie
(Paris VI)
4 Place Jussieu
75230 PARIS, CEDEX 05

tel: 332525 - 4879

Directeur:
Prof. Alexandre Ivanoff

Med
I

negotiating

FRANCE (Cont.)

Centre des faibles Radioactivités
Laboratoire mixte CNRS-CEA
B.P. No. 1
91190 GIF-SUR-YVETTE

Med
VIII

Dr. R.
Chesselet

signed
8.9.77

Oct. 1977

tel: 907.78.28

Directeur:
Dr. Jacques Labeyrie

GREECE

Institute of Oceanographic
and Fisheries Research
Ministry of Co-ordination
Agios Kosmas-Ellinikon
ATHENS

Med
I

Dr. E.
Verykokakis

signed
18.5.77

Jan 1977

Med
II

Dr. F.
Voutsindou

signed
20.4.77

Dec. 1976

tel: 9820211

Director General:
Dr. Constantine E. Vamvakas

Med
III

Dr. J.
Satsmadjis

signed
1.12.77

Dec. 1976

Med
V

Dr. C.
Bogdanos

signed
20.4.77

Dec. 1976

Med
VI

Dr. E.
Papageorgiou

signed
18.5.77

Jan 1977

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

intercalib.
for Med III

analyses
reported

Zoological Laboratory and
Museum
University of Athens
Panepistimiopolis-Kouponia
ATHENS 621

Med
IV

Dr. M. Moraitou
Apostolopoulou

signed
27.4.77

April 1977

Med
V

Dr. C. E.
Vamvakas

signed
27.4.77

Feb 1977

Director:
Prof. Dr. Vassili Kiortsis

Laboratory of Zoology
Faculty of Science
University of Thessaloniki
THESSALONIKI

Med
IV

negotiating

Med
V

a) Prof. Dr. M. E.
Kattoulas

signed
8.9.77

Dec. 1976

b) Prof. Dr. M. E.
Kattoulas

signed
8.9.77

Dec. 1976

Director:
Prof. Dr. Marios E. Kattoulas

GREECE (Cont.)

Radioanalytical Laboratory
Radiochemical and Nuclear
Analysis group
Department of Chemistry
Nuclear Research Centre
"Demokritos"
Aghia Paraskevi Attikis,
ATHENS

tel: 6513111 ext. 336-335

Head of the Laboratory:
Dr. Apostolos P. Grimanis

Med
I

Dr. N.
Mimicos cleared
8.5.78

March 1977

Med
II

Dr. A.P.
Grimanis signed
20.4.77
and
Dr. C.
Papadopoulos

Oct. 1975

Med
VIII

Dr. C.
Papadopoulos signed
20.6.77

July 1977

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

General Chemical State Laboratory
Division of Environmental
Pollution Control
Ministry of Economic Affairs
16 A. Tsouha Street
602 ATHENS

tel: 6428211

Head of Division
Dr. Demis G. Markatos

Med
II

Dr. D. G.
Markatos signed
28.4.77

June 1976

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

Department of Food Hygiene
Faculty of Veterinary Medicine
Aristotelian University of
Thessaloniki
THESSALONIKI

tel: 31.2392.2305

Director:
Prof. Dr. Achilles G. Panetsos

Med
II

Prof. Dr. A.G.
Panetsos signed
9.8.77

March 1977

Med
III

Prof. Dr. A.G.
Panetsos signed
9.8.77

March 1977

Med
VII

Prof. Dr. A.J.
Mantis signed
21.10.77

February 1977

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

intercalib.
for Med III

1 sample
analysis
reported

Laboratory of Hygiene
Medical School
Aristotle University of
Thessaloniki
THESSALONIKI

tel: 2392-2339

Director:
Prof. Dr. Theodore Edipides

Med
III

negotiating

Med
VII

Prof. Dr. I.
Edipides signed
25.7.77

July 1977

Med
XI

intercalib.
for Med III

Laboratory of Analytical Chemistry
Faculty of Physics and Mathematics
University of Thessaloniki
THESSALONIKI

tel: (031) 2392-2482

Director:
Prof. Dr. George Vasilikiotis

Med
II

Prof. Dr. G.
Vasilikiotis signed
4.7.77

Feb. 1977

Med
III

Prof. Dr. G.
Vasilikiotis signed
4.7.77

Feb. 1977

Med
XI

intercalib.
for Med II

oyster, sea-
plant and
copepod
analyses
reported

intercalib.
for Med III

sample
analyses
reported

(7)

GREECE (Cont.)

Genaki Institute of Phythopathology 8 Delta Street ATHENS	Med III	Dr. N. Adam	signed 21.5.77	March 1977
tel: 8012376	Med IV	Dr. R. Fytizas	signed 21.5.77	March 1977
Director: Dr. Dimitrios S. Vassilopoulos	Med XI	intercalib. for Med III		sample analyses reported
Laboratory of Organic Chemistry Aristotle University of Thessaloniki THESSALONIKI	Med I	Prof. N.E. Alexandrou	cleared 8.5.78	Aug. 1977
tel: 2392.2497				
Director: Prof. Nicholas E. Alexandrou				
Environmental Pollution Control Project Ministry of Social Services 147, 28th October Street ATHENS 814	Med VII	Prof. J. Papadakis Dr. S. Sotiracopoulou Dr. M. Thalassinou- Tzatzanis	signed 15.5.78	Nov. 1976
tel: 850111, 850476				
Project Manager: Dr. Gregory Markantonatos				
Department of Hydrology and Hydraulic Works National Technical University 42, 28th October Avenue ATHENS 147	Med VI		negotiating	
tel: 3607.603/3691.265				
Director: Prof. Dr. Themis S. Xanthopoulos				
Laboratory of Hydraulics and Hydraulic Works Department of Hydraulics School of Technology Aristotle University of Thessaloniki THESSALONIKI	Med VI		negotiating	
Tel: 591.2697/96				
Director: Prof. Dr. J. Ganoulis				

