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Mediterranean action plan

Long-Term Programme for Pollution Monitoring and Research in the Mediterranean Sea (MED POL - PHASE II)

REPORT ON THE IMPLEMENTATION OF THE MONITORING ACTIVITIES DURING 1981-1983 AND PROPOSALS FOR 1983-1985

CONTENTS

1. INTRODUCTION

1. The Long-term Programme for Pollution Monitoring and Research (MED POL - PHASE II) was adopted by the Second Meeting of the Contracting Parties in Cannes, 2-7 March 1981 (UNEP/IG.23/11, Annex V).

2. The steps proposed by the secretariat for the implementation of MED POL - PHASE II have been reviewed by the First Meeting of the Working Group for Scientific and Technical Co-operation in Athens, 28 September - 2 October 1981 (UNEP/WG.62/7).

3. This document contains information on the progress achieved in the implementation of the monitoring component of MED POL - PHASE II since it began in mid 1981. The layout of the document follows the relevant structure of the adopted MED POL - PHASE II programme document (UNEP/IG.23/11, Annex V).

4. The document was prepared by the secretariat, in close collaboration with the relevant Co-operating Agencies, for the Second Meeting of the Working Group, which is invited to provide the secretariat with comments on its contents and on the proposed workplan, timetable and budget for the 1983-1985 period. On the basis of the review of the document, and taking into account the comments expected from the members of the Working Group, the Working Group may wish to make recommendations to the Executive Director of UNEP with a view of their transmission to the forthcoming Extraordinary Meeting of the Contracting Parties (April 1984).

5. In particular, the following aspects require the attention of the Group:

- agreement should be reached on the use of the proposed reporting forms for results of monitoring activities (Annex II to this document);
- the desirable sampling frequencies should be decided; and,
- advice should be given on the activities planned for 1983-1985, and on the allocation of the financial assistance in the same period to the national research centres participating in monitoring.

2. BACKGROUND

6. As a follow-up to the First Meeting of the Working Group, a document containing the basic criteria for the implementation of national monitoring programmes was prepared by the secretariat (UNEP/WG.62/3/Rev.1).

7. The document containing these criteria was distributed (19 February 1982) to all National Co-ordinators for MED POL in order to provide guidance in defining national monitoring programmes expected to be carried out by the Contracting Parties as part of MED POL - PHASE II. The descriptions of the national programmes were planned to be used as the technical annex to an Agreement between the respective Government and UNEP, specifying the substance of the programmes and modalities of co-operation on their implementation, including the provision of assistance to the national research centres designated to participate in it.

8. The staff of the MED UNIT and the relevant Co-operating Agencies assisted the MED POL National Co-ordinators, by visits and correspondence, to define the national monitoring programmes according to the agreed common criteria.

9. Table 1 summarizes the present status of national monitoring programmes. The list of collaborating MED POL centres, designated by the MED POL National Co-ordinators as participants in the programme, is given in Annex I.

10. Difficulties encountered in defining the national monitoring programmes and in signing the Agreements between the Governments and UNEP, were:

- late designation of the National Co-ordinators for MED POL in several countries;
- lack of funds to finance the programme at national level; and,
- in a few cases, the national monitoring programmes submitted to UNEP did not follow the guidelines contained in UNEP/WG.62/3/Rev.1, or were submitted in incomplete form.

11. Financial assistance has been provided by the secretariat to research centres in countries where Agreements have been signed. (See details in section 8.).

3. MONITORING

12. The various monitoring activities are reviewed in the paragraphs below. The review follows the structure of MED POL - PHASE II, as approved by the Contracting Parties (UNEP/IG.23/11, Annex V), and occasionally refers to the relevant parts of the Barcelona Convention and its Protocols (UNEP, 1982).

3.1 Monitoring of sources of pollution (paragraphs 12-14 of UNEP/IG.23/11, Annex V)

a. Type and amount of pollutants discharged directly into the coastal waters from land-based (coastal) sources

13. No reports (expected according to Articles 6 and 13 of the Land-Based Sources Protocol) have yet been received on the authorization granted for the discharges related to substances and sources listed in Annex II of the Protocol, or on quantities of pollutants discharged from land-based sources. The reporting forms, which may be adopted by the Contracting Parties, will be presented to the Meeting of Experts on the Implementation of the Land-Based Sources Protocol (December 1983), for their consideration.

14. Most of the proposed national monitoring programmes (according to Agreements referred to in paragraph 7 above, and Articles 8 and 13 of the Land-Based Sources Protocol), include the monitoring of a number of urban and industrial sources of pollution (Tables 2 and 3) with an indication of the type of effluents, parameters to be monitored and frequency of sampling.

Table 1: Status of National Monitoring Programmes

C O U N T R Y	STATUS	IMPLEMENTED SINCE
ALGERIA	Not received	
CYPRUS	Agreement signed	March 1983
EEC	Not received	
EGYPT	Not received	
FRANCE	Received	Continuous
GREECE	Not received	
ISRAEL	Agreement signed	Continuous
ITALY	Not received	
LEBANON	Agreement signed	January 1983
LIBYA	Not received	
MALTA	Agreement signed	December 1982
MONACO	Not received	
MOROCCO	Received	
SPAIN	Received	February 1982
SYRIA	Not received	
TUNISIA	Received	
TURKEY	Received	March 1983
YUGOSLAVIA	Agreement signed	November 1982

Table 2: Urban effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Location (Town)	Populat.1/ (approx.)	Number of sampling stations	Parameters monitored
I ALBORAN	Morocco	Tetouan	-	6	BOD_5, COD, TSS, N, P, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, Zn, HH
	Morocco	Al-Hoceima	257,000	2	same as above
	Morocco	Nador	501,000	3	BOD_5, COD, TSS, N, P, FC, DET, Hg, Cd, Pb, Cr, Zn, HH
	Morocco	Oujda	-	4	BOD_5, COD, TSS, N, P, FC, DET, PHE, PH, Hg, Cd, Pb, Cr Zn, HH
	Spain	Ceuta	136,000	-	BOD_5, COD, TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD
	Spain	Melilla	134,000	-	same as above
	Spain	Malaga	400,000	-	same as above
	Spain	Almería	127,000	-	same as above
	Spain	Torremolinos	20,000	-	same as above

1/ Figures refer to normal population, and may increase considerably in summer.

- = Insufficient information received.

Table 2 (contd): Urban effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Location (Town)	Populat.1/ (approx.)	Number of sampling stations	Parameters monitored
II NORTH-WESTERN	Spain	Valencia	714,000	-	BOD_5, COD, TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD
	Spain	Castellon	110,000	-	same as above
	Spain	Tarragona	78,000	-	same as above
	Spain	Hospitalet	242,000	-	same as above
	Spain	Barcelona	1,800,000	8	same as above
	Spain	Badalona	202,000	-	same as above
	Spain	Lloret	10,000	-	same as above
III SOUTH-WESTERN	Spain	Cartagena	158,000	-	BOD_5, COD, TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD
	Spain	Alicante	218,000	-	same as above
	Spain	Benidorm	60,000	-	same as above
	Spain	Palma de Mallorca	262,000	-	same as above

1/ Figures refer to normal population, and may increase considerably in summer.

- = Insufficient information received.

Table 2 (contd): Urban effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Location (Town)	Populat.1/ (approx.)	Number of sampling stations	Parameters monitored
IV TYRRHENIAN	Tunisia	Bizerte	400.000	11	BOD_5, COD, TSS, N, P, Hg, Cd, Pb
	Tunisia	Tunis	1.000.000	40	same as above
	Tunisia	Tabarka	10.000	5	same as above
	Tunisia	Korbous	20.000	4	same as above
	Tunisia	Nabeul	60.000	4	same as above
V ADRIATIC	Yugoslavia	Piran	30.000	2	BOD_5, TSS, N, P, FC, DET, PH, Hg, Cd, Pb, Zn
	Yugoslavia	Izola	20.000	2	same as above
	Yugoslavia	Koper	50.000	1	same as above
	Yugoslavia	Rovinj	10.000	1	BOD_5, TSS, N, P, FC, Hg, Cd
	Yugoslavia	Split	50.000	1	BOD_5, TSS, N, P, FC, PH, Hg, Cd, RAD
	Yugoslavia	Stobrec	2.000	1	same as above
	Yugoslavia	Sibenik	80.000	2	BOD_5, COD, TSS, DET, PH, Hg, Cd, Pb, Zn
VI IONIAN					

1/ Figures refer to normal population, and may increase considerably in summer.

Table 2 (contd): Urban effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Location (Town)	Populat.[1] (approx.)	Number of sampling stations	Parameters monitored
VII CENTRAL	Malta	Malta South	200.000	1	BOD_5, COD, TSS, N, P, FC, DET, PH, Hg, Cd, Pb, Cr, Zn, HH
	Malta	St. Paul's Bay	3.000	1	same as above
	Malta	Mgarr	10.000	1	same as above
	Malta	Manikata	200	1	same as above
	Malta	Mellieha	5.000	1	same as above
	Malta	Gozo	20.000	1	same as above
	Tunisia	Mahdia	300.000	1	BOD_5, COD, TSS, N, P, Hg Cd, Pb
	Tunisia	Sfax	500.000	5	same as above
	Tunisia	Gabès	300.000	10	same as above
	Tunisia	Hammamet	50.000	4	same as above
	Tunisia	Sousse	100.000	9	same as above
	Tunisia	Monastir	60.000	4	same as above

[1] Figures refer to normal population, and may increase considerably in summer.

Table 2 (contd): Urban effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Location (Town)	Populat.1/ (approx.)	Number of sampling stations	Parameters monitored
VIII AEGEAN	Turkey	Marmaris	8.000	1	BOD_5, COD, TSS, N, P, FC, PH, Hg, Cd
	Turkey	Bodrum	10.000	1	same as above
	Turkey	Izmir	530.000	1	same as above
	Turkey	Edremit	27.000	1	same as above
IX NORTH-LEVANTINE	Turkey	Iskenderun	125.000	1	BOD_5, COD, TSS, N, P, FC, PH, Hg, Cd
	Turkey	Mersin	216.000	1	same as above
	Turkey	Antalya	174.000	1	same as above
X SOUTH-LEVANTINE					
XI ATLANTIC	Morocco	Sebou	-	2	(BOD_5, COD, TSS, N, P,
	Morocco	Kenitra	-	1	(FC, DET, PHE, PH, Hg, Cd,
	Morocco	Gibraltar	-	1	(
	Morocco	Tanger	-	2	(
	Morroco	Ksar Sghir	-	1	(

1/ Figures refer to normal population, and may increase considerably in summer.

- = Insufficient information received.

Table 3: Industrial effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev. 1)

MED POL Area	Country	Location Town	Type of industry/activity	Type of waste	Number of sampling stations	Parameters Monitored
I ALBORAN	Morocco	Tetouan	-	-	3	BOD_5, COD, TSS, N, P, FC, DET, PHE, PH, Hg, Cd, Cr, Pb, Zn, HH
	Morocco	Al-Hoceima	food, petroleum	-	2	same as above
	Morocco	Nador	metallurgy	inorganics	2	same as above
	Morocco	Oujda	mining, petroleum hydrocarbons	organics, inorganics	3	same as above
	Spain	Algeciras	ind. complex/ refinery	-	-	BOD_5, COD, TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD
II NORTH-WESTERN	Spain	Valencia	-	-	-	BOD_5, COD, TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD,
	Spain	Sagunto	metallurgy	inorganics	-	same as above
	Spain	Castellon	refinery/petrochem.	petrol hydrocarbons	-	same as above
	Spain	Vandellos	nuclear power plant	radioisotopes	-	same as above
	Spain	Tarragona	refinery/petrochem.	petrol hydrocarbons	-	same as above
	Spain	Barcelona	-	-	-	same as above
III SOUTH-WESTERN	Spain	Cartagena	refinery/petrochem.	petroleum hydrocarbons		BOD_5, COD,TSS, P, N, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, HH, RAD

- = Insufficient information received.

Table 3 (contd): Industrial effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev. 1)

MED POL Area	Country	Location Town	Type of industry/activity	Type of waste	Number of sampling stations	Parameters Monitored
IV TYRRHENIAN	Tunisia	Northern Coast	cement, refinery, metals	organics, inorganics	-	BOD_5, COD, TSS, N, P, Hg, Cd, Pb
	Tunisia	Gulf of Tunis	paints, pesticides	organics	-	same as above
V ADRIATIC	Yugoslavia	Izola	fish canning	organics	1	BOD_5, COD, TSS, N, P, DET, PH, Hg, Cd, Zn
	Yugoslavia	Koper	petrochemical, metal processing, agriculture	organics, inorganics	1	FC, Pb, Cr and HH in addition to those above
	Yugoslavia	Piran	-	-	1	same as above
	Yugoslavia	Rovinj	tobacco, cigarette processing and printing	organics	1	BOD_5, TSS, N, P, FC, Hg, Cd
	Yugoslavia	Valdibora Bay	fish processing and canning	organics, inorganics	1	same as above
	Yugoslavia	Razine-Sibenik	production & processing of aluminium	inorganics	-	BOD_5, COD, TSS, DET, PH, Hg, Cd, Pb, Zn
VI IONIAN						
VII CENTRAL	Tunisia	East Coast	oil, food	organics	-	BOD_5, COD, TSS, N, P, Hg, Cd, Pb
	Tunisia	Region of Gabès	oil, chemicals	organics	-	same as above

- = Insufficient information received.

