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XX Meeting of the Inter-agency Advisory
Committee (IAAC) for MED POL

Athens, 12-16 January 1987

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1. The XX IAAC Meeting was held in Athens, 12-16 January 1987. The Co-operating Agencies represented are listed in annex I.

2. A. Manos opened the Meeting and welcomed the participants. He underlined the great contribution that the Inter-Agency Advisory Committee had given since the beginning to the MED POL programme towards its smooth and efficient implementation and pointed out that its function could well expand. In fact, he suggested that in addition to the co-ordination of the MED POL activities, the IAAC could represent a forum between the UN system for exchange of information on other activities related to the protection of the Mediterranean carried out by each organization. This information could be reported to the Mediterranean Contracting Parties to emphasize the role played and the valuable contribution provided by the UN Agencies through their participation in the Mediterranean Action Plan. L. Jeftic added that the MED POL programme should be in close contact with all the other regional and sub-regional programmes (MEDALPEX, POEM, etc.) in order to optimize the funds spent by the Mediterranean countries and avoid duplications.

3. L. Jeftic briefly introduced the documents prepared by the secretariat for the Meeting (annex II) and the provisional agenda (annex III) was unanimously adopted.

4. On 14 January afternoon, at the kind invitation of the Athens National Center for Marine Research, the group visited the research vessel EGEON, and, after the visit, a discussion was held on board of the ship with the Director of the Centre on future plans and possible use of the vessel.

5. L. Jeftic informed the group of the Consultation Meeting on the assessment of the MED POL monitoring programme held in Athens, 8-9 January 1987. The report of the Meeting was distributed (annex IV) and the relevant recommendations of the consultation were kept into account during the discussions.

Agenda item 1. Review of activities since XIX IAAC

a) Monitoring

6. L. Jeftic briefly introduced document UNEP/IAAC-XX/4, which described the status of implementation of the National Monitoring Programmes and presented a summary of the MED POL data base (annex V). It was agreed that the relevant agencies should continue to check the technical quality of the monitoring data and would contact for clarification the laboratories who provided the data, as appropriate.

7. In order to make full use of the existing MED POL - PHASE I data it was decided that the data gathered through MED POL I to VIII should be analysed by the Agencies and utilized as much as possible in the relevant documentation prepared.

8. The preparation of formats for reporting of monitoring data was considered in the light of relevant activities ongoing since several years in other regions and organizations. Reference was made to the IOC/UNEP/ICES/IAEA Interagency Consultation on International Marine Pollution Data Management, Copenhagen, 4-6 September 1986, where the existing ICES and MED POL reporting formats for contaminants in biological material had been compared, and the new ICES reporting format for contaminants in seawater had been also considered. Since then ICES had also prepared draft reporting formats for contaminants in sediments.

9. It was agreed that contact be taken with the ICES secretariat in order to investigate to what extent the ICES existing formats could be used, as they are or appropriately revised, for MED POL. It was also noted that reporting formats for observations of petroleum hydrocarbons were included in the IOC Manuals and Guides used for MARPOLMON-P, covering dissolved/dispersed, oil slicks, pelagic tar and tar on beaches. It was agreed that the existing formats should be reviewed and used as basis for the further development of the MED POL formats.

10. It was agreed that the Agencies would take care of the preparation of the missing formats as follows:

- Heavy metals, chlorinated hydrocarbons, petroleum hydrocarbons and nutrients in effluents (WHO);
- Heavy metals in seawater and sediments (IAEA);
- Chlorinated hydrocarbons in sediments (IAEA);
- Microbial contaminants in shellfish (WHO);
- Petroleum hydrocarbons in seawater, sediments, tar on beaches, pelagic tar, oil slicks (IOC);
- Petroleum hydrocarbons in organisms (FAO/IOC);
- Standard physical and chemical parameters (TSO, chlorophyll, wind and currents) (IOC).

11. A short presentation of the state of preparation of each of the parameters would be written by each relevant Agency and sent to the MED Unit by end of January for inclusion in the documentation of the Fifth Working Group for Scientific and Technical Co-operation for MED POL.

12. The distribution of the 1987 funds for the purchase of equipment for the monitoring was discussed and the US \$ 431,000 available were divided as follows: MEDU: \$ 131,000; FAO: \$ 220,000; WHO: \$ 70,000; WMO: \$ 10,000. Agencies will supply the MED Unit with the list of equipment provided through the monitoring and research during 1986, divided by categories.

b) Research

13. Three documents were presented under this topic, UNEP/IAAC-XX/5, 6 and 7. The first two documents contained the computerized list of all research projects since 1982 and had to be updated by each agency (annex VI). The updated version will be prepared on the basis of the information received from agencies by 25 January 1987. The latter document showed the 1987 research proposals and after extensive discussion an agreement was reached on the distribution of the projects to the different agencies according to their subject. The total number of projects for 1987 was 140, with 74 ongoing projects to be extended and 66 newly submitted proposals (annex VII). The funds for the 1987 research component were divided between the co-operating agencies as follows: FAO: US \$ 105,000; WHO: US \$ 98,000; WMO: US \$ 25,000; IAEA: US \$ 26,000 and IOC: US \$ 42,000.