ISRAEL

Israel Oceanographic and
Limnological Research Ltd.
Tel Shikmona
P.O. Box 1793
HAIFA

tel: (04)539.258/9

Director:
Mr. Yonay Ben-Nun

Med I	Dr. O.H. Gren	signed 26.10.77	May 1976
Med II	Dr. O.H. Gren	signed 14.9.76	Oct. 1975
Med III	Dr. R. Ravid	signed 14.9.76	Oct. 1975
Med IV	Dr. T. Shimoni	signed 21.9.76	Sept. 1976
Med V		negotiating	
Med VI	Dr. A. Hecht	signed 3.11.77	May 1976
Med VIII	Dr. O. H. Gren	signed 15.8.77	July 1977
Med XI	intercalib. for Med II		oyster, sea- plant, copepod and fish analyses reported
	intercalib. for Med III		

Environmental Health Laboratory
Hadassan Medical School
Hebrew University
P.O. Box 1172
JERUSALEM

tel: 233-821

Acting Director:
Prof. Michael Davis

Med VII	Mr. S. Pattal	signed 16.10.77	Nov. 1977
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Environmental and Water Resources
Engineering Division
Technion - Israel Institute of
Technology
Technion City
HAIFA 32000

tel: (04) 227.111 ext. 2359

Head:
Prof. Jacob Bear

Med VII	Dr. N. Buras Prof. Y. Kott	signed 19.7.78	July 1978
------------	-------------------------------------	-------------------	-----------

The Dr. A. Felix Public
Health Laboratory
Ministry of Health
Abu Kehir
P.O. Box 8255
TEL-AVIV

tel: (03)821.777

Director:
Dr. Yanah Yoshpe-Purer (Mrs)

Med VII	Dr. Y. Yoshpe-Purer	signed 16.6.78	June 1978
------------	------------------------	-------------------	-----------

ISRAEL (Cont.)

Public Health Laboratory
Public Health Department
Ministry of Health
P.O. Box 9526
HAIFA

Med
VII

Dr. R.
Seligmann

signed
21.6.78

June 1978

tel: (04)536201

Director:
Dr. Rachel Seligmann (Mrs)

Biological Research Laboratories
Institute of Evolution
University of Haifa
Mount Carmel
31999 HAIFA

Med
IV

Prof. E.
Nevo

signed
15.3.78

Jan. 1978

tel: (04) 240448

Director:
Prof. Eviatar Nevo

Department of Zoology
Tel Aviv University
RAMAT AVIV

Med
IV

Prof. Z.
Yaron

cleared
22.5.78

April 1978

tel: 033-425262 Ext. 812

Head:
Prof. Z. Yaron

ITALY

Institute of Hydrobiology and
Fish Culture
University of Messina
Via dei Verdi 75
98100 MESSINA

Med
IV

Prof. P.
Crisafi

negotiating

tel: 710617

Director:
Prof. Sebastiano Genovese

Med
VII

Prof. S.
Genovese

signed
24.3.78

Jan 1978

Laboratory of Hydrobiology and
Fish Culture
Institute of Comparative Anatomy
University of Siena
Via delle Cerchia, 3
53100 SIENA

Med
II

Prof. Dr. A.
Renzoni

signed
1.9.76

Sept. 1976

tel: (0577) 288428

Director:
Prof. Dr. Aristeo Renzoni

Med
III

Prof. Dr. A.
Renzoni

signed
8.5.78

March 1978

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

intercalib.
for Med III

ITALY (Cont.)

Observatory for Experimental
Geophysics - Marine Laboratory
P. O. Box 2011
34016 TRIESTE

tel: (040) 730276

Director:
Dr. Ezio Accorroni

Med
VI

Dr. E.
Accorroni

cleared
30.8.78

June 1977

Institute of Marine Biology-CNR
Riva Sette Martiri 1364/A
30122 VENICE

tel: (041) 707622

Director:
Prof. Dr. Bruno Battaglia

Med
III

Dr. V.U.
Fossato

signed
27.7.77

July 1976

Med
IV

Dr. L.
Dalla Venezia

signed
24.5.78

July 1978

Med
XI

intercalib.
for Med III

sample
analyses
reported

Marine Contamination Laboratory-CNEN
19030 FIASCHERINO (La Spezia)

tel: (0187) 966496/7

Director:
Dr. Aldo Brondi

Med
II

Dr. A.
Brondi

signed
11.8.77

Dec. 1975

Med
IV

negotiating

Med
XI

intercalib.
for Med II

oyster, sea-
plant and
copepod
analyses
reported

Centre for Study and Research
in Sanitary Engineering
Institute of Water Supply and
Wastes Disposal
University of Naples
Via Claudio 21
80125 NAPLES

tel: 620344

Director:
Prof. Luigi Mendia

and

Zoological Station of Naples
Villa Comunale
80125 NAPLES

tel: 406222/406347

Director:
Prof. Alberto Monroy

Med
VII

cleared
10.8.78

1977

Centre for Radiochemistry
and Activation Analysis - CNR
Institute of General Chemistry
University of Pavia
12 Viale Taramelli
27100 PAVIA

tel: (0382) 31-200/24-605

Director:
Dr. Mario A. Rottler

Med
II

Prof. E.
Orvini

signed
16.9.76

Sept. 1976

Med
XI

intercalib.
for Med II

oyster, sea-
plant and
copepod
analyses
reported

ITALY (Cont.)