Table 3 (contd): Industrial effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev. 1)

MED POL Area	Country	Location Town	Type of industry/activity	Type of waste	Number of sampling stations	Parameters Monitored
VIII AEGEAN	Turkey	Izmir	textile, food processing	organics	1	BOD_5, COD, TSS, N, P, FC, PH, Hg, Cd
	Turkey	Aliaga	refinery, petro-chemicals	petroleum hydrocarbons	1	same as above
IX NORTH LEVANTINE	Cyprus	Limassol	wines & spirits	organics	4	BOD_5,COD, TSS, N, P, DET, Zn
	Cyprus	Limassol	laundry	organics	1	P, DET
	Cyprus	Limassol	soft drinks	organics	1	BOD_5,COD, TSS, N, P, DET, Zn
	Cyprus	Limassol	slaughterhouse	organics	1	BOD_5, COD, TSS
	Cyprus	Limassol	ore processing, sulphuric phosphoric and fertilizer factories	organics, inorganics	1	COD, TSS, N, P, Cd, Pb, Cr, Zn
	Cyprus	Larnaca	detergents	organics	1	P, DET
	Cyprus	Larnaca	olive oil production	organics	1	BOD_5
	Cyprus	Larnaca	petrochemicals	organics	1	PH, Cd, Pb
	Turkey	Iskenderum Bay	metal processing agriculture	fertilizers, inorganics	1	BOD_5,COD, TSS, N, P, FC, PH, Hg, Cd
	Turkey	Yumurtalik	oil terminal	petroleum hydrocarbons	1	same as above
	Turkey	Tasucu	pulp and paper	organics, inorganics	1	same as above
	Turkey	Dalaman	pulp and paper	organics, inorganics	1	same as above

Table 3 (contd): Industrial effluents proposed to be monitored (sampling frequencies undetermined, code of parameters according to UNEP/WG.62/3/Rev. 1)

MED POL Area	Country	Location Town	Type of industry/activity	Type of waste	Number of sampling stations	Parameters Monitored
X SOUTH LEVANTINE						
XI ATLANTIC	Morocco	Oued Sebou	food, paper	organics	3	BOD_5, COD, TSS, PH, Hg, Cd, Pb, Cr
	Morocco	Tanger	food, chemical	organics, inorganics	5	BOD_5,COD, TSS, N, P, FC,DET, PHE, PH, Hg, Cd, Cr,Pb, Zn, HH

15. The WHO manual (WHO, 1982) developed in the framework of MED POL - PHASE I for the assessment of the overall amounts of pollutants reaching the marine environment has been available to all MED POL National Co-ordinators with recommendations to be used, on an interim basis, until the relevant reference methods are formulated and adopted (see Chapter 4).

b. Type and amount of pollutants dumped directly into the sea

16. Only a few reports on the dumping operations (expected according to Articles 7, 8 and 9 of the Dumping Protocol) have been received, although the reporting forms and procedures have been adopted by the Contracting Parties (UNEP/IG.23/11). Unfortunately, these reports do not contain a clear indication on the type and amount of pollutants dumped. The reports are reviewed in a separate document (UNEP/WG.91/8) submitted to this meeting of the Working Group. According to the information contained in that document:

- only Italy has reported the issuance of two special permits (Articles 5 and 7 of the Protocol) for dumping 1.5 million tonnes of industrial waste, each, during 18 months, starting June 1981 and June 1982, respectively;

- no States have reported the issuance of general permits (Articles 6 and 7 of the Protocol). France and Italy reported dumping 0.4 and 1.4 million tonnes of dredge spoil during 1981; and

- France and Spain reported during 1981 dumping of 18,000 tons of petroleum hydrocarbons and about 300 tonnes of explosives, industrial waste and general cargo due to force majeure (Article 8 of the Protocol).

c. Type and amount of pollutants dumped in emergency or released accidentally into the sea

17. No reports (expected according to Articles 8 and 9 of the Emergency Protocol) have been received from the Contracting Parties. Reports on oil spills have been received from the Regional Oil Combating Centre (ROCC), in Malta. The information contained in these reports is not detailed enough to allow the quantitative assessment of the petroleum hydrocarbons discharged into the Mediterranean. The reports are reviewed in a separate document (UNEP/WG.91/7) submitted to this meeting of the Working Group.

d. Type and amount of selected substances reaching the sea directly through natural processes from land-based (coastal) or maritime sources

18. No information has been received by the secretariat which could be used for the assessment of the type and amount of selected substances reaching the sea directly through natural processes from land-based (coastal) or maritime sources.

3.2 Monitoring of coastal waters, including estuaries (paragraphs 15-20 of UNEP/IG.23/11, Annex V)

19. Table 4 summarizes the basic information relevant to the monitoring of coastal waters, including estuaries, covered by the proposed national monitoring programmes.

20. Reference methods recommended to be followed in the monitoring of coastal areas have been distributed to all National Co-ordinators for MED POL and many research centres. Additional methods are in the process of being developed in co-operation with FAO, UNESCO, IOC, WHO and IAEA. For further details see Chapter 4 below.

21. Forms for reporting (see Annex II) have been distributed to all National Co-ordinators for MED POL. Other additional forms are being developed by the secretariat in collaboration with the relevant Co-operating Agencies.

22. A data report relevant to the national monitoring programme has been received only from France. A progress report has been received from Turkey.

3.3 Monitoring of (open-sea) reference areas (paragraphs 21-24 of UNEP/IG.23/11, Annex V)

23. Table 5, indicates the basic information relevant to the monitoring of reference areas covered by the proposed national monitoring programmes.

24. No information on the results obtained from the monitoring of the reference areas or from ongoing cruises in the Mediterranean Sea have been reported to the secretariat.

3.4 Monitoring of the transport of pollutants through the atmosphere (paragraphs 25-29 of UNEP/IG/23/11, Annex V)

25. Following the decision of the Contracting Parties to consider the first phase of this type of monitoring as research activity (UNEP/IG.23/11, paragraph 41), contacts were established, through WMO, with national meteorological services in order to assess the possibility of using the existing background pollution monitoring stations (BAPMON) as the basic network on which to begin the activity.

26. At the request of UNEP, GESAMP through its Working Group No. 14 on Interchange of Pollutants between the Atmosphere and the Oceans, undertook to define transport processes towards, and into the Mediterranean, to review the relevant scientific literature and to assess the pathways and fluxes of important pollutants into the Mediterranean. For more details on this subject see document UNEP/WG.91/Inf.4.

27. Following GESAMP's recommendations, two BAPMON stations in Carpentras (France) and Ivan Sedlo (Yugoslavia), have accepted to sample aerosols and wet precipitation. In addition two national research centres (Centre pour les Faibles Radioactivités (France) and Middle East Technical University (Turkey)) have agreed to carry out onshore and onboard sampling. Routine analyses of samples are being carried out by these centres and the IAEA International Laboratory for Marine Radioactivity in Monaco.

Table 4: Coastal waters and estuaries proposed to be monitored[1/]
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
I ALBORAN	Morocco	Tetuan	16	SW, SD	TC, FC, FS, BOD_5, COD, TSS, N, P, DET, PHE, PH, Hg, Cd, Pb, Cr, Zn, HH, RAD
	Morocco	Al-Hoceima	10	SW	BOD_5, COD, TSS, N, P, FC, DET, PHE, PH, Hg, Cd, Pb, Zn, HH
	Morocco	Nador	5	SW, SD MG, ME, EB	TR, PH, SP&C, Hg, HH, COD, TSS, BOD_5, N, P, TC, DET, Cr, Cd, Zn, Pb
	Morocco	Oujda	17	SW	TC, FC, FS, BOD_5, COD, TSS N, P, DET, PHE, PH, Hg, Cd, Pb, Cr, Zn, HH
	Spain	Malaga	5	SW, SM, SD MG, MB, MS, TT, TA XG, PL, AA	BO&M, SP&C, FC, TR, PH Hg, Cd, HH, P, N

1/ Sampling frequencies variable according to station

Table 4 (contd): Coastal waters and estuaries proposed to be monitored[1/])
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
II NORTH-WESTERN	France	Golfe de Fos	3	SW	SP&C, PH, TSS N, P, HH, Hg, Cd
	France	Etang de Berre	3	SW	SP&C, PH, TSS, N, P, Hg, Cd, HH
	France	Cortiou	2	SW	same as above
	France	Baie de Ville-franche	1	SW,SD, MG	SP&C, PH, TSS, N, P, HH, Hg, Cd, FC
	France	Golfe d'Ajaccio	1	SW	SP&C, PH, TSS, N, P, Hg, Cd, HH
	France	Banyuls	1	MG	Hg, Cd, FC, HH, PH
	France	Etang de Thau	1	same as above	same as above
	France	Baie de Marseille	1	MG, SP, Trisopterus minutus capelanus	same as above

1/ Sampling frequencies variable according to station

Table 4 (contd): Coastal waters and estuaries proposed to be monitored[1/]
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
II NORTH WESTERN	France	Baie de Toulon	1	MG	Hg, Cd, FC, HH, PH
	France	Baie de Cannes	2	SD, MG	Hg, Cd, FC, HH, PH PCB's Total, Hydrocarbons
	France	Pyrénées orientales)	29	SW	(TC, FC, Mineral oils,
		Aude)	18		(Tensio-active substances,
		Herault)	45		(pH, Transparence, Petroleum
		Gard)	3		(residues
		Bouches du Rhône)	92		
		Var)	126	SW	(FS, Salmonella,
		Alpes maritimes)	144		(Enterovirus, pH, Oxygen,
		Corse du Sud)	65		(NH_4, N, HH, As, Cd, Cr,
		Haute Corse)	59		(Pb, Hg, Cyanides, P
	Spain	Júcar	5	SW, SM, SD	BO&M, SP&C, FC, TR, PH Hg, Cd, HH, P, N
	Spain	Valencia	5	same as above	same as above
	Spain	Ebro	5	same as above	same as above
	Spain	Barcelona	26	same as above	same as above
	Spain	Ter	5	same as above	same as above
	Spain	Fluvià	5	same as above	same as above
	Spain	Catalunya	135	SW	TC, FC, BO&M

1/ Sampling frequencies variable according to station

Table 4 (contd): Coastal waters and estuaries proposed to be monitored[1/]
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
III SOUTH-WESTERN	Spain	Mar Menor	5	SW, SM, SD MG, MB, MS, TT TA, XG, PL, AA	BO&M, SP&C, FC, TR, PH, Hg, Cd, HH, P, N
	Spain	Segura	5	same as above	same as above
	Spain	Baleares	5	same as above	same as above
IV TYRRHENIAN	Tunisia	Gulf of Tunis	-	-	-
V ADRIATIC	Yugoslavia	Gulf of Trieste	42	SW, SD, SM, fish	FC, Hg, Cd, HH, PH
	Yugoslavia	Istrian west coast	10	SW, SD, fish,	BO&M, N, P, FC, TSS, HH, SP&C, Hg, Cd,
	Yugoslavia	middle Adriatic	7	SW, SD, SM, bivalves, EW	FC, Hg, Cd, PH, BO&M
	Yugoslavia	Krka Estuary/Kornati Archipelago	10	SW, SD, EW, MG	TSO, SP&C, TSS, Hg, Cd, Pb, Zn, FC, BOD_5, COD, DET, PH, HH, OS
VI IONIAN					

1/ Sampling frequencies variable according to station

- = Insufficient information received.