Group for Oceanographic
Research - Genova
Institute of Hydrobiology
and Fish Culture
University of Genova
Via Balbi 5
12126 GENOVA

tel: (010) 280-955

Med
II

Prof. R.
Capelli

signed
3.2.77

Dec. 1976

Med
IV

Prof. M.
Grunesu

signed
2.8.78

June 1978

Med
VI

Prof. I.
Dagnino

signed
12.8.77

May 1977

Chairman:
Prof. Norberto Della Croce

Med
XI

intercalib.
for Med II

oyster, sea-
plant, copepod
and fish
analyses
reported

Institute of Hygiene
University of Trieste
Via dell'Istria 65/1
34137 TRIESTE

tel: (040) 728.303

Director:
Prof. Luigi Majori

Med
VII

Prof. L.
Majori

signed
6.2.78

Feb. 1978

Istituto Superiore di Sanità
Viale Regina Elena 299
00161 ROME

tel: (06) 4990

Director:
Prof. Francesco Pocchiari

Med
VII

Prof. L.
Villa

signed
28.10.77

May 1977

RAC
VII

Prof. F.
Pocchiari

signed
15.6.77

Institute for Water Research - CNR
Via Reno 1
00198 ROME

tel: (06) 84-48-741

Director:
Prof. Roberto Passino

Med
VI

negotiating

Med
VII

Dr. T.
La Mace

signed
6.7.78

1975

Station for Marine Biology
Institute of Zoology and
Comparative Anatomy
University of Messina
Via dei Verdi 75
98100 MESSINA

tel: 81-27-21

Director:
Prof. Arturo Solognari

Med
II

Dr. L.
Maio

signed
23.11.76

Dec. 1976

Med
XI

intercalib.
for Med II

oyster,
sea-plant,
copepod
analyses
reported

Institute of Zoology
"Federico Raffaele"
University of Rome
Viale dell'Università 32
00185 ROME

tel: (06) 4958259/4958254

Director:
Prof. Eri Manelli

Med
V

Prof. E.T.
Rivosecchi

negotiating

ITALY (Cont.)

Institute of Hygiene
University of Genova
Via A. Pastore 1
16132 GENOVA

Med
VII

Prof. S.
De Flora

signed
3.1.78

1975

tel: 515052, 515013

Director:
Prof. Fernando L. Petrilli

Institute of General and Inorganic
Chemistry
Faculty of Industrial Chemistry
University of Venice
Calle Larga S. Marta 2137
30123 VENICE

Med
I

Prof. A.A.
Orio

signed
29.9.78

tel: 706324

Director:
Prof. Angelo A. Orio

Institute of Organic Chemistry
University of Genova
Palazzo delle Scienze
Corso Europa
16132 GENOVA

Med
I

Prof. C.
Dell'Erba

negotiating

tel: (010) 515.059

Director:
Prof. G. Leandri

Departmental Institute of Chemistry
and Industrial Chemistry
University of Catania
Viale A. Doria 8
95125 CATANIA

Med
I

Prof. S.
Musumeci

negotiating

tel:

Director:
Prof. S. Musumeci

LIBAN

Centre de Recherche marine
Conseil national de la Recherche
scientifique
B.P. 11-8281
BEYROUTH

Med
I

Dr. H.H.
Kouyoumjian

signed
19.5.77

first half
1977

tel: 302287 - 934763

Med
II

Dr. H.H.
Kouyoumjian

signed
19.5.77

Président du Conseil:
Dr. Joseph Naggear

Med
III

Dr. H.H.
Kouyoumjian

signed
19.5.77

Med
IV

negotiating

Med
V

negotiating

Med
VII

Dr. H.H.
Kouyoumjian
Prof. F.
Ghorra

signed
28.11.77

August 1977

Med
XI

intercalib.
for Med II

intercalib.
for Med III

(13)

MALTA

The University of Malta
MSIDA

tel: 36.450

Rector Magnificus
Prof. Edwin J. Borg-Costanzi

Med I	Dr. M. Sammut	signed 23.3.77	July 1976
Med II	Dr. A. Storace	signed 30.7.76	Sept. 1976
Med III	Dr. J. V. Sannister	signed 30.7.76	Sept. 1976
Med IV	Dr. L.J. Saliba	signed 30.7.76	July 1976
Med VI	Dr. D.A. Havard	signed 22.3.77	Feb. 1976
Med VIII	Dr. J. V. Sannister	signed 26.5.77	May 1977
Med XI	intercalib. for Med II		sea-plant, copepod and fish analyses reported
	intercalib. for Med III		
RAC I	Dr. M. Sammut	signed 15.11.77	

Public Health Laboratory
Department of Health
15 Merchants Street
VALLETTA

tel: 24071

Chief Medical Officer:
Dr. A. Grech

Med VII	Dr. L.J. Spiteri	signed 13.7.77	Aug. 1977
---------	------------------	----------------	-----------

MAROC

Institut scientifique des Peches
maritimes
Rue de Tiznit
B.P. 21
CASABLANCA

tel: 678.11

Directeur:
Dr. Mohamed Azzou

Med II	Melle H. Idrissi	signed 17.5.77	March 1977
Med III	Melle H. Idrissi	signed 17.5.77	March 1977
Med IV	Mr. A. N'Hila	signed 23.1.78	Sept. 1977
Med XI	intercalib. for Med II		
	intercalib. for Med III		
Med VII		negotiating	

MAROC (Cont.)