Table 4 (contd): Coastal waters and estuaries proposed to be monitored[1/]
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
VII CENTRAL	Malta	Malta	7	SW, SD, fish, crustaceans	N, P, Hg, Cd, Pb, Cr, Zn, TC, FS, PH, HH, DET, FC
	Tunisia	Gulf of Hammemet	-	-	-
	Tunisia	Gulf of Gabés	-	-	-
VIII AEGEAN	Turkey	Aegean	24	EW, SM, SD	BO&M, FC, COD, BOD_5, P, N, Hg, Cd, PH, OS, TR, SP&C
IX NORTH LEVANTINE	Cyprus	Limassol Bay	4	SW, SD, SS, bivalve, fish, crustaceans	SP&C, Hg, HH, PH, TR, Cd, OS
	Cyprus	Larnaca Bay	4	same as above	same as above
	Cyprus	Vasilico/Moni area	1	SW, SD	SP&C, Hg, HH, PH, Al, Fe, F
	Cyprus	Lara area	1	SS	TR
	Turkey	Levantine	17	EW, SM, SD	BO&M, FC, BOD_5, COD, P, N, Hg, Cd, PH, OS, TR, SP&C

1/ Sampling frequencies variable according to station

- = Insufficient information received

Table 4 (contd): Coastal waters and estuaries proposed to be monitored[1/]
(code of parameters/matrices according to UNEP/WG.62/3/Rev.1)

MED POL Area	Country	Geographical Area	Number of sampling stations	Matrices monitored	Parameters monitored
X SOUTH LEVANTIN	Israel	Haifa bay	12	SD, gastropod, in-shore fish, benthic organisms	Hg, Cd
	Israel	Med. coast of Israel	60	SW, SD	FC, Salmonella
	Israel	Kfar Galim Beach	25	SS	TR
	Lebanon	Beirut-Nahr Ibrahim	10	SW, SD, shellfish, crustaceans	SP&C, FC, BO&M, P, N, BOD_5, COD, Hg, Cd, HH
XI ATLANTIC	Morocco	Sebou, Beht, Kenitra	6	SW, SD	BOD_5, COD, TSS, N, P, FC, DET, PHE, PH, Hg, Cd, Pb, Cr, Zn, HH,
	Morocco	Tanger	9	MG, MB, SP	Hg, Cd, HH

1/ Sampling frequencies variable according to station

Table 5: Reference areas proposed to be monitored

MED POL area	Country	Geographical area	Number of sampling stations	Sampling frequency	Matrix	Parameters and matrices monitored
I ALBORAN	Spain	Straits of Gibraltar	-	once/year	SW SD Phytoplankton) Zooplankton) Benthos)	BO&M, SP&C, TR, PH Hg, HH Hg, Cd, HH
II NORTH-WESTERN	Spain	Off Ebro	-	once/year	SW SD Phytoplankton) Zooplankton) Benthos)	BO&M, SP&C, TR, PH Hg, HH Hg, Cd, HH
	Spain	Straits of Gibraltar	-	same as above	same as above	same as above
	Spain	Open waters of West. Med.	-	same as above	same as above	same as above
III SOUTH-WESTERN						
IV TYRRHENIAN	Tunisia	Parc marin de Zembra	1	-	-	-

- = Insufficient information received

Table 5 (contd): Reference areas proposed to be monitored

MED POL area	Country	Geographical area	Number of sampling stations	Sampling frequency	Matrix	Parameters and matrices monitored
V ADRIATIC	Yugoslavia	Middle Adriatic	28	seasonal	SW, SD, organisms	SP&C, BO&M, Hg, Cd, HH
VI IONIAN						
VII CENTRAL						
VIII AEGEAN	Turkey	Aegean	15	seasonal	SW, SD, organisms	SP&C, BO&M, OS, TR, PH, Hg, Cd
IX NORTH LEVANTINE	Turkey	Levantine	6	seasonal	SW, SD	BO&M, OS, TR, PH, SP&C, Hg, Cd
X SOUTH LEVANTINE						
XI ATLANTIC						

28. Results of these research and pilot monitoring activities are being assessed by the secretariat in co-operation with WMO and IAEA.

4. SAMPLING AND ANALYTICAL TECHNIQUES (paragraphs 30-34 of UNEP/IG.23/11, Annex V).

29. In order to fulfil the requirement that data generated in MED POL - PHASE II should be comparable, to the largest extent feasible, with those obtained during the pilot phase, and those generated through UNEP-sponsored programmes in other regions, the Regional Seas Programme Activity Centre of UNEP, in close co-operation with the MED UNIT and the relevant Co-operating Agencies, co-ordinates the development and testing of reference methods for marine pollution studies which are, or will be proposed, as the sampling and analytical techniques to be used in MED POL - PHASE II.

30. The list of reference methods and their present status is indicated in Annex III.

31. Additional reference methods covering sampling and analytical techniques for effluent waters are at present being developed. Acute toxicity test for a number of substances, as well as methods dealing with long-term effects of pollutants on organisms, on their populations and on ecosystems, are planned to be developed in future.

32. During the summer of 1982, WHO, in close consultation with the secretariat, organized a testing and intercalibration exercise for reference methods relevant to the assessment of microbiological quality of recreational and shellfish-growing waters. Research centres from six Mediterranean countries participated in the exercise and provided reports with the results of the testing. For details see Chapter 6 of this document and document UNEP/WG.91/Inf.6.

33. Testing exercises are being organized jointly by FAO and IAEA, in consultation with the secretariat, to test reference methods relevant to the monitoring of selected metals and chlorinated hydrocarbons in organisms. Selection of research centres participating in the exercise has been done in consultation with the National Co-ordinators.

34. For details on quality control of data through the intercalibration of sampling and analytical techniques, see Chapter 6.

5. DATA ANALYSIS AND DISSEMINATION (paragraphs 35-39 of UNEP/IG.23/11, Annex V)

35. Forms for data reporting have been developed or are being developed, taking into account the requirements of the Convention, its Protocols and specifically the various MED POL activities. They include:

- reporting forms required in accordance with Articles 6 and 13 of the Land-Based Sources Protocol in connexion with the issuance of authorizations by the competent national authorities for discharge of waste and of quantities of pollutants discharged from their Territories (for more details see paragraph 13);

- reporting forms required in accordance with Articles 7 and 8 of the Dumping Protocol on the issuance of authorizations by the competent national authorities for dumping of wastes and on quantities of waste actually dumped in the Mediterranean Sea (for more details see paragraph 16);

- reporting forms required in accordance with Articles 8 and 9 of the Emergency Protocol on accidents causing, or likely to cause, pollution of the sea, and on the presence, characteristics and extent of spillages observed at sea (see paragraph 17);

- reporting forms for data reporting from monitoring of urban and industrial effluents (for more details see paragraphs 14 and 15);

- reporting forms for data reporting from monitoring of coastal waters and estuaries (for more details see paragraph 21), and,

- reporting forms for data reporting from monitoring of reference areas (see paragraphs 23-24).

36. Draft forms for reporting data resulting from monitoring of selected pollutants have been prepared by the secretariat on the basis of experience gained through MED POL - PHASE I. These draft forms (Annex II) were sent in June 1983 to all MED POL National Co-ordinators, for consideration and comments. The Working Group is invited to review these drafts, amend them as appropriate, and to approve their use by all research centres participating in MED POL.

37. In view of the limited amount of data reported until now in the framework of MED POL - PHASE II, they have not yet been analysed or distributed.

38. Data obtained through MED POL - PHASE I, mainly in the framework of pilot projects, MED POL II, III and VII were initially collected and evaluated by FAO and WHO. At a later stage the data were transfered to the computerized data bank of the MED UNIT and are now being analysed.

39. Using data obtained through MED POL II pilot project the present state of pollution by mercury in the Mediterranean Sea was analysed by the secretariat, in co-operation with FAO and WHO. The document containing this analysis and the proposals for control measures is submitted for the consideration of this meeting of the Working Group (UNEP/WG.91/5).

40. Data obtained through MED POL VII pilot project were used for the assessment of the present state of microbial pollution in the Mediterranean, prepared by the secretariat in co-operation with WHO. The document containing this assessment, and the proposals for control measures, is submitted for the consideration of this meeting of the Working Group (UNEP/WG.91/6).

41. Other documents relevant to MED POL that have been prepared and are either printed, or in the process of being issued are:

- Waste Discharge into the Marine Environment. Principles and Guidelines for the Mediterranean Action Plan, WHO/Pergamon Press, 1982. - issued

- UNEP: Achievements and planned development of UNEP's Regional Seas Programme and comparable programmes sponsored by other bodies. UNEP Regional Seas Reports and Studies No 1, UNEP, 1982. - issued

- GESAMP: The Health of the Oceans. UNEP Regional Seas Reports and Studies No 16, UNEP, 1982. - issued

- FAO/UNESCO/IOC/WHO/WMO/IAEA/UNEP Co-ordinated Mediterranean Pollution Monitoring and Research Programme (MED POL - PHASE I): Programme Description. UNEP Regional Seas Reports and Studies No 23, UNEP, 1983. - issued

- UNEP: Marine Pollution. UNEP Regional Seas Reports and Studies No 25, UNEP, 1983. - issued

- UNEP: Long-term Programme for Pollution Monitoring and Research in the Mediterranean (MED POL) - PHASE II. UNEP Regional Seas Reports and Studies No 28, UNEP, 1983. - issued

- UNEP: Action Plan for the Protection of the Mediterranean. UNEP Regional Seas Reports and Studies No 34, UNEP, 1983. - being prepared

- Proceedings of the VI ICSEM/IOC/UNEP Workshop on Pollution of the Mediterranean Sea (Cannes, 2-4 December 1982) - being prepared

- Individual Scientific Reports of Principal Investigators from Research Centres who Participated in MED POL - PHASE I. - being prepared

- Final Report on MED POL - PHASE I. - being prepared

- Reference Methods for Marine Pollution Studies - for details see Annex III of this document.

6. ASSISTANCE COMPONENT (paragraphs 43-48 of UNEP/IG.23/11, Annex V).

6.1 Training and Technical Assistance

42. Group training was provided through the secretariat to a number of research centres through the sponsorship of 77 scientists to attend meetings, seminars, workshops, etc., organized, co-sponsored or supported through the MED POL programme. On-job training is being organized for a number of scientists directly participating in the monitoring activities. The IAEA International Laboratory for Marine Radioactivity (ILMR) has offered to train scientists, through MED POL (six at a time), for three months on analytical and sampling techniques for heavy metals, petroleum and halogenated hydrocarbons, etc. For details see Annex IV of this document.

43. Assistance was also provided to some national institutions and MED POL National Co-ordinators by visits of staff of the secretariat, staff of the Co-operating Agencies and consultants/experts sponsored through MED POL. Most of these visits were undertaken in order to discuss the formulation of national monitoring programmes and the involvement of national research centres in their implementation. For details see Annex V.

6.2 Quality Control of Data

44. The quality control programme for MED POL is being carried out since 1975 in order to ensure the highest degree of quality and comparability of data.

45. ILMR has been organizing since 1975, the intercalibration relevant to the monitoring of selected metals and chlorinated hydrocarbons. A detailed report on these activities is submitted to this meeting of the Working Group for information (UNEP/WG.91/INF.3).

46. Since the start of the MED POL - PHASE II, the following standards and reference samples have been prepared by ILMR and the corresponding intercalibration exercises have been launched with the participation of research centres identified by MED POL National Co-ordinators:

- organohalogens (DDT, DDE, DDD and PCBs) in sediments;
- organohalogens (DDT, DDE, DDD and PCBs) in mussels;
- heavy metals (Hg, Cd, Pb, Zn and Cu) in sediments; and
- heavy metals (Hg, Cd, Pb, Zn and Cu) in mussels.

47. In addition, on specific requests, analytical standards have been supplied by ILMR to selected research centres, usually in connexion with the maintenance service.

48. The global intercalibration of analytical methods for petroleum hydrocarbons with participation of selected Mediterranean research centres, has been initiated in March 1983 by IOC in consultation with the secretariat. It is carried out by the Bermuda Biological Station for Research and is being closely co-ordinated with a similar activity being conducted by ICES. The exercise is guided by the IOC Group of Experts on Methods, Standards and Intercalibration (GEMSI).

49. Intercalibration of microbiological and related techniques have been organized by WHO in co-operation with the secretariat at regional and national level. During the summer of 1982, the first versions of the relevant reference methods were tested by a number of Mediterranean laboratories under local environmental conditions. The testing was followed by an intercalibration exercise at the Istituto Superiore di Sanità in Rome, 22-24 November 1982 (see Annex IV). On the basis of this exercise the relevant reference methods have been revised and preparations have been made for the organization of national intercalibration exercises in Spain (late 1983) and Greece (late 1983/early 1984), with the attendance of scientists from other countries.

6.3 Common maintenance service

50. The common maintenance service for sophisticated analytical equipment, which has been organized for the pilot phase of MED POL by UNEP in co-operation with IAEA, continues to be at the disposal of research centres participating in MED POL - PHASE II. The maintenance services provided to these research centres on their request since the beginning of MED POL - PHASE II are summarized in Annex VI.

6.4 Supply of equipment and material

51. The equipment provided by UNEP to the research centres participating in MED POL - PHASE I has been transfered into the ownership of recipient research centres. The total value of this equipment is approximately US $ 1,000,000.

52. The new equipment requested from the secretariat through the national monitoring programme has been, or is being, supplied by the secretariat to the research centres participating in MED POL - PHASE II according to the signed and finalized agreements (see Annex VII).

7. CO-ORDINATION (paragraphs 49-53 of UNEP/IG.23/11, Annex V)

53. The monitoring activities of MED POL - PHASE II are co-ordinated by the Co-ordinating Unit for the Mediterranean Action Plan through direct contacts with the MED POL National Co-ordinators, with the assistance of relevant Co-operating Agencies and according to the decisions of the periodic meetings of the Contracting Parties and advice of the Working Group for Scientific and Technical Co-operation. Specifically, since the adoption of MED POL - PHASE II, including its general budgetary provisions, by the Second Meeting of the Contracting Parties in Cannes, 2-7 March 1981 (UNEP/IG.23/11):

- the proposed workplan and budget for the initial period of MED POL - PHASE II was reviewed by the First Meeting of the Working Group in Athens, 28 September - 2 October 1981, which advised the secretariat on its implementation (UNEP/WG.62/7);

- the MED POL workplan and budget for 1982-1983 was approved by the Extraordinary Meeting of the Contracting Parties in Geneva, 29 March - 1 April 1982 (UNEP/IG.36/8);

- the revised detailed MED POL workplan and budget for 1983 was approved by the Third Meeting of the Contracting Parties in Dubrovnik, 28 February - 4 March 1983 (UNEP/IG.43/6); the same meeting adopted the overall MED POL budget for the 1984-1985 period;

- the detailed programme and budget of MED POL for 1984-1985 was endorsed by the Eighteenth Meeting of the Bureau of the Contracting Parties in Athens, 18-19 January 1983 (UNEP/BUR/18.Corr. 1).

54. Since the initiation of MED POL - PHASE II, three meetings of the Inter-Agency Advisory Committee (IAAC) for MED POL took place in order to ensure harmonious co-operation betwen the secretariat and the Co-operating Agencies in the implementation of MED POL, specifically:

- XIII Meeting of IAAC, Geneva, 15-18 March 1982; reviewed the activities of MED POL during 1981 and provided guidance to Co-operating Agencies on the implementation of research activities and services;

- XIV Meeting of IAAC, Athens, 18-22 October 1982; reviewed the activities of MED POL, cleared part of the research proposals and prepared the workplan and budget proposal for 1983; and

- XV Meeting of IAAC, Athens 12-14 April 1983; reviewed the activities of MED POL, prepared the workplan and budget proposals for 1984-1985.

55. In order to benefit from other activities carried out in the framework of UNEP's Regional Seas Programme and other regional programmes (such as the Oslo/Paris Commission) relevant to MED POL, the staff of the MED UNIT attended a number of scientific and technical meetings organized by these programmes.

8. BUDGETARY CONSIDERATIONS

56. In Table 6 the expenditures and commitments related to MED POl monitoring activities for the 1981-1985 period are summarized and compared to authorized allocations. The details of these expenditures and commitments, presented in the format requested by the Contracting Parties (UNEP/IG.43/6, Annex VII), are shown in Annex VIII of this document.

Table 6: Summary of expenditures and commitments, compared to authorized allocations, for monitoring activities of MED POL for the period 1981-1985
(in US dollars)

Year	Allocation	Expenditures/Commitments
1981	600,000 1/	336.710
1982	750,000 2/	371.977
1983	900,000 3/	1,116,000 5/
1984	800,000 4/	-
1985	850,000 4/	-
Total	3,900,000	1,824,685

1/ Second Meeting of the Contracting Parties (UNEP/IG.23/11, Annex IX)
2/ Extraordinary Meeting of the Contracting Parties (UNEP/IG.36/8, Annex V)
3/ Third Meeting of the Contracting Parties (UNEP/IG.43/6, Annex V)
4/ Third Meeting of the Contracting Parties (UNEP/IG.43/6, Annex V) and Eighteenth Meeting of the Bureau (UNEP/BUR/18/Corr.1, Annex IV)
5/ US $216,000 rephased from 1982 allocation was authorized by the Third Meeting of the Contracting Parties (UNEP/IG.43/6, paragraph 71)

57. Annex VIII reflects only the expenditures and commitments charged directly against Chapter 3 of the Mediterranean Action Plan budget (Mediterranean Trust Fund, Environment Fund and cash contribution of the Government of Greece). It does not include the contributions of the Co-operating Agencies and of UNEP through the Regional Seas Programme Activity Centre. These contributions, for the period covered by Table 6, are estimated and are shown in Table 7.:

Table 7: Contributions of Co-operating Agencies and UNEP (through RS/PAC) towards the cost of MED POL in the period 1981-1983
(in US dollars)

Year	UNEP (RS/PAC)	FAO	WHO	IOC/ UNESCO	IAEA	WMO
1981	30,000	6,000	4,000	5,000	5,000	4,000
1982	30,000	48,000	49,000	55,000	78,000	16,500
1983	45,000	53,000	75,000	41,000	85,000	16,500
TOTAL	105,000	107,000	128,000	101,000	168,000	37,000

9. ACTIVITIES PLANNED FOR 1983-1985 AND THEIR FINANCIAL IMPLICATIONS

58. The following activities are planned to be carried out by the secretariat, in co-operation with the Co-operating Agencies, in the 1983-1985 period:

- continued negotiations with the MED POL National Co-ordinators in order to increase the contributions to MED POL - PHASE II through their national monitoring programmes;

- continued contacts with national research centres designated as participants in the monitoring activities of MED POL - PHASE II in order to facilitate their participation in the programme;

- provision of equipment, training and fellowships to national research centres, on request of and in consultation with MED POL National Co-ordinators;

- continued support to the national research centres through the common maintenance services, provision of reference methods for marine pollution studies, provision of reference materials and standards, and through involvement in intercalibration in order to assist them to improve the quality of their data;

- further analysis of data collected during MED POL - PHASE I, and preparation of their publication;

- strengthening of the computerized MED POL data bank by processing of data reported to the secretariat and preparation of periodic data profiles on topics of general interest;

- development and testing of additional reference methods for marine pollution studies and preparation of additional standards and reference materials relevant to parameters to be monitored during MED POL - PHASE II;

- preparation for, and the implementation of a pilot project to assess the feasibility to monitor the transport of pollutants into the Mediterranean Sea through the atmosphere;

- continued use of the Working Group to obtain advice on matters related to the implementation of the monitoring activities; two meetings of the Working Group are envisaged: in December 1984 and in December 1985;

- continued co-operation with Co-operating Agencies on all relevant aspects of MED POL monitoring activities in order to benefit from their experience, expertise and contributions;

- organizing smaller ad hoc meetings of scientists/experts from collaborating research centres to discuss specific problems related to their participation in the programme;

- sponsoring the participating of scientist/experts in meetings organized by other bodies on subjects relevant to monitoring activities of MED POL; and

- co-sponsonship with ICSEM of VII ICSEM/UNEP Workshop on pollution of the Mediterranean Sea (Autumn 1984), and by sponsoring scientists from MED POL research centres to participate in it, and publication of the Proceedings.

59. The activites envisaged in the preceeding paragraphs are covered with financial allocations approved by the Bureau of the Contracting Parties (UNEP/BUR/18/Corr. 1), and presented in Annex VIII.

ANNEX I

List of MED POL - PHASE II collaborating centres and scientists

CYPRUS

Fisheries Department Ministry of Agriculture & Natural Resources 5-7 Tagmatarchou Pouliou Nicosia	A. Demetropoulos* L. Loizides L. Athanassiadou P. Loizidou

FRANCE

Centre Océanologie de Bretagne B.P. 337 29273 Brest Cedex	M. Chaussepied*
Institut Scientifique et Technique des Pêches Maritimes(ISTPM) Rue de l'ile d'Yeu B.P. 1049 44037 Nantes Cedex	Y. Thibaud*

ISRAEL

Israel Oceanographic and Limnological Research, Haifa	B. Krumgalz* A. Golik*
"Dr. Felix" Public Health Laboratory Ministry of Health Tel Aviv	Y. Yoshpe-Purer*
District Public Health Laboratory Ministry of Health Haifa	A. Mates*
District Public Health Laboratory Ministry of Health Beer-Sheva	N. Platzner*
Environmental Protection Service Ministry of the Interior Jerusalem	Co-ordinator of the Laboratories

* = Designated as responsible investigators

List of MED POL - PHASE II collaborating centres
and scientists

LEBANON

Centre de Recherche Marine	H. Kouyoumjian*
Conseil National de la Recherche Scientifique	H. Hajenian
Jounieh	E. Najjar
	M. Tilbian
	J. Belian
	J. Yazbek

MALTA

Public Health Laboratory Department of Health Merchant's Street Valletta	R. Schembri*
Department of Pharmacy University of Malta Tal-Qroqq	A. Serracino Inglott*
Works Department Bacteriological Laboratory New Lyceum Msida	V. Gauci*
Department of Maths & Science University of Malta Tal-Qroqq	V. Axiak*

List of MED POL - PHASE II collaborating centres and scientists

MOROCCO

Institut National d'Hygiène B.P. 769, Rabat	N.N. Ben Mansour*
Office National de l'eau Potable (Laboratoire) B.P. Rabat-Chellah Rabat	M.A. Foutlane*
Institut Scientifique des Pêches Maritimes 21 rue de Tiznit B.P. 21 Casablanca	H. Idrissi*
Laboratoire de Chimie Faculté des Sciences Université d'Oujda Oujda	Prof. Ramdani*
Laboratoire de Biologie Faculté des Sciences Université Hassan II Rabat-Agdal	Prof. Matringe* Dr. Kessabi*
Laboratoire de Toxicologie Institut Agronomique et et Vétérinaire Hassan II Rabat-Agdal	Dr. Lamnaouer
Laboratoire d'hygiène et industrie des denrées alimentaires d'origine animale Institut Agronomique et Vétérinaire Hassan II Rabat-Agdal	Dr. Marrackchi* Mr. Belmlih
Centre international de Génie sanitaire Ecole Mohammadia d'Ingénieurs B.P. 765 Rabat	Dr. Nejjar* Dr. Belkhadir Dr. Mahyaoui Dr. Frouji

List of MED POL - PHASE II collaborating centres
and scientists

SPAIN

Escuela Universitaria Politecnica Plaza del Hospital Gerona	J. Arnau*
Ayuntamiento de Barcelona Servicio del Medio Ambiente Paseo de Circunvalación 1 Barcelona 3	J. Marti i Valls*
Cap, Servei de Sanejament Ambiental Direccio General de Promocio de la Salut Generalitat de Catalunya Passeig Lluis Companys 7 Barcelona 3	M. Gonzalez-Cabre* A. Bardaji
Instituto Quimico de Sarria Barcelona 17	J. Obiols*
Instituto de Investigaciones Pesqueras Paseo Nacional, s/n Barcelona 3	A. Ballester*
Instituto de Quimica Bio-Organica c/Jorge Girona Salgado s/n Barcelona 34	J. Albaigés*
Escuela Universitaria de Castellon Apartado 224 Castellón de la Plana	J. Medina*
Facultad de Ciencias Quimicas Departamento Química Analítica C/Doctor Moliner Burjasot (Valencia)	F. Bosch*

List of MED POL - PHASE II collaborating centres and scientists

Facultad de Ciencias Químicas Departamento de Química Técnica Apartado 99 Alicante	F. Ruiz Beviá*
Centro Oceanografico de Baleares Muelle de Pelaires Palma de Mallorca	G. Chacartegui*
Centro Oceanográfico del Mar Menor C/Magallanes, s/n San Pedro del Pinatar Murcia	A. Rodriguez de León*
Escuela Nacional de Sanidad Ciudad Universitaria Madrid 3	M. Marino*
Facultad de Ciencias Departamento de Ecología Universidad de Málaga Málaga	X. Niell*

TUNISIA

Institut Pasteur 13 Place Pasteur Tunis	A. Chadli* S. Jekov C. Capape Y. Messaoudia
Institut National Scientifique et Technique d'Océanographie et de Pêche (INSTOP) Salammbo	M.S. Hadj Ali* M. Belkhir Mr. Amara Mr. Dridi

List of MED POL - PHASE II collaborating centres and scientists

TURKEY

9 Eylul University Institute of Marine Sciences and Technology Mithatpasa Cad 178/3 Izmir	E. Izdar* I. Ozgenc
Middle East Technical University Department of Marine Sciences PK 28, Erdemli Icel	T. Norman* U. Unluata

YUGOSLAVIA

Marine Research & Training Centre JLA 65 66330 Piran	J. Stirn* R. Planinc T. Turk
Centre for Marine Research "Rudjer Boskovic" Institute G. Paliaga 5 52210 Rovinj	D. Bazulic* D. Fuks D. Deggobis N. Smodlaka
"Jozef Stefan" Institute Jamova 39 61000 Ljubljana	P. Stegnar*
Institute for Oceanography & Fisheries Mose Pijade 63 P.O. Box 114 58000 Split	S. Sobot* A. Span* N. Krstulovic
Centre for Marine Research "Rudjer Boskovic" Institute P.O.Box 1016 41001 Zagreb	T. Branica* Z. Kozarac M. Picer A. Skrivanic D. Hrsak V. Zutic

ANNEX II

Form of report for special and general permits

(Application of Articles 5 and 6 of the Protocol for the Prevention of pollution of the Mediterranean Sea by Dumping from Ships and Aircraft)

1. Special permits issued in accordance with Article 5 of the Protocol concerning dumping by ships and aircraft of the Barcelona Convention should be notified immediately to the Organization. General permits issued in accordance with Article 6 of the Protocol should be reported annually to the Organization.

2. The notification should contain the following information, for each special and general permit or approval (unless in any individual case a particular item of information is clearly inappropriate):

   (a) Issuing authority: .....

   (b) Date issued: .....

   (c) Country of origin of wastes or other matter and port of loading: .....

   (d) General description of waste or other matter and the process from which the waste is derived: .....
   .....
   .....

   (e) Form in which waste or other matter is presented for disposal (i.e. solid, liquid or sludge): .....

   (f) Total quantity (in metric units) of waste or other matter covered by the permit: .....

   (g) Period for which permit is valid: .....

   (h) Expected frequency of dumping: .....

   (i) Chemical composition of waste or other matter (this should be sufficiently detailed to provide adequate information to other countries on the nature and composition): .....
   .....
   .....
   .....
   .....

(j) Properties of waste or other matter:

(i) solubility: .....

(ii) density: .....

(iii) pH: .....

(k) Method of packaging:.....

(l) Method of release: .....

(m) Procedure and site for subsequent tank washing: .....
.....

(n) Approved dumping site:

(i) geographical position (latitude and longitude): .....

(ii) depth of water: .....

(iii) distance from the nearest coast: .....

(o) Additional information (relevant factors listed in Annex III of the Protocol, e.g. toxicity, and other biological properties):
.....
.....
.....
.....
.....