Faculté des Sciences
Université Mohamed V
Avenue Ibn Batouta
S.P. 1014
RABAT

tel: 718.34

Doyen:
Prof. Dr. Drissi Khalil

Med I		negotiating
Med II		negotiating
Med III		negotiating
Med IV		negotiating
Med V		negotiating
Med VI	Prof. S. El-Kabir	negotiating
Med XI	intercalib. for Med II	

intercalib.
for Med III

Institut national d'Hygiène
Ministère de la Santé Publique
335 Avenue Mohammed V
RABAT

tel:

Directeur:
Prof. Nouredine Benmansour

Med II		negotiating
Med III		negotiating
Med IV		negotiating
Med V		negotiating
Med VII		negotiating
Med XI	intercalib. for Med II	
	intercalib. for Med III	

PRINCIPAUTE DE MONACO

Centre scientifique de Monaco

Administration:-
16 Boulevard de Suisse
MONTE CARLO

Laboratoires:-
Avenue Saint-Martin
MONACO-VILLE

tel: (93)302154/301514

Président du Conseil
d'Administration:
S.E.M. César C. Solamito

Med VI	Dr. A. Vatrican	cleared 28.4.77	April 1977
Med VII	Dr. R. Vaissière	signed 24.10.77	1975

SPAIN

Instituto de Investigaciones
Pesqueras
Paseo Nacional, s/n
BARCELONA 3

tel: 31 06 450

Director:
Dr. Buenaventura Andreu

Med I	Dr. M. Calderon	signed 9.5.77	Jan. 1975
Med II	Dr. A. Sallaster	signed 22.7.76	Jan. 1976
Med III	Dr. A. Sallaster	signed 28.7.76	Jan. 1976
Med IV	Dr. R. Establier	signed 28.7.76	Jan. 1976
Med V		negotiating	
Med VI	Dr. A. Cruzado	signed 2.3.77	March 1976
Med VIII	Dr. A. Sallaster	signed 26.7.77	August 1977
Med XI	intercalib. for Med II		oyster, sea- plant, copepod and fish analyses reported
	intercalib. for Med III		1 sample analysis reported

Laboratorio Oceanografico del
Mar Menor
Instituto Espanol de Oceanografia
Magallanes s/n
P.O. Box 22
SAN PEDRO DEL PINATAR (Murcia)

tel: 57 05 29

Director:
Dr. Argeo R. de Leon

Med I	Dr. F. Faraco	signed 25.4.78	May 1978
Med II	Dr. J. Guerrero	signed 1.10.78	May 1978
Med III		negotiating	
Med IV	Dr. J. Ros	cleared 29.5.78	May 1978
Med VI		negotiating	
Med VII		negotiating	
Med XI	intercalib. for Med II		oyster, sea- plant and copepod analyses reported
	intercalib. for Med III		

Laboratorio Oceanografico de
Baleares
Instituto Espanol de Oceanografia
P.O. Box 291
PALMA DE MALLORCA

tel: 230737

Director:
Dr. Miguel Duran

Med I		negotiating
Med V		negotiating

Laboratorio Oceanografico de
Malaga
Instituto Espanol de Oceanografia
Paseo de la Farola 27
MALAGA

tel: 212810

Director:
Mr. Natalio Cano

Med VI		negotiating
--------	--	-------------

SPAIN (Cont.)

Jefatura Provincial de Sanidad
Avenida Maria Cristina, s/n
TARRAGONA

Med
VII

Dr. R.
Mujeriego

signed
25.8.77

April 1977

tel: (977) 202645, 201150, 201522

Director:
Dr. Alfredo Bardaji

Jefatura Provincial de Sanidad
Puente del Carmen 30
MALAGA

Med
VII

Dr. R.
Mujeriego

signed
25.8.77

April 1977

tel: (952) 216590, 227806

Director:
Dr. Marcelo Arce

Institute of Applied Organic
Chemistry
High Council of Scientific
Investigations
Calle Jorge Girona Salgado
BARCELONA 34

Med
I

Dr. J.
Albaiges

negotiating

tel: 204.06.00

Director:
Prof. Dr. Manuel Sallaster

SYRIA

Centre for Marine Research of
Latakia
Supreme Council of Sciences
Aboul-Alaa Al-Maari Avenue
P.O. Box 4762
DAMASCUS

Med
I

negotiating

Med
II

negotiating

Med
III

negotiating

tel: 339754

President:

Med
XI

intercalib.
for Med II

intercalib.
for Med III

TUNISIE

Institut national scientifique
et technique d'Océanographie
et de Pêche
SALAMMO

Med
I

M. H.A.
Salem

cleared
2.4.77

June 1977

tel: 275.632

Med
II

M. H.A.
Salem

signed
5.11.76

Jan. 1977

Directeur:
M. Madj Ali Salem

Med
III

M. H.A.
Salem

signed
5.11.76

Jan. 1977

Med
XI

intercalib.
for Med II

intercalib.
for Med III

TUNISIE (Cont.)

Laboratoire Central
Ministère de l'Industrie des Mines
et de l'Energie
23, Rue Jawahar Lal Nehru
(Ex. Rue Dr. Braquenhaye)
Montfleury - TUNIS

Med
IV

negotiating

tel: 244 322

Med
VI

negotiating

Directeur:
Dr. Ridha Bouhalila

Institute Pasteur
13 Place Pasteur
TUNIS

Med
VII

negotiating

tel:

Directeur:
Prof. A. Chadli

TURKEY

Hydrobiological Research Institute
Faculty of Science
University of Istanbul
Rumelihisari
ISTANBUL

Med
IIMr. I.
Artuzsigned
15.4.77

Dec. 1976

tel: 65 15 11

Med
IIIMr. I.
Artuzsigned
15.4.77

Dec. 1976

Director:
Prof. Dr. Lutfi Siran

Med
IVMr. I.
Artuzsigned
15.4.77

Jan. 1977

Med
XIintercalib.
for Med IIsea-plant
copepod and
fish analyses
reportedintercalib.
for Med III

Marine Science Department
Middle East Technical
University
P.K. 28
ERDEMLI-ICEL

Med
IProf.Dr. T.I.
Balkassigned
28.2.77

June 1976

tel: Erdemli 342

Med
IIProf.Dr. T.I.
Balkassigned
3.9.76

Sept. 1976

Chairman:
Prof. Dr. Turgut I. Balkas

Med
IIIDr. T.
Soylemez
Dr. E.
Salihoglusigned
3.9.76

Sept. 1976

Med
VIDr. U.
Unluatasigned
10.5.77

July 1976

Med
XIintercalib.
for Med IIoyster,
sea-plant,
copepod and
fish analyses
reportedintercalib.
for Med III1 sample
analysis
reportedRAC
IIIProf.Dr. T.I.
Balkassigned
25.4.77

TURKEY (Cont.)