Form of annual report concerning actual dumping carried out by the Parties to the Protocol

Annual report on all dumpings carried out during the year 19__

The purpose of this form is to facilitate an assessment of the Parties' inputs by dumping in the waters of the Protocol area. The form must be completed for each calendar year in retrospect and submitted to the Organization following the year to which the dumping relates.

The Parties are reminded that the figures for the quantities of substances dumped should relate to the actual amounts dumped during the report year and not to the quantities licensed.

As far as possible, the following information should be given for each dumping area:

1. Dumping area:

   (a) Location - Longitude: .....
   Latitude: .....

   (b) Depth: .....metres

   (c) Tidal flows: - Direction: .....
   Maximum Speed: .....

   (d) Type of waste dumped (delete as appropriate):

   Industrial wastes
   Sewage sludges
   Dredgings
   Others

   (e) Other relevant information (e.g. residual water movements): .....
   .....

2. Industrial wastes dumped:

Details need only be given for the categories listed in Section 1(d) as having been dumped during the reporting year.

Units of quantity should be in tonnes unless otherwise stated:

(a) Year of issue of the permits concerned: .....

(b) General description of these wastes: .....
.....

(c) Method of dumping (when more than one vessel is involved, give the range of loads and discharge conditions):

(i) Vessel(s) load: .....

(ii) Manner of discharge from vessel: .....

(iii) Rate of discharge: .....

(iv) Speed of vessel while dumping: .....

(d) Total quantity of wastes actually dumped: .....

(e) Total quantity of wastes licensed: .....

(f) Total quantity of insoluble solids: .....

(g) Total quantity of particulate organic components: .....

(h) Total quantity of trace contaminants of Annex I substances:

Mercury : .....

Cadmium : .....

Organohalogen compounds: .....(specify)

Others : .....

(i) Total quantity of the following metals:

Arsenic: ..... Nickel: .....

Chromium: ..... Zinc: .....

Copper: ..... Others: .....

Lead: .....

(j) Any other compounds present in appreciable quantity:

.....

(k) Total quantity of strong acids: .....
strength/pH: .....

(l) Total quantity of strong alkalis: .....
strength/pH: .....

(m) Toxicity of waste(s) - Give LC-50 values and names of species tested (*where more than one waste is involved give toxicity criteria* e.g. 96-h-LC-50 values not below 1000 ppm to Crangon crangon or Agonus cataphractus):

.....
.....

(n) Monitoring authority: .....

(o) Other relevant information: .....
.....

3. Sewage sludges dumped in each site:

Details need only be given for the categories listed in section 1(d) as having been dumped during the reporting year.

Units of quantity should be in tonnes unless otherwise stated.

(a) Year of issue of the permits concerned: .....

(b) Place of origin of the sewage sludge: .....

(c) Method of dumping (where more than one vessel is involved, give the range of loads and discharge conditions):

(i) Vessel(s) load: .....

(ii) Manner of discharge from vessel: .....

(iii) Rate of discharge: .....

(iv) Speed of vessel while discharging: .....

(d) Total quantity actually dumped: .....

(e) Total quantity licensed: .....

(f) Total quantity of insoluble solids: .....

(g) Total quantity of particulate organic compounds: .....

(h) Total quantity of trace contaminants of Annex I substances:

Mercury: .....

Cadmium: .....

Organohalogen compounds: .....(specify)

Others: .....

(i) Total quantity of the following metals:

Arsenic: ..... Nickel: .....

Chromium: ..... Zinc: .....

Copper: ..... Others: .....

Lead: .....

(j) Monitoring authority: .....

4. Dredgings dumped in each site:

Details need only be given for the categories listed in section 1(d) as having been dumped during the reporting year.

Units of quantity should be in tonnes unless otherwise stated.

When less than 10,000 tonnes per year are dumped, chemical analysis of dredgings composition are not required unless the source of the dredgings is believed to be polluted.

(a) Year of issue of the permits concerned: .....

(b) Place of origin of the dredgings: .....

(c) Method of dumping: Stationary/Moving (delete as appropriate)

(d) Total quantity actually dumped: .....

(e) Total quantity licensed: .....

(f) Total quantity of insoluble solids: .....

(g) Total quantity of particulate organic components: .....

(h) Total quantity of trace contaminants of Annex I substances:

Mercury: .....

Cadmium: .....

Organohalogen compounds: .....(specify)

Others: .....

(i) Total quantity of the following metals:

Arsenic: ..... Nickel: .....

Chromium: ..... Zinc: .....

Copper: ..... Others: .....

Lead: .....

(j) Monitoring authority: .....

LONG TERM PROGRAMME FOR POLLUTION
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Explanatory notes for completing the log form for
reporting data on Heavy Metals in Marine Organisms

This form is meant to provide results of analyses of heavy metals in marine organisms sampled according to Reference Method n° 7 and analysed according to Reference Methods n° 8, 9, 10 or 11. If different methods are followed, a full description of these methods or a proper bibliographic reference should be made available to the MED UNIT.

Each line should be used to report the result of a single analysis, or of the arithmetic mean and standard deviation of replicate analysis, carried out on one "specimen sample". Averaging of results from various "specimen samples" should not be reported in this form.

If several elements (heavy metals) or tissues are analysed on one "specimen sample" the same SAMPLE CODE should be given in all the corresponding lines. When entering the various analytical results of the corresponding sample, the SAMPLING INFORMATION and the BIOLOGICAL INFORMATION should be specified only one when entering the first analytical result. If several tissues are analysed in a "specimen sample" the TISSUE name should be specified in each line.

The following specific instructions should be used to fill the forms :

- ALWAYS utilize first the form specified as page one.
- Place your READY MADE STICKER sent from the Med Unit on page one.
- ALWAYS use capital letters when filling in the forms.
- Always make reference to the relevant analytical method used on the first page where indicated as REFERENCE TO ANALYTICAL METHOD USED.
- When the data entry section of the first page is full then always use ordinary forms (the ones without stickers) and write down the appropriate page number on the top left-hand side of the form.
- When all the data are reported, write down the total number of forms used (i.e. total number of pages) on the top left-hand side of the first page and staple together all the forms used for the same set of samples.

Completed forms should be sent to the National Co-ordinator for MED POL in your country for transmittal to the MED UNIT.

SAMPLING INFORMATION : (see Reference Method n° 7, Appendix B)

SPECIMEN SAMPLE CODE	Use any numbering sequence according to your own option e.g. 123 or PE12.
SAMPLING DATE	Enter the date on which the sample was collected, e.g. 1 July 1983 as 01 07 83.
SAMPLING LOCATION	Enter the geographic co-ordinates of the location where the sample was collected, in degrees and minutes (enter E or W in the E/W column) e.g. 40 15 15 30 E. If precise coordinates are not known, try to approximate to the nearest degree and leave minutes blank e.g. 40 ___ 15 __ E.

Sampling at fish markets should only take place for monitoring purposes if the area in which the organisms were caught is known.

BIOLOGICAL INFORMATION

SPECIES NAME		Enter the scientific name of the species sampled e.g. MULLUS BARBATUS.
N_S		Enter the number of specimens in the sample if the sample is composite e.g. 12, otherwise enter 1.
LENGTH		
	Units	Enter the units used e.g. cm.
	Av. Lgth	Enter the arithmetic mean of the lengths of the various specimens comparing the sample if the sample is composite, otherwise, enter the actual length of the individual specimen e.g. 9.00.
	St. dev.	Enter the standard deviation calculated for the length if the sample is composite e.g. 0.12.
WEIGHT		
	Units	Enter the units used e.g. kg.
	Av. wght.	Enter the arithmetic mean of the weights of the various specimens comparing the sample if the sample is composite, otherwise enter the actual weight of the individual specimen e.g. 5.00.
	St. dev.	Enter the standard deviation calculated for the weight if the sample is composite e.g. 0.125.

SEX	Enter M-Male, F-Female, I-Indeterminate.
AGE	Enter estimated or average age in years e.g. 3 or ND if not determined.
TISSUE	Enter the name of the tissue analysed e.g. LIVER (refer to the list of the tissue names attached).

ANALYTICAL INFORMATION

DW/FW $^{o}/_{o}$	Enter the ratio of Dry Weight to Fresh Weight in percentage e.g. 21.5 %.
ELEMENT	Enter the symbol used for the element analysed e.g. CD.
N_a	Enter the number of replicate analysis of the element analysed carried out on the same sample e.g. 5.
CONC.	Enter the arithmetic mean of the concentrations obtained for each element analysed if several replicate analysis have been carried out, otherwise enter the single value obtained, expressed with respect to fresh weight in (g/kg FW) e.g. 10.03.
St. dev.	Enter the standard deviation calculated for the concentrations reported, if replicate analysis have been carried out e.g. 0.25.

COMMENTS

Use this section to enter;

- identification of the stations,
- any complementary information e.g. on the way the sample has been stored.
- extraction

Further comments may be written on the back of the form with proper reference to the relevant line.

LIST OF TISSUE NAMES

Whole body
Soft Part
Liver
Kidney
Ovary
Testes
Gonads
Gall bladder
Spleen
Digestive gland
Gills
Brain
Nerves
Byssus gland
Stomach (empty)
Fillet (general)
White
Brown
Pectoral
Adductor
Foot (molluscs)
Pincer (crustaceans)
Abdomen (crustaceans)
Tentacles (cephalopods)
Arms
Carapace
Shell
Skin
Scale(s)
Feather(s)
Bone
Byssus
Mould
Blood
Hemolymph
Bile
Urine
Subcutaneous fat
Others

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LOG FORM for reporting data on monitoring of HEAVY METALS in MARINE ORGANISMS

SAMPLING INFORMATION									BIOLOGICAL INFORMATION										ANALYTICAL INFORMATION					REFERENCE TO ANALYTICAL METHOD FOLLOWED :
Sample Code	DATE			LOCATION					Species Name	N_S	LENGTH			WEIGHT			SEX	AGE	TISSUE	DW/FW %	ELEMENT	N_a	CONC. (µg/kg) fresh weight	St. dev.	
	Day	Month	Year	Lat Degree	Lat Min	Long Degree	Long Min	E/W			units	Av. lgth.	St. dev.	units	Av. wght.	St. dev.									COMMENTS

LOG FORM for reporting data on monitoring of HEAVY METALS in MARINE ORGANISMS

SAMPLING INFORMATION									BIOLOGICAL INFORMATION										ANALYTICAL INFORMATION					COMMENTS
Sample code	DATE			LOCATION					Species Name	N_S	LENGTH			WEIGHT			SEX	AGE	TISSUE	DW/FW %	ELEMENT	N_a	CONC. (µg/kg) fresh weight	St. dev.	
	Day	Month	Year	Lat Degree	Lat Min	Long Degree	Long Min	E/W			units	Av. lgth.	St. dev.	units	Av. wght.	St. dev.									

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Explanatory notes for completing the log form for
reporting data on Halogenated Hydrocarbons in Marine Organisms

This form is meant to provide results of analyses of halogenated hydrocarbons in marine organisms sampled according to Reference Method n° 12 and analysed according to Reference Method n° 14. If different methods are followed, a full description of these methods or a proper bibliographic reference should be made available to the MED UNIT.

Each line should be used to report the result of a single analysis, or of the arithmetic mean and standard deviation of replicate analysis, carried out on one "specimen sample". Averaging of results from various "specimen samples" should not be reported in this form.

If several compounds (halogenated hydrocarbons) or tissues are analysed on one "specimen sample" the same SAMPLE CODE should be given in all the corresponding lines. When entering the various analytical results of the corresponding sample, the SAMPLING INFORMATION and the BIOLOGICAL INFORMATION should be specified only one when entering the first analytical result. If several tissues are analysed in a "specimen sample" the TISSUE name should be specified in each line.

The following specific instructions should be used to fill the forms :

- ALWAYS utilize first the form specified as page one.
- Place your READY MADE STICKER sent from the Med Unit on page one.
- ALWAYS use capital letters when filling in the forms.
- Always make reference to the relevant analytical method used on the first page where indicated as REFERENCE TO ANALYTICAL METHOD USED.
- When the data entry section of the first page is full then always use ordinary forms (the ones without stickers) and write down the appropriate page number on the top left-hand side of the form.
- When all the data are reported, write down the total number of forms used (i.e. total number of pages) on the top left-hand side of the first page and staple together all the forms used for the same set of samples.

Completed forms should be sent to the National Co-ordinator for MED POL in your country for transmittal to the MED UNIT.

SAMPLING INFORMATION : (see Reference Method n° 12, Appendix B)

SPECIMEN SAMPLE CODE — Use any numbering sequence according to your own option e.g. 123 or PE12.

SAMPLING DATE — Enter the date on which the sample was collected, e.g. 1 July 1983 as 01 07 83.

SAMPLING LOCATION — Enter the geographic co-ordinates of the location where the sample was collected, in degrees and minutes (enter E or W in the E/W column)
e.g. 40 15 15 30 E.
If precise coordinates are not known, try to approximate to the nearest degree and leave minutes blank e.g. 40 __ 15 __ E.

Sampling at fish markets should only take place for monitoring purposes if the area in which the organisms were caught is known.

BIOLOGICAL INFORMATION

SPECIES NAME — Enter the scientific name of the species sampled e.g. MULLUS BARBATUS.

N_S — Enter the number of specimens in the sample if the sample is composite e.g. 12, otherwise enter 1.

LENGTH

Units — Enter the units used e.g. cm.

Av. Lgth — Enter the arithmetic mean of the lengths of the various specimens comparing the sample if the sample is composite, otherwise, enter the actual length of the individual specimen e.g. 9.00.

St. dev. — Enter the standard deviation calculated for the length if the sample is composite e.g. 0.12.

WEIGHT

Units — Enter the units used e.g. kg.

Av. wght. — Enter the arithmetic mean of the weights of the various specimens comparing the sample if the sample is composite, otherwise enter the actual weight of the individual specimen e.g. 5.00.

St. dev. — Enter the standard deviation calculated for the length if the sample is composite e.g. 0.125.

SEX	Enter M-Male, F-Female, I-Indeterminate.
AGE	Enter estimated or average age in years e.g. 3 or ND if not determined.
TISSUE	Enter the name of the tissue analysed e.g. LIVER (refer to the list of the tissue names attached).

ANALYTICAL INFORMATION

E.O.M.	Enter the percentage of extractable organic matter e.g. 21.5.%.
DW/FW $^{o}/_{o}$	Enter the ratio of Dry Weight to Fresh Weight in percentage e.g. 21.5 %.
COMPOUND	Enter the symbol used for the element analysed e.g. PCB.
N_a	Enter the number of replicate analysis of the compound analysed carried out on the same sample e.g. 5.
CONC.	Enter the arithmetic mean of the concentrations obtained for each compound analysed if several replicate analysis have been carried out, otherwise enter the single value obtained, expressed with respect to fresh weight in (g/kg FW) e.g. 10.03.
St. dev.	Enter the standard deviation calculated for the concentrations reported, if replicate analysis have been carried out e.g. 0.25.

COMMENTS

Use this section to enter;

- identification of the stations,
- any complementary information e.g. on the way the sample has been stored.
- extraction

Further comments may be written on the back of the form with proper reference to the relevant line.

LIST OF TISSUE NAMES

Whole body
Soft Part
Liver
Kidney
Ovary
Testes
Gonads
Gall bladder
Spleen
Digestive gland
Gills
Brain
Nerves
Byssus gland
Stomach (empty)
Fillet (general)
White
Brown
Pectoral
Adductor
Foot (molluscs)
Pincer (crustaceans)
Abdomen (crustaceans)
Tentacles (cephalopods)
Arms
Carapace
Shell
Skin
Scale(s)
Feather(s)
Bone
Byssus
Mould
Blood
Hemolymph
Bile
Urine
Subcutaneous fat
Others

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LOC FORM for reporting data on monitoring of HALOGENATED HYDROCARBONS in MARINE ORGANISMS

SAMPLING INFORMATION									BIOLOGICAL INFORMATION											ANALYTICAL INFORMATION						REFERENCE TO ANALYTICAL METHOD FOLLOWED :
Sample Code	DATE			LOCATION					Species Name	N_s	LENGTH			WEIGHT			SEX	AGE	TISSUE	E.O.M. %	DW / FW %	COMPOUND	N_a	CONC. (µg/kg) fresh weight	St. dev.	
	Day	Month	Year	Lat Degree	Lat Min	Long Degree	Long Min	E/W			units	Av. lgth.	St. dev.	units	Av. wght.	St. dev.										COMMENTS

LOG FORM for reporting data on monitoring of HALOGENATED HYDROCARBONS in MARINE ORGANISMS

SAMPLING INFORMATION								BIOLOGICAL INFORMATION										ANALYTICAL INFORMATION						COMMENTS
Sample Code	DATE			LOCATION				Species Name	N_s	LENGTH			WEIGHT			SEX	AGE	TISSUE	E.O.M. %	DW / FW	COMPOUND	N_a	CONC. (µg/kg) fresh weight	St. dev.	
	Day	Month	Year	Lat Degree	Lat Min	Long Degree	Long Min			units	Av. lgth.	St. dev.	units	Av. wght.	St. dev.										

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Explanatory notes for completing the log form for
reporting data on Microbial Pollution in Sea Water

This form is meant to provide results of determinations of microbial pollutants in seawater sampled and analysed according to Reference Methods Nos 1, 2, 3 and 4. If different methods are followed, a full description of these methods or a proper bibliographical reference should be made available to the MED Unit.

For the purposes of this form, a sampling point means a specific location, including a specific depth. Samples taken at the same sampling point, but at different dephts are considered to represent different sampling points.

One line should be used to report the result of each analysis or the arithmetic mean and standard deviaton of analyses of replicate samples from the same station. Averaging of results from various sampling points should not be reported in this form.

If more than one bacterial indicator is determined from the same sampling point or various depths are sampled at a given station, the same STATION CODE should be given in all the corresponding lines. When entering the various analytical results of the corresponding station, the SAMPLING INFORMATION and the BACTERIOLOGICAL AND COMPLEMENTARY INFORMATION (with the exception of the bacterial indicator) should be specified once only when entering the first analytical result. Where more than one bacterial indicator is determined, the bacterial indicator name, in the proper code, should be specified in each line.

The following specific instructions should be used to fill the forms :

- ALWAYS utilize first the form specified as page one.
- Place your READY MADE STICKER sent from the Med Unit on page one .
- ALWAYS use capital letters when filling in the forms.
- Specify the reference to the relevant analytical method used on the first page where indicated as REFERENCE TO ANALYTICAL METHOD USED.
- When the data entry section of the first page is full then always use ordinary forms (the ones without stickers) and write down the appropriate page number on the top left-hand side of the form.
- When all the data are reported, write down the total number of forms used (i.e. total number of pages) on the top left-hand side of the first page and staple together all the forms used for the same set of stations.

Completed forms should be sent to the National Coordinator for MED POL in your country for transmittal to the MED Unit.

SAMPLING INFORMATION (see Reference Method No.1, Appendix A)

STATION NO.: use the code number for the station as defined in your national monitoring programme

SAMPLING DATE: enter the date on which the sample was collected, e.g. 1 July 1983 as 01 07 83

SAMPLING TIME: enter the time at which the sample was collected, e.g. 2.15 pm as 14 15

SAMPLING LOCATION: enter the geographic coordinates of the location where the sample was collected, in degrees and in minutes (enter E or W in the E/W column) e.g. 40 15 15 30 E

WATER DEPTH: enter depth of water in metres to nearest 0.5 metre, i.e. 2.5 or 3.0

DISTANCE FROM SHORE: enter distance from shore in metres

BASIC OCEANOGRAPHIC AND METEOROLOGICAL OBSERVATIONS

WAVE HEIGHT: enter height of waves in metres to nearest 0.5 metre, i.e. 2.5 or 3.0

WIND DIRECTION: enter in degrees

WIND SPEED: enter in metres per second

SURFACE CURRENT DIRECTION: enter in degrees

SURFACE CURRENT SPEED: enter in cm per second

BACTERIOLOGICAL AND COMPLEMANTARY INFORMATION

SAMPLING DEPTH: enter depth at which sample is taken to nearest 0.1 metre

TEMPERATURE: enter in degrees centigrade

SALINITY: enter in parts per thousand

OXYGEN: enter in ml dissolved oxygen per litre

BACTERIAL INDICATOR: enter the indicator's code name as follows:

Total coliforms:	TC
Faecal coliforms:	FC
Faecal streptococci:	FS

For other indicators and pathogens, see Annex B to Reference Method No.1

BACTERIAL COUNT: enter the result as no. per 100 ml

COMMENTS : use this section to enter any relevant information

make sure that any comment is entered against the appropriate indicator, i.e. in the same line. If comments take up more than one line, commence any further data on other stations or indicators in line following end of comment

long comments may be written on the back of the form with proper reference to the appropriate line

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LOG FORM for reporting data on monitoring of MICROBIAL POLLUTION in SEA WATER

SAMPLING INFORMATION													BASIC OCEANOGRAPHIC AND METEOROLOGICAL OBSERVATIONS					BACTERIOLOGICAL AND COMPLEMENTARY INFORMATION						REFERENCE TO ANALYTICAL METHOD FOLLOWED :
STAT. NUMBER	DATE			TIME		LOCATION					WATER DEPTH (m)	DISTANCE FROM SHORE (m)	WAVE HEIGHT (m)	WIND		SURFACE CURRENT		SAMPLING DEPTH (m)	TEMPERATURE (°C)	SALINITY o/oo	OXYGEN $\frac{ml O_2}{l}$	BACTERIAL INDICATOR	BACTERIAL COUNT (No/100ml)	
	Day	Month	Year	Hour	Minute	LAT Degree	LAT Minute	LONG Degree	LONG Minute	E/W				Direction (d)	Speed $\frac{m}{sec}$	Direction (d)	Speed $\frac{cm}{sec}$							COMMENTS

LOG FORM for reporting data on monitoring of MICROBIAL POLLUTION in SEA WATER

SAMPLING INFORMATION														BASIC OCEANOGRAPHIC AND METEOROLOGICAL OBSERVATIONS					BACTERIOLOGICAL AND COMPLEMENTARY INFORMATION						COMMENTS
STAT. NUMBER	DATE			TIME		LOCATION					WATER DEPTH (m)	DISTANCE FROM SHORE (m)		WAVE HEIGHT (m)	WIND		SURFACE CURRENT		SAMPLING DEPTH (m)	TEMPERATURE (°C)	SALINITY ‰	OXYGEN $\frac{ml O_2}{l}$	INDICATOR BACTERIAL	BACTERIAL COUNT (No/100ml)	
	Day	Month	Year	Hour	Minute	LAT Degree	LAT Minute	LONG Degree	LONG Minute	E/W					Direction (d)	Speed $\frac{m}{sec}$	Direction (d)	Speed $\frac{cm}{sec}$							

ANNEX III

Reference methods for marine pollution studies

Number	Methods	Status
1	Guidelines for monitoring the quality of coastal recreational waters.	draft
2 Rev.1	Determination of total coliforms in sea-water by the membrane filtration culture method	issued
3 Rev.1	Determination of faecal coliforms in sea-water by the membrane filtration culture method	issued
4 Rev.1	Determination of faecal streptococci in sea-water by the membrane filtration culture method	issued
5 Rev.1	Determination of faecal coliforms in bivalves by multiple test tube method	issued
6	Guidelines for monitoring chemical contaminants in marine organisms	to be developed
7 Rev.1	Sampling of selected marine organisms and sample preparation for trace metals analysis	issued
8 Rev.1	Determination of total mercury in selected marine organisms by flameless atomic absorption spectrophotometry	issued
9	Determination of total arsenic in selected marine organisms by flameless atomic absorption spectrophotometry	issued
10	Determination of total selenium in selected marine organisms by flameless atomic absorption spectrophotometry	issued
11 Rev.1	Determination of total cadmium, zinc, lead and copper in selected marine organisms by flameless atomic absorption spectrophotometry	issued
12	Sampling of selected marine organisms and sample preparation for the analysis of chlorinated hydrocarbons	issued
13	Determination of methylmercury in selected marine organisms by gas-liquid chromatography	draft
14	Determination of DDTs and PCBs in selected marine organisms by gas-liquid chromatography	issued

Reference methods for marine pollution studies

Number	Methods	Status
15	Monitoring of tar on marine beaches	being developed
16	Determination of DDTs, PCBs, PCCs and other hydrocarbons in sea-water, estuarine water and suspended matter by gas chromatography	draft
17	Determination of DDTs, PCBs, PCCs and other hydrocarbons in marine sediments by gas chromatography	draft
18	Determination of total dissolved cadmium in sea-water by differential pulse anodic stripping voltammetry	draft
19	Determination of total mercury in estuarine waters and suspended matter by cold vapour atomic absorption spectrophotometry	draft
20	Monitoring of petroleum hydrocarbons in sediments	being developed
21	Determination of total coliforms in sea-water by multiple test tube method	issued
22	Determination of faecal coliforms in sea-water by multiple test tube method	issued
23	Determination of faecal streptococci in sea-water by multiple test tube method	issued
B	Monitoring of petroleum hydrocarbons in sea-water	being developed
C	Guidelines for monitoring of estuarine waters and suspended matter	being developed
D	Determination of faecal coliforms in estuarine waters, suspended matter and sediments	being developed
E	Determination of phosphorus in suspended matter and sediments	being developed
F	Determination of nitrogen in suspended matter and sediments	being developed
G	Determination of BOD_5 and COD in estuarine waters	being developed

Reference methods for marine pollution studies

Number	Methods	Status
I	Determination of total cadmium in estuarine waters and suspended matter	draft
K	Determination of basic oceahographic and meteorological conditions	draft
L	Determination of standard physical and chemical parametry	draft
M	Statistical methods for the evaluation of results from monitoring the quality of coastal recreational and shellfish-growing waters	draft
N	Sampling of aerosols and wet precipitation for analysis of chemical pollutants	being developed
O	Determination of selected trace metals in aerosols and in wet precipitation	being developed
P	Determination of halogenated hydrocarbons in aerosols and in wet precipitation	being developed
Q	Sampling of dry deposition	being developed
R	Determination of total mercury in marine sediments by flameless atomic absorption spectrophotometry	being developed
S	Determination of total cadmium in marine sediments by flameless atomic absorption spectrophotometry	being developed

ANNEX IV

Scientists sponsored through MED POL for participation in training activities and meetings

I. TRAINING

a. On-job training requested under the MED POL assistance component

Cyprus:	1983:	2 weeks training on atomic absorption spectrophotometry for L. Athanassiadou[1/]
		2 weeks training on gas chromatography for P. Loizidou, at I.O.K.A.E. in Athens, Greece[1/]
Lebanon:	1983:	1 week training on the analysis of heavy metals in sea-water.[1/]
		1 week training on the analysis of pesticides in sea-water.[1/]
Italy:	1981:	1 week on-job training and discussions on coastal water quality monitoring for C. Campello at the Environmental Health Laboratory, Hebrew University of Jerusalem, Israel.[2/]
		1 week on-job training on coastal water quality control for C. Campello at the Institut National de la Santé et la Recherche Medicale, Villeneuve d'Aseq, France.[2/]
		1 week on-job training and discussions on coastal water quality monitoring for L. Majori at the Environmental Health Laboratory, Hebrew University of Jerusalem, Israel.[2/]
Morocco:	1983:	Training of laboratory technicians (12 m/m)
		Study tours to several Mediterranean laboratories for Principal Investigators.