Department of Biological
Oceanography and Institute of
Hydrobiology
Faculty of Science, Ege University
Mithatbasna Cad. No. 364
BORNova/IZMIR

tel: 180110

Director:
Prof. Remzi Galdiay

Med
II

Dr. H.
Uysal

signed
14.4.77

March 1977

Med
IV

Dr. H.
Uysal

signed
14.4.77

Feb. 1977

Med
V

Dr. A.
Kocatas

signed
14.4.77

Jan. 1977

Med
XI

intercalib.
for Med II

sea-plant and
copepod
analyses
reported

General Directorate of Fisheries
Su Urunleri Genel Mudurlugu
Saglik Sokak 21
SIRHIYE/ANKARA

tel:

Director:
Mr. Etem Ozel

Med
II

Mr. H.
Kulan

cleared
4.3.77

March 1977

Med
III

Mr. N.
Nazli

cleared
4.3.77

March 1977

Med
IV

Mr. C.
Cetin

cleared
4.3.77

after the
completion
of training

Med
V

Mr. E.
Cengiz

cleared
4.3.77

after the
completion
of training

Med
XI

intercalib.
for Med II

intercalib.
for Med III

Department of Environmental
Engineering
Faculty of Engineering
Middle East Technical University
ANKARA

tel: 237100

Chairman
Prof. Dr. S. Erol Ulug

Med
VII

Prof. Dr.
S.E. Ulug

signed
17.10.77

July 1977

YUGOSLAVIA

Laboratory for Trace Element
Analyses
Department of Physics and
Mathematics
Faculty of Industrial
Pedagogy
University of Rijeka
Omladinska 14
RIJEKA

tel: (051) 23.296

Head:
Prof. Dr. Vlado Valkovic

Med
I

negotiating

Med
II

Prof. Dr. V.
Valkovic
and
Dr. A.
Ljubicic

signed
14.9.76

March 1976

Med
XI

intercalib.
for Med II

oyster
analysis
reported

YUGOSLAVIA (Cont.)

Institute for Oceanography and
Fisheries
Rt. Marjana
P.O. Box 114
SPLIT

Tel: 46.682

Director:
Mr. Rade Stijelja

Med I		negotiating	
Med II	Dr. L. Stojanaski	signed 10.2.77	March 1977
Med III	Dr. T. Vucetic	signed 10.2.77	March 1977
Med IV	Dr. R. Muzinic	signed 10.2.77	March 1977
Med V	Dr. T. Pucher- Petkovic	signed 30.6.77	April 1977
Med VI	Dr. M. Zore-Armanda	signed 3.3.77	Jan. 1977
Med VII	Dr. S. Sobot	signed 7.10.77	Nov. 1976
Med XI	intercalib. for Med II		
	intercalib. for Med III		

The Biological Institute
Ivrdava Sv. Ivana
P. O. Box 39
DUBROVNIK

tel: (050) 27-937

Director:
Prof. Dr. Tomo Gamulin

Med III	Mr. D. Vilicic	signed 13.10.76	Sept., 1976
Med IV	Dr. F. Krsinic	signed 20.8.77	Nov. 1976
Med V	Dr. A. Benovic	signed 27.1.77	Nov. 1976
Med XI	intercalib. for Med III		sample analyses reported

YUGOSLAVIA (Cont.)

Centre for Marine Research
"Rudjer Boskovic" Institute
P.O. Box 1016, Bijenicka 54
ZAGREB

tel: (041) 38.541/424.355

Director General:
Mr. Vojna Kundic

Director of Rovinj Centre:
Dr. Marko Branica

Med I	Dr. V. Pravdic	signed 3.3.77	Jan. 1977
Med II	Dr. M. Branica	signed 24.9.76	Sept. 1976
Med III	Mr. N. Smodlaka	signed 24.9.76	June 1976
Med IV	Dr. B. Kurelec	signed 24.9.76	June 1976
Med V	Dr. D. Zavodnik	signed 24.9.76	July 1976
Med VI	Dr. Lj. Jeftic	cleared 8.5.78	Jan. 1977
Med VII	Ms. D. Fuks	signed 4.8.77	June 1976
Med XI	intercalib. for Med II		

	intercalib. for Med III		
RAC II	Dr. M. Branica	signed 21.4.77	

Marine Biological Station
Institute of Biology
University of Ljubljana
P.O. Box 16
PORTOROZ

tel: (066) 73-073

Director:
Prof. Dr. Miroslav Zel

(Director General:-
Prof. Matija Gogala
Institute of Biology
University of Ljubljana
P.O. Box 141
LJUBLJANA

tel: (061) 22121)

Med II	Prof.Dr. S. Gomiscek	signed 23.8.76	June 1976
Med III	Dr. J. Cencelj	signed 23.8.76	June 1976
Med V	Dr. J. Stirn	signed 23.8.76	Sept. 1976
Med VII	Ms. M. Lenarcic	signed 2.9.77	October 1977
Med XI	intercalib. for Med II		

intercalib.
for Med III

REGIONAL ACTIVITY CENTRES (RAC) FOR MED POL PROJECTS

1. For pilot project on Baseline Studies and Monitoring of Oil and Petroleum Hydrocarbons in Marine Waters:

University of Malta
Msida
Malta

Responsible for RAC I : Dr. M. Sammut

2. For pilot project on Baseline Studies and Monitoring of Metals, particularly Mercury and Cadmium, in Marine Organisms:

Centre for Marine Research
"Rudjer Boskovic" Institute
Rovinj/Zagreb
Yugoslavia

Responsible for RAC II : Dr. M. Granica

3. For pilot project on Baseline Studies and Monitoring of DDT, PCBs and Other Chlorinated Hydrocarbons in Marine Organisms:

Marine Science Department
Middle East Technical University
Erdemli - Içel
Turkey

Responsible for RAC III : Prof. Dr. T. I. Balkas

4. For pilot project on Research on the Effects of Pollutants on Marine Organisms and their Populations:

Station Marine d'Endoume
Marseille
France

Responsible for RAC IV : Prof. J.-M. Pérès

5. For pilot project on Research on the Effects of Pollutants on Marine Communities and Ecosystems:

Centre de Recherches Océanographiques
et des Pêches
Alger
Algérie

Responsible for RAC V : Dr. R. Semroud

6. For pilot project on Problems of Coastal Transport of Pollutants:

Institute of Oceanography and Fisheries
Mediterranean Branch
Alexandria
Egypt

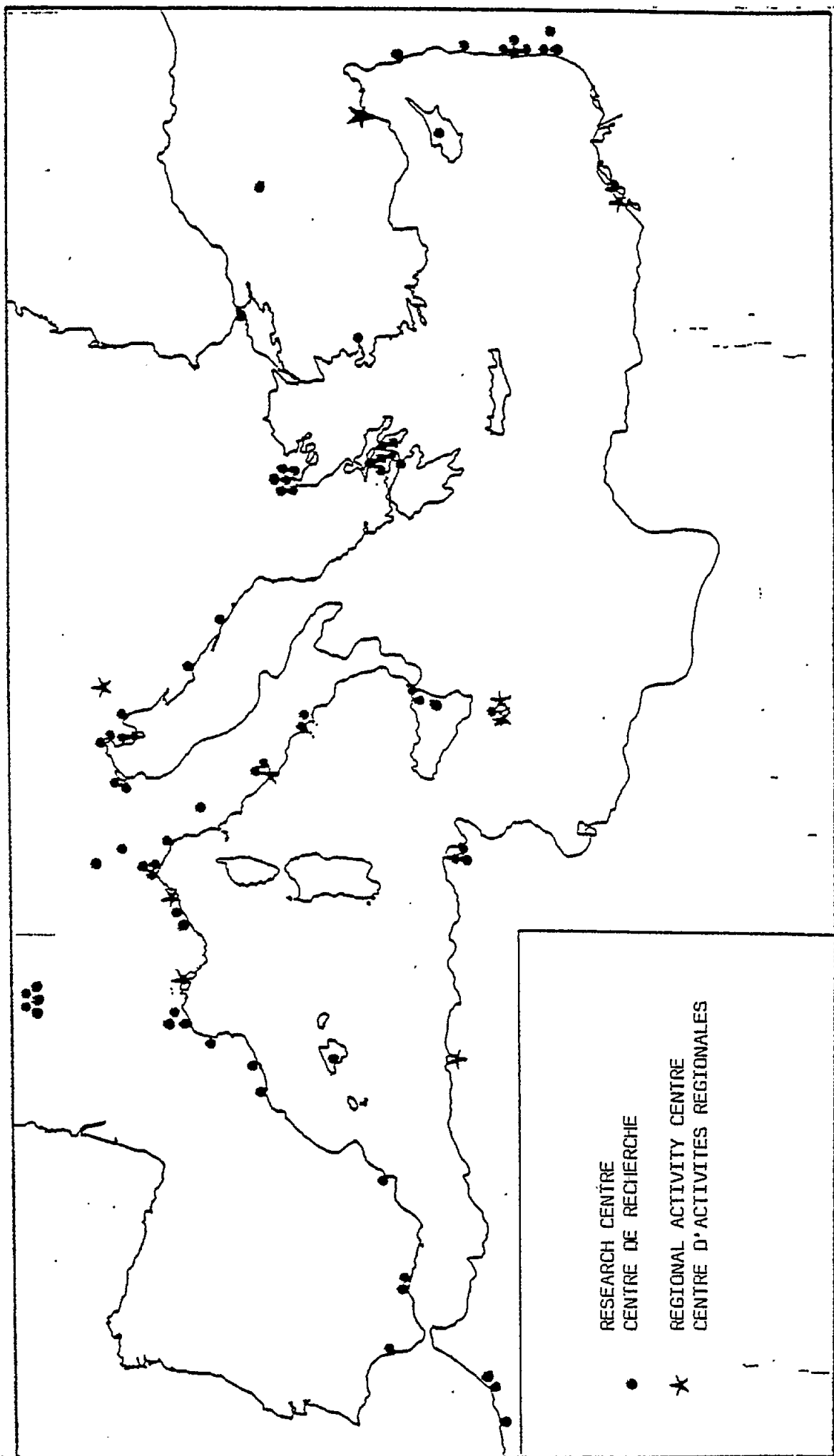
Responsible for RAC VI : Dr. M. A. Gerges

7. For pilot project on Coastal Water Quality Control:

Istituto Superiore di Sanità
Roma
Italia

Responsible for RAC VII : Prof. F. Pocconiari

Fig. 1 RESEARCH CENTRES NOMINATED AS PARTICIPANTS IN MED POL AND REGIONAL ACTIVITY CENTRES
RELEVANT TO MED POL
CENTRES DE RECHERCHE DESIGNES COMME PARTICIPANT AU MED POL ET CENTRES D'ACTIVITES
REGIONALES SE RAPPORTANT AU MED POL



INTERCALIBRATION OF ANALYTICAL TECHNIQUES
AND COMMON MAINTENANCE SERVICES

The tables of this annex are based on reports submitted by the IAEA International Laboratory of Marine Radioactivity in Monaco.