1/ Training included in Agreement with relevant Government
2/ Training organized through WHO as follow-up of PHASE I

Tunisia 1983: Group training on analytical techniques and interpretation of results for heavy metals, pesticides, petroleum hydrocarbons and detergents.

Group training on analytical techniques and interpretation of results for microbiological pollution.

Two months on-job training on sampling and analysis of pesticides and other chlorinated hydrocarbons at ILMR, Monaco, for D. Khemais

Two months on-job training in sampling and analysis of heavy metals at ILMR, Monaco, for A. Habib

Yugoslavia: 1981: 8 weeks training and research on physiology of marine bacteria for D. Fuks at the Istituto de Investigaciones Pesqueras, Barcelona, Spain.2/

1983: 1 month training on specific techniques for the analysis of high molecular weight halogenated hydrocarbons for R. Planinc.1/

2 weeks training on fluorimetric detection of petroleum hydrocarbons for J. Stirn.1/

3 months training on exchange rates between water and sediments, at the Universitá di Venezia Facoltà di Chimica Industriale, Italy, for D. Degobbis.1/

3 months of training at the Laboratoire de Chromatographie, Centre Océanologique de Bretagne, Brest, France, for D. Bazulic.1/

1 month training on currents, data analysis, evaluation and interpretation of results at the Laboratoire d'Océanographie Physique, Museum National d'Histoire Naturelle, Paris, France for M. Orlic

1 month training on petroleum hydrocarbon analysis at the Laboratoire Physique et Chimie Marine, ERA CNRS Université Curie, Paris, France.

1/ Training included in Agreement with relevant Government
2/ Training organized through WHO as follow-up of PHASE I

II. ATTENDANCE AT MEETINGS OF SCIENTISTS SPONSORED THROUGH MED POL

a. WHO/UNEP Consultation Meeting on the Evaluation of Methylmercury in Mediterranean Populations and related Health Hazards, Athens 13-17 September 1982

C. Alzieu, France[1/]
C. Boudens, France[1/]
M. Branica, Yugoslavia[1/]
A. Grech, Malta[1/]
L. Kosta, Yugoslavia[1/]
D. Spala, Greece[3/]
G. Tomassi, Italy[1/]
G. Vournas, Greece[3/]

b. WHO/UNEP Intercalibration Exercise, Rome, 22-26 November 1982

N.N. Benmansour, Morocco
M.C. Bertrandy, France
B. Carcassonne, France
B. Fattal, Israel
V. Gauci, Malta
S. Sotiracopoulos, Greece
E. Tosti, Italy
V. Turk, Yugoslavia
L. Villa, Italy[3/]
L. Volterra, Italy[3/]

c. WHO/UNEP Consultation Meeting on Methods for Monitoring Selected Pollutants in Sewage Effluents and Coastal Recreational Waters, Rome, 24-26 November 1982 *(in addition to those mentioned under section b)*

M.Y. Abdul-Rahim Ali, Kuwait[4/]
S Alawfy, Oman[4/]
F. Aulicino, Italy[3/]
P. Bernard, France
M. Bernhard, Italy[2/]
G. Donati, Italy[3/]
F.M. El-Sharkawi, Egypt
T. Feliu-Mendez, Spain
S. De Fulvio, Italy[3/]
D. Fuks, Yugoslavia
E. Geldreich, USA[2/]
S. Grane Terrados, Spain[3/]
S. Jekov, Tunisia
K.K. Kristensen, Denmark[2/]
R. Mujeriego, Spain
R.E. Ward, St. Lucia[2/]
Y. Yoshpe-Purer, Israel
A. Zapponi, Italy[3/]

1/ Sponsored by WHO/EURO
2/ Sponsored by RS/PAC of UNEP
3/ Attended at own institution's expense
4/ Sponsored by ROPME

d. VI ICSEM/IOC/UNEP Workshop on Pollution of the Mediterranean Sea, Cannes, 2-4 December 1982

F. Aid, Algeria
S. Albertazzi, Italy
M. Angelidis, Greece
V. Axiak, Malta
A. Bakalem, Algeria
M. Bernhard, Italy
B. Cavari, Israel
M. I. El Samra, Egypt
F. El-Sharkawi, Egypt
I. H. El-Sokkary, Egypt
K. Fytianos, Greece
D. Fuks, Yugoslavia
G.P. Gabrielides, Greece
A. Grimanis, Greece
M. Gacic, Yugoslavia
Y. Halim, Egypt
M. Juracic, Yugoslavia
B.S. Krumgalz, Israel
C. Lucu, Yugoslavia
N. Mimicos, Greece
A. Monaco, France
M. Moraitou-Apostolopoulou, Greece
A. A. Moussa, Egypt
R. Mujeriego, Spain
I.M. Munda, Yugoslavia
E. Nevo, Israel
B. Ozretic, Yugoslavia
G.C. Pappalardo, Italy
J. Pavicic, Yugoslavia
V. Picer, Yugoslavia
V. Pravdic, Yugoslavia
H.H. Saleh, Egypt
M. Scoullos, Greece
H. A. Sultan, Egypt
B.M. Sunay, England
G. Tomassi, Italy
S. Tuncer, Turkey
V. Turk, Yugoslavia
H. Uysal, Turkey
S.P. Varnavas, Greece
G.S. Vassilikiotis, Greece
G. Verriopoulos, Greece
S. D. Wahby, Egypt
Y. Yoshpe-Purer, Israel
V. Zutic, Yugoslavia

e. IMO/FAO/UNESCO/WMO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) and Working Groups (1981-1983)

T.I. Balkas, Turkey[2/]
M. Bernhard, Italy[2/]
R. Chesselet, France[2/]
G.C. Clerici, Italy[2/]
F. El-Sharkawi, Egypt[2/]
M. Kuzmic, Yugosavia[2/]
P. Marchand, France[2/]
U. Marinov, Israel[2/]
J.M. Martin, France[2/]
V. Pravdic, Yugoslavia[2/]
L.J. Saliba, Malta[2/]
H.I. Shuval, Israel[2/]
S.M. Siahmed, Algeria[2/]

f. Seminar on Jelly-fish, Athens 6-9 June 1983

V. Axiak, Malta
A. Benovic, Yugoslavia
R. Hartwick, Australia [2/]

g. Mabahiss/John Murray International Symposium on Marine Sciences of the North-West Indian Ocean and Adjacent Waters, Alexandria 3-7 September 1983

M. Abboud, Lebanon
C.F. Gokcay, Turkey
A. Kocatas, Turkey
H.H. Kouyoumjian, Lebanon
S. Lakkis, Lebanon
N. Mimicos, Greece
S. Soyupak, Turkey
H. Uysal, Turkey
S.P. Varnavas, Greece

h. International Symposium on Ecotoxicological Testing for the Marine Environment, Gent 12-14 September 1983

M. Kranjnovic-Ozretic, Yugoslavia

[2/] Sponsored by RS/PAC of UNEP

ANNEX V

Technical assistance provided to national institutions

Country	Date	Expert and International Organization
ALGERIA		
Algiers	26 February - 1 March 82	A. Cruzado, UNEP
Algiers	2 - 4 January 83	L.J. Saliba, WHO
Algiers/Oran Mostaganem	2 - 5 May 83	L.J. Saliba, WHO
CYPRUS		
Nicosia	28 - 31 January 82	A. Cruzado, UNEP
Nicosia	7 - 9 June 82	L.J. Saliba, WHO
Nicosia	16 - 17 March 83	A. Cruzado, UNEP
Nicosia	15 - 30 March 83	G. Gabrielides, IAEA
E.E.C.		
Ispra	27 - 29 June 83	A. Cruzado, UNEP
EGYPT		
Alexandria/Cairo	25 - 28 January 82	A. Cruzado, UNEP
Alexandria/Cairo	28 May - 1 June 83	L.J. Saliba, WHO
FRANCE		
Paris	22 August 82	A. Cruzado, UNEP
GREECE		
Athens	1982/1983	A. Cruzado, UNEP L.J. Saliba, WHO
ISRAEL		
Jerusalem	17 - 27 March 83	A. Cruzado, UNEP
ITALY		
Rome	7 - 8 February 82	L.J. Saliba, WHO
Genova	23 - 25 May 82	F.S. Civili, UNEP
Rome	6 - 7 June 82	L.J. Saliba, WHO
Rome	6 May 83	L.J. Saliba, WHO

Technical assistance provided to national institutions

Country	Date	Expert and International Organization
LIBYA		
Tripoli	22 May - 6 June 82	A. Cruzado, UNEP S. Fowler, IAEA A. Economopoulos, IAEA P. Le Lourd, IMO H. Gudal, UNEP
MALTA		
Malta	3 - 6 June 82	A. Cruzado, UNEP L.J. Saliba, WHO
MONACO		
Monte Carlo	16 July 82	A. Cruzado, UNEP
MOROCCO		
Rabat/Casablanca	22 - 25 February 82	A. Cruzado, UNEP
Rabat	5 - 8 January 83	L.J. Saliba, WHO
SPAIN		
Barcelona	16 - 19 July 82	A. Cruzado, UNEP
TUNISIA		
Tunis	27 - 10 October 82	F.S. Civili, UNEP
TURKEY		
Istanbul/Ankara/ Izmir/Erdemli	19 - 25 September 82	A. Cruzado, UNEP
YUGOSLAVIA		
Zagreb	12 - 14 May 82	A. Cruzado, UNEP
Zagreb	12 May 83	L.J. Saliba, WHO
Zagreb	1 - 2 August 83	A. Cruzado, UNEP

ANNEX VI

Maintenance services provided and instruments serviced
by the International Laboratory for Marine Radioactivity

Town/Country	Dates	Instruments
Salammbo-Tunisia	25-27 March 1981	Installation of Automatic Sample Dispenser ASD-53 Checking of whole AAS system
Rovinj-Yugoslavia	8-10 September 1981	Two Aanderaa current meters serviced
Nicosia-Cyprus	28 September -1 October 1981	GC 3700 serviced Replacement of servo motor drive belt on chart recorder
Alexandria-Egypt	16-22 April 1982	Due to difficulties with Egyptian customs the visit to Alexandria laboratories aborted
Nicosia-Cyprus	23-28 April 1982	Emergency service of GC 3700. Reparation of Nicosia's GC 3700 at ILMR in Monaco
Nicosia-Cyprus	14-18 March 1983	Reinstallation of GC 3700, AAS serviced; two chart recorders and two current meters serviced
Erdemli-Turkey	18-22 March 1983	GC 2750, AAS 1250, Turner spectrofluorometer and, two strip chart recorders serviced
Istanbul-Turkey	22-23 March 1983	GC 2750 serviced
Izmir-Turkey	24-25 March 1983	AAS 1250 serviced
Zagreb-Yugoslavia	7-8 April 1983	Service problems discussed; inspection of the Turner spectrofluorometer
Split-Yugoslavia	11 April 1983	Two Aanderaa current meters serviced; inspection of Metler balance, Mod. PL 1200, Compressor Bauer and peristaltic pump Varla
Rovinj-Yugoslavia	12-17 April 1983	GC 2750, AAS 1250 and two Aanderaa current meters serviced
Piran-Yugoslavia	14-16 April 1983	GC 2750 and AAS 1250 serviced
Msida-Malta	8-12 August 1983	Varian GC and AAS, Turner spectrofluorometer, two strip chart recorders and 2 current meters serviced.

ANNEX VII

Equipment requested by collaborating MED POL centres during PHASE II

Country	Non-expendable
CYPRUS	
Fisheries Department 5-7 Tagmatarchou Pouliou Nicosia	Complements for Gas Chromatograph[1/] 1 Thermocirculator[1/] 1 Fractional Distillation apparatus[1/] 1 U/V Lamp with accessories[1/] 1 Distillation apparatus[1/] 2 Conductivity Cells for "AANDERAA current meters[1/] 1 Aanderaa tape reader 1 Apple IIe (//+) microcomputer, or similar, with twin disc drives, monitor and printer 1 Epson I/O interface with RS232C, or similar
FRANCE	
Station Météorologique Hameau de Serres 84200 Carpentras	1 Sartorius High Volume Sampler HV100[2/]
ISRAEL	
Israel Oceanographic & Limnological Research Tel-Shikmona P.O. Box 830 Haifa	1 Mercury Analyser System with accessories[1/] 1 Laboratory Centrifugal Ball Mill[1/]
Public Health Laboratory Ministry of Health Abu Kebir P.O. Box 8255 Tel Aviv	1 Constant Temperature Incubator[1/]
District Public Heath Laboratory Ministry of Health Haifa	1 Constant Temperature Incubator[1/]
District Public Health Laboratory Ministry of Health Beer-Sheva	1 Constant Temperature Incubator[1/]

1/ Committed under Agreement

2/ Supplied through WMO

Equipment requested by collaborating MED POL centres
during PHASE II

Country	Non-expendable
LEBANON	
Centre de Recherche Marine Conseil National de la Recherche Scientifique B.P. 11-8281 Beyrouth	1 Slip-ring - Interocean 1/ 1 T/S Sensor - Hydrobios 1/
MALTA	
Department of Maths & Science University of Malta Tal-Qroqq	1 Strip Chart Recorder for AAS 1/
Bacteriological Laboratory Works Department New Lyceum Msida	1 Cooled Incubator for BOD (20°C) 1/
Public Health Laboratory Department of Health Merchant's Street Valetta	1 Stirrer Hot Plate 1/
Department of Pharmacy University of Malta Msida	1 Sediment Sampler 1/

1/ Committed under Agreement

Equipment requested by collaborating MED POL centres
during PHASE II

Country	Non-expendable
MOROCCO	
Office National de l'Eau Potable B.P. Rabat-Chellah Rabat	1 Infra-red Spectrophotometer 1 Gas Chromatograph
Institut Scientifique des Pêches Maritimes 21 rue de Tiznit B.P. 21 Casablanca	1 Liquid Chromatograph 1 Salinometer 1 Automatic Oxygen Analyzer
Faculté des Sciences d'Oujda Oujda	1 Liquid Chromatograph 1 Gas Chromatograph 1 AAS 1 Aniometer
Institut National Agronomique et Vétérinaire Hassan II, (Lab. de Toxicologie) Rabat-Agdal	1 Gas Chromatograph 1 Liquid Chromatograph 1 Freezer 1 Stove 1 Centrifuge 1 Muffle furnace 2 Balances
Ecole Mohammadia d'Ingénieurs B.P. 765 Rabat	1 Mobile Laboratory 1 flameless AAS 1 Gas Chromatograph BOD meters COD meters 1 Water Distillation apparatus 1 Glassware Rinsing Machine Spectrophotometers (IR, VIS, UV)
TUNISIA	
Institut National Scientifique et Technique d'Océanographie et de Pêche (INSTOP) Salammbo	1 Electron Capture Detector 1 Autoclave 1 Out-board Engine of 9 1/2 H.P. 1 Portable Oxygen Analyzer 1 Quantometer System
Institut Pasteur 13 Place Pasteur Tunis	1 Sediment Core Sampler 1 Hydro bottle 1 Incubator 2 PH Meters 1 Analytical Balance

Equipment requested by collaborating MED POL centres
during PHASE II

Country	Non-expendable
TURKEY	
9 Eylul University Institute of Marine Sciences and Technology Mithatpasa Cad 178/3 Izmir	1 Gas Chromatograph
Middle East Technical University Institute of Marine Sciences PK 28 Erdemli Icel	1 Bay Cabinet 2 Meter Wheels 10 Water Bottles (2 lt.) with thermometer frame 2 Water Bottles (5 lt. non-toxic) 1 Bench-type Salinometer 1 Heavy duty Centrifugal Pump 1 Dissolved Oxygen Meter 1 Submarine Photometer with 100m rubber coated cable and field box 1 Autoanalyzer system 1 Incubator
YUGOSLAVIA	
Marine Research & Training Centre JLA65 66330 Piran	1 Turner System Fluorimeter Assembly 1/ 1 Spectrophotometer 1 Stereo Microscope WILD M7A 1 MPS Semifotomat complete with accessories for WILDM7A and WILD M40 1 Mercury Analyzer
Centre for Marine Research "Ruder Boskovic" Institute G. Paliaga 5 52210 Rovinj	1 Dual Mode Glass Capillary Inlet Splitter 1/ 1 Mercury Analyzer 1/
Centre for Marine Research "Ruder Boskovic" Institute P.O. Box 1016 41001 Zagreb	1 Milli-Q System for reagent grade water 1 Horiba Universal Multiprobe 1 Taccussel RDE 1 Hewlett-Packard X-Y recorder 7045B 1 Hewlett-Packard GC capillary injector, model 5720

1/ Committed under Agreement

Equipment requested by collaborating MED POL centres
during PHASE II

Country	Non-expendable
Institute for Oceanography & Fisheries Mose Pijade 63 58000 Split	1 In situ Salinometer Hydro-Bios 2 Hydrobios TPN Water Samplers
The Biological Institute Tvrdava Sv. Ivana P.O. Box 39 Dubrovnik	1 Strip-chart Recorder
Meteorological Station Bircaninova 6 P.O. Box 604 11101 Belgrade	1 Sartorius High Volume Sampler HV100 2/

2/ Supplied through WMO

ANNEX VIII

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
1. PERSONNEL A/					
Experts/Consultants					
- WHO Senior Scientist, P-5, Int.	12mm 75.250	11.5mm 73.391	12mm 65.000	12mm 72.000	12mm 77,760
- FAO Fishery Expert, P-5, Int.	8mm 50.117	6mm 29.667	4mm 27.000	12mm 75.000	12mm 77.760
- IAEA Maintenance Engineer, P-3, Int.	12mm 47.911	12mm 47.718	12mm 58.800	12mm 60.000	12mm 64.800
- FAO Consultants	-	1.5mm 5.000	5mm 20.000	-	-
- IOC Consultants	3mm 9.000	2mm 5.583	-	-	-
- WMO Consultants	-	0.5mm 1.201	-	-	-
- WHO Consultants	-	1.5mm 4.000	-	-	-
Administrative Support					
- WHO Secretary, Athens, Int. G-5	-	12mm 27.891	12mm 31.400	-	-
- WHO Secretary, Athens, Local G-4	-	-	-	12mm 13.000	12mm 13.000
- WHO Secretary, Copenhagen, Local G-4	6mm 5.185	6mm 7.000	6mm 7.000	6mm 7.000	6mm 7.000
- FAO Secretary, Athens, Local G-4	-	-	6mm 4.000	12mm 13.000	12mm 13.000
- FAO Secretary, Pome, Local G-4	12mm 15.295	-	-	-	-
- IOC/UNESCO Secretary, Paris, Local G-3/G-4	3mm 3.595	6mm 9.106	5mm 8.000	-	-
- WMO Secretary, Geneva, Local G-3/G-4	-	-	2mm 2.500	-	-
- IAEA Secretary, Monaco, Local G-4	6mm 6.321	4mm 5.000	4mm 5.000	-	-
- IAEA Laboratory Assistant,Monaco,Local G-5	-	6mm 7.034	10mm 20.000	12mm 28.500	12mm 30.780
Component Total	212.674	222.591	248.700	268.500	284.100

A/ Cost of UNEP staff involved in MED POL covered through Chapter I (Co-ordination) of MAP budget.

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
2. TRAVEL B/					
- WHO	499	700	5.000	7.000	7.000
- FAO	6.573	1.009	4.000	7.000	7.000
- IOC/UNESCO	240	3.027	2.000	2.000	3.000
- WMO	-	749	2.000	2.000	3.000
- IAEA	8.367	12.965	18.500	15.000	18.000
Component Total	15.679	18.450	31.500	33.000	38.000
3. SUBCONTRACTS					
- Intercalibration of bacteriological methods with Istituto Superiore di Sanità, Rome, Italy, (through WHO)	11.000	-	-	-	-
- Development of analytical methods by Istituto Superiore di Sanità, Rome, Italy (through WHO)	-	5.500	-	-	-
- Development of analytical methods by Laboratorio Municipal, Badalona, Spain (through WHO)	-	4.000	-	-	-
- Development of analytical methods by Institut Pasteur de Tunis, Tunisia (through WHO)	-	3.000	-	-	-
- Intercalibration of bacteriological methods with the University of Barcelona, Spain (through WHO)	-	-	4.000	-	-
- Intercalibration of bacteriological methods with Environmental Pollution Control Project Min. of Environment, Athens, Greece (through WHO)	-	-	4.000	-	-
Sub-Total	11.000	12.500	8.000	-	-

B/ Cost of travel of UNEP staff related to MED POL covered through Chapter I (Co-ordination) of MAP budget.

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
Sub-Total (b/fwd)	11.000	12.500	8.000	-	-
- Other intercalibration contracts (through WHO)	-	-	-	8.000	10.000
- Intercalibration of petroleum hydrocarbon analytical methods with the Bermuda Biological Station (through IOC)	-	-	10.000	10.000	12.000
- Printing of ICSEM/UNEP proceedings (ICSEM through the secretariat)	-	-	25.000	-	25.000
- Agreement with Cyprus (through the secretariat)	-	-	17.000	-	-
- Agreement with Yugoslavia " "	-	-	30.000	-	-
- Agreement with Malta " "	-	-	15.000	-	-
- Agreement with Lebanon " "	-	-	12.000	-	-
- Agreement with Israel " "	-	-	38.000	-	-
- Agreement with Turkey " "	-	-	38.000	-	-
- Agreement with Tunisia " "	-	-	36.000	-	-
- Agreement with Morocco " "	-	-	30.000		
- Other agreements and extension of existing ones " "	-	-	411.300	243.500	252.600
Component Total	11.000	12.500	670.300	261.500	299.600
4. MEETINGS/TRAINING/WORKSHOPS/FELLOWSHIPS					
Meetings:					
- Working Group for Scientific and Technical Co-operation	41.769	-	35.000	40.000	45.000
- Others	5.417	-	-	-	-
Training:					
- On-job training (through WHO)	7.247	-	-	-	-
- On-job training (through the secretariat)	-	-	72.600	77.500	82.900
Sub-Total	54.433	-	107.600	117.500	127.900

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
Sub-Total (b/fwd)	54.433	-	107.600	117.500	127.900
Fellowships:					
- Fellowships for attendance at meetings:					
: ICSEM/UNEP Workshops	-	35.000	-	35.000	-
: WHO/UNEP intercalibration exercise, Rome, Italy	-	10.468	-	-	-
: WHO/UNEP consultation meeting for monitoring selected pollutants in sewage effluents and coastal recreational waters, Rome, Italy	8.000	-	-	-	-
: Greek Government seminar on jelly-fish, Athens, Greece	-	-	6.500	-	-
: Mabahiss/John Murray International Symposium on marine sciences of the north-west Indian Ocean and adjacent waters, Alexandria, Egypt	-	-	8.800	-	-
: International symposium on ecotoxicological testing for the marine environment, Gent, Belgium	-	-	900	-	-
: WHO/UNEP intercalibration exercise, Barcelona Spain	-	-	4.000	-	-
: WHO/UNEP intercalibration exercise, others,	-	-	-	8.000	12.000
: Other meetings	-	-	15.000	40.000	45.000
Component Total	62.433	45.468	142.800	200.500	184.900

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
5. EQUIPMENT C/					
Expendable					
- Laboratory supplies (through WHO)	2.756	-	-	-	-
- Spare parts for common maintenance service (through IAEA)	11.023	22.122	19.300	17.000	21.000
Non-expendable					
- Sampling equipment (through WMO)	-	15.720	-	-	-
- Laboratory equipment (to ILMR)					
: Atomic Absorption Spectrophotometer (partial)	-	27.915	-	-	-
: Other	10.222	-	-	16.000	18.000
Component Total	24.001	65.757	19.300	33.000	39.000
6. RENTAL AND MAINTENANCE OF PREMISES D/	-	-	-	-	-
Component Total	-	-	-	-	-

C/ Equipment committed through Agreements included in Section 3 (Sub-contracts). For details see Annex VII.
D/ No direct costs to MED POL.

Expenditures and commitments relevant to monitoring activities of MED POL for the 1981-1982 and proposed commitments for 1983-1985 period

(Presented in US dollars and in format requested by the Contracting Parties in UNEP/IG.43/6, Annex VII)

	1981	1982	1983	1984	1985
7. OPERATION AND MAINTENANCE OF EQUIPMENT E/					
- IAEA	1.927	4.288	1.400	1.500	1.800
Component Total	1.927	4.288	1.400	1.500	1.800
8. REPORTING COSTS F/					
- WHO	617	-	-	-	-
- IAEA	2.000	2.923	1.000	1.000	1.300
Component Total	2.617	2.923	1.000	1.000	1.300
9. SUNDRY G/					
- IAEA	6.379	-	1.000	1.000	1.300
Component Total	6.379	-	1.000	1.000	1.300
GRAND TOTAL	336.710	371.977	1.116.000 H/	800.000	850.000

E/ This item covers only the cost of operation and maintenance of equipment used by ILMR for common maintenance service
F/ Costs of translation and printing of UNEP documents related to MED POL covered through Chapter I (Co-ordination) of MAP budget.
G/ Cost of sundry items related to MED POL incurred by UNEP covered through Chapter I (Co-ordination) of MAP budget.
H/ Includes US $216.000 rephased from 1982 as authorized by the third meeting of the Contracting Parties (UNEP/IG.43/6, Annex V).