Contents

- Table 1 : State of the result reporting in the intercalibration exercises related to MED POL II project on 15 September 1978
- Table 2 : State of the result reporting in the intercalibration exercises related to MED POL III project on 15 September 1978
- Table 3 : Maintenance services provided to participants in MED POL (November 1976 - November 1978)

Table 1. State of the result reporting in the intercalibration exercises
related to MED POL II Project on 15 September 1978

+ = results reported
- = results not reported

Country	Institute	Principal Investigator	MA-M-1 (oyster)	SP-M-1 (sea plant)	MA-A-1 (coospod)	MA-A-2 (fish)
Algeria	C.R.O.P. Alger	O. Siblot	+	+	+	+
Cyprus	Fisheries Dept., Min. Agri. & Nat. Res., Nicosia	A. Gemetropoulos	-	+	+	-
Egypt	Inst. of Ocean. & Fish., Alexandria	H.I. Emara	not sent	-	-	not sent
France	Lab. Contr. Hyg. Alim., Min. Agri., Paris	G. Cumont	not sent	+	+	-
	I.S.T.P.M. Mantes	Y. Thibaud	+	+	+	+
Greece	Inst. Ocean. & Fish. Res., Athens	F. Voutsinou	+	+	+	-
	N.R.C. Demokritos Athens	A.P. Grimanis	+	+	+	+
	Gen. Chem. State Lab., Div. of Env. Poll. Cont., Athens	O.G. Markatos	+	+	+	-
	Fac. of Vet. Med. Dept. Food Hyg., Thessaloniki	A.G. Panetsos	+	+	+	-
	Lab. of Anal. Chem. Fac. Phys. & Math., Thessaloniki	G. Vasilikiotis	+	+	+	-
Israel	Israel Ocean. & Limnol. Res. Ltd., Haifa	O.H. Gran	+	+	+	+
Italy	Lab. of Hydr. & Fish Culture, Inst. Comp. Anat., Siena	A. Ranzoni	+	+	+	+
	Mar. Cont. Lab. CNR Fiascherino (La Spezia)	A. Brondi	+	+	+	+
	Inst. of Gen. Chem. CNR, Pavia	E. Orvini	+	+	+	-
	Inst. of Hydr. & Fish Culture, Univ. of Genova, Genova	R. Capelli	+	+	+	+
	Inst. of Zoology & Comp. Anat. Univ. of Messina, Messina	L. Mojo	+	+	+	-

Table 1 (Cont'd)

Country	Institute	Principal Investigator	MA-M-1 (oyster)	SP-M-1 (sea plant)	MA-A-1 (codend)	MA-A-2 (fish)
Lebanon	Marine Research Centre, CNRS Beirut	H.H. Kouyoumjian	not sent	-	-	not sent
Malta	The Univ. of Malta Malta, Malta	A. Storace	not sent	+	+	+
Morocco	Inst. Sc. des Pêches Mar., Casablanca	M. H. Idrissi	not sent	-	-	not sent
	Fac. des Sciences Univ. Mohamed V, Rabat	(E. Saaidi)	not sent	-	-	not sent
Spain	Inst. de Invest. Pesq. Barcelona	A. Ballester	+	+	+	-
	Lab. Ocean. del Mar Menor, San Pedro del Pinatar	J. Guerrero	-	+	+	-
Tunisia	Inst. Nat. Sci. & Techn. d'Océan. et de Pêche, Sousse	H.A. Salam	not sent	-	-	not sent
Turkey	Hydr. Res. Inst. Univ. of Istanbul, Istanbul	I. Ardu	not sent	+	+	-
	Mar. Sci. Dept. Middle East Tech. Univ. Erdemli-Içel	T.I. Balkas	-	+	-	-
	Inst. of Hydrobiol. Ege Univ. Izmir	H. Uysal	not sent	-	-	not sent
	Gen. Direct. of Fisheries, Ankara	H. Kulen	not sent	-	-	not sent
Yugoslavia	Dept. of Phys. & Math. Fac. of Ind. Eng. Univ. of Rijeka, Rijeka	V. Valkovic & A. Ljubicic	+	-	-	not sent
	Inst. for Ocean. & Fish., Split	L. Stojanovski	not sent	-	-	not sent
	"Rudjer Boskovic" Inst. Zagreb - Rovinj	M. Branica	not sent	-	-	not sent
	Mar. Biol. Station Univ. of Ljubljana, Portoroz	S. Gomiscak & J. Stirn	-	-	-	not sent
Nr. of samples sent			19	31	31	20
Nr. of results reported			17	20	20	9

Table 2. State of the result reporting in the intercalibration exercises
related to MED POL III project on 15 September 1978

+ = results reported
- = results not reported

Country	Institute	Principal Investigator	MA-M-1 (oyster)	MA-A-1 (copepod)	MA-A-2 (fish)
Cyprus	Fisheries Dept. Ministry Agri. & Nat. Resources, Nicosia	A. Osmetropoulos	-	not sent	not sent
Egypt	Inst. of Ocean. & Fish., Alexandria	M.M. Abbas Aly	-	not sent	not sent
France	Lab. de chimie appliquée à l'expertise, Montpellier	R. Mestres	+	+	+
	I.S.T.P.M., Nantes	C. Alziou	+	+	+
Greece	Lab. of Hygiene, Univ. of Thessaloniki, Thessaloniki	Th. Edipides	+	+	-
	Lab. Anal. Chem. Univ. of Thessaloniki, Thessaloniki	G. Vasilikiotis	-	not sent	not sent
	Dept. of Food Hygiene, College of Veter. Med., Thessaloniki	A.G. Panetsos	+	-	not sent
	Phytopatol. Inst. Esenaki, Athens	N. Adam	+	+	-
	Inst. Oceanogr. and Fish Research, Athens	J. Satsmadjis	+	+	+
Israel	Isr. Oceanolog. and Limnol. Research Ltd., Haifa	R. Ravid	-	-	not sent
Italy	Inst. di Biolog. del Mar del CNR, Venezia	U.V. Fossato	+	+	+
	Lab. Hydrol. & Fish. Cultura, Inst. Comp. Anat., Siena	A. Renzoni	-	not sent	not sent
Lebanon	Mar. Res. Centre, C.N.R.S., Beyrouth	H.H. Kouyoumjian	-	not sent	not sent

Table 2 (Cont'd)

Country	Institute	Principal Investigator	MA-M-1 (oyster)	MA-A-1 (caperdod)	MA-A-2 (fish)
Malta	Dept. of Physiol. and Biochem., Msida	J.V. Gannister	-	not sent	not sent
Morocco	Inst. des Pêches Marit. Casablanca	H. Idrissi	-	not sent	not sent
Spain	Inst. de Investig. Pesqueras, Barcelona	A. Ballster	-	-	-
Tunisia	Inst. Nat. Scient. et Techn. d'Océanogr. et de Pêche, Salammo	H.A. Salem	-	not sent	not sent
Turkey	Dept. of Marine Sciences Middle East Techn. Univ. Erdemli-Içel	T. Soyilemaz	+	-	not sent
	Hydrobiol. Inst. Faculty of Sciences Istanbul	I. Arduç	+	-	not sent
	General Directorate of Fisheries Sıhhiye/Ankara	N. Nazlı	-	not sent	not sent
Yugoslavia	Marine Biolog. Station Portoroz	J. Cencelj	-	not sent	not sent
	Center for Marine Research, "Rudjer Boskovic" Inst., Rovinj	N. Smolake	-	-	-
	Inst. for Oceanography and Fisheries, Split	T. Vučetić	-	not sent	not sent
	Center for Marine Research, "Rudjer Bosković" Inst., Zagreb	M. Pišer	+	+	+
	The Biological Inst., Dubrovnik	O. Vilić			
No. of samples sent			25	13	5
No. of results reported			10	7	5

Table 3. Maintenance services provided to participants in MED POL
(November 1976 - November 1978)

Institution	Date	Services provided
Marine Biological Station, Portorož, Yugoslavia	22-25 Nov. '76	Installation of AAS and GC received through MED POL
Centre for Marine Research, Rovinj, Yugoslavia	11-14 Jan. '77	Installation of AAS and GC received through MED POL
Marine Science Department, Marsin, Turkey	9-13 May '77	Installation of AAS and GC received through MED POL
General Chemical State Laboratory, Athens, Greece	5 July '77	Adjustment of Mercury Analyzer
University of Athens, Athens, Greece	5 July '77	Discussions on maintenance problems
Institute of Oceanographic and Fisheries Research, Athens, Greece	6 July '77	Current Meters maintenance
Analytical Chemistry Laboratory, University of Thessaloniki, Thessaloniki, Greece	7 July '77	Maintenance of different types of GC and AAS
Centre for Marine Research, "Rudjer Bošković" Institute, Rovinj, Yugoslavia	9-12 July '77	1st service on GC; repair of AAS; repair of Y-spectrometer
Marine Biological Station, Portorož, Yugoslavia	13 July '77	1st service on GC and AAS
Centre de recherches océanographiques et des pêches, Alger, Algeria	7-9 Aug. '77	Installation of AAS received through MED POL
Fisheries Department, Nicosia, Cyprus	15-18 Aug. '77	Installation of AAS received through MED POL
Israel Oceanographic and Limnological Research Ltd., Haifa, Israel	19-23 Aug. '77	1st service on AAS and repair; repair of GC; maintenance of current meters
Centre for Marine Research, "Rudjer Bošković" Institute, Rovinj, Yugoslavia	24-26 Aug. '77	Emergency service. Repair of AAS
Marine Biological Station, Portorož, Yugoslavia	5-7 Oct. '77	Emergency service. Repair of AAS
Centre for Marine Research, "Rudjer Bošković" Institute, Rovinj, Yugoslavia	6-7 Oct. '77	2nd service. Replacement of H ₂ -lamp

Table 3 (Cont'd)

Institution	Date	Services provided
Hydrobiological Research Institute, Istanbul, Turkey	25-26 Oct. '77	Installation of GC received through MED POL
Institute of Hydrobiology, Izmir, Turkey	27 Oct. '77	Installation of AAS received through MED POL
Marine Science Department, Mersin, Turkey	28 Oct. '77	1st service on AAS and GC; repair of AAS
Marine Biological Station, Portorož, Yugoslavia	19-21 Dec. '77	2nd service on AAS and GC; repair of AAS
University of Malta, Msida, Malta	6 Feb. '78	2nd service on AAS and repair; arrangement for repair of GC (Hewlett-Packard)
Israel Oceanographic and Limnological Research Ltd., Haifa, Israel	7- 9 Feb. '78	2nd service and repair of AAS and GC
Fisheries Department, Nicosia, Cyprus	10-11 Feb. '78	1st service on AAS. Repair of fluorometer
Institut scientifique des pêches maritimes, Casablanca, Morocco	17-20 Sept. '78	1st service and repair of AAS
Institut national scientifique et technique d'océanographie et de pêche, Salammo, Tunisia	21-22 Sept. '78	1st service on AAS
Centre de recherches océanographiques et des pêches, Alger, Algeria	12-14 Nov. '78	1st service on AAS