c) Assessments

14. L. Jeftic introduced document UNEP/IAAC-XX/8 which reported the full list of the assessments which had to be prepared in the period 1987-1989. The Group agreed on the actions to be taken for the 1987 activities as well as on the budget requirements for the ones foreseen in the years 1988-1990 (annex VIII).

d) Reference methods

e) Maintenance

f) Intercalibration

15. L. Jeftic introduced documents UNEP/IAAC-XX/9, 10 and 11 which presented the information available at the secretariat on the implementation of the above subjects. The representative of IAEA distributed five documents (annex IX) which contained the latest information on the status of preparation of Reference methods, service visits during 1985 and 1986, list of spare parts and accessories supplied to research institutes and a summary of intercalibration exercises of 1985 and 1986. The document on the reference methods will be amended on the basis of information supplied to the secretariat by 25 January 1987.

g) Publication

16. The secretariat introduced document UNEP/IAAC-XX/12 which showed all the issues of the MAP Technical Reports Series published, being published or planned to be published (annex X). It was agreed that the series should be used as much as possible to present final reports and results of the MED POL research projects. All agencies should send their amendments to the list by 25 January 1987.

h) Meetings

17. L. Jeftic introduced document UNEP/IAAC-XX/13 which contained a list of all meetings relevant to MED POL held since the Genoa Meeting (September 1985) and the ones planned to be convened in 1987. The list was discussed and its amended version appears as annex XI.

18. The meetings relevant to monitoring, data quality assurance and research to be proposed for 1988 and 1989 were also discussed and are reflected in the budget for 1988-1989 (annex XVII). Titles, tentative dates and venue for meetings on activities C, D, E, F, G and L to be supplied by responsible agencies by 25 January 1987.

Agenda item 2. Review of decisions and recommendations of the Fourth Ordinary Meeting of Contracting Parties, Genoa, 9-13 September 1985 and follow-up activities

Agenda item 3. Review of decisions and recommendations of the Meeting of Experts of the Technical Implementation of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources, Athens, 9-13 December 1985, and follow-up activities

Agenda item 4. Review of decisions and recommendations of the Fourth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL, Athens, 16-20 June 1986 and follow-up activities

Agenda item 5. Review of decisions and recommendations of the XIX Meeting of the Inter-Agency Advisory Committee (IAAC) for MED POL, Athens, 13-17 January 1986

19. Under the above agenda items, documents UNEP/IAAC-XX/14, 15, 16 and 17 were reviewed and all the actions undertaken during 1986 or to be undertaken during 1987 were discussed. The updated versions of the above documents are presented in annexes XII, XIII XIV and XV.

Agenda item 6. Preparation for the Fifth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL, Athens, 6-10 April 1987

20. Under this item the group discussed the proposed agenda for the forthcoming meeting of the Working Group for Scientific and Technical Co-operation presented in document UNEP/IAAC-XX/18, and the relevant document to be prepared. As a result, a revised version of the agenda was agreed upon as well as a list of documents (annex XVI). The Agencies' representatives were also asked to inform MED Unit at latest by the end of January 1987 of all additional documents which would be presented to the Working Group Meeting as information documents.

21. The group discussed and agreed on the budget for the 1988/1989 activities to be proposed to the Fifth Working Group for Scientific and Technical Co-operation for MED POL (annex XVII). The Agencies' representatives pointed out that it would be indispensable to have close consultations with the UNEP secretariat before making any revision of project documents relevant to MED POL.

Agenda item 7. Information by agencies on projects carried out by agencies and related to the Mediterranean Action Plan

22. The group felt that the discussion held at the beginning of the meeting (see para 2. of the report) had covered the subject of agenda item 7. The subject will be brought again at the next IAAC Meeting and the Agencies will be asked to provide information on meetings, publications and activities outside MED POL, co-ordinated by the Co-operating Agencies, relevant to the Mediterranean.

Agenda item 8. Other matters

23. L. Jeftic informed the Meeting of the intention of UNEP's OCA/PAC office to launch a project on the Ecological Implications of expected climatic changes at a global scale and the Agencies were asked to propose as soon as possible names of Mediterranean scientists who could cover the Mediterranean area.

24. The question of having at the Co-ordinating Unit different maps covering the Mediterranean region in all the possible aspects (geological, hydrographical, oceanographic, fisheries, etc.) was raised. The Agencies were asked to make such maps available whenever possible.

25. The group agreed to convene the next IAAC meeting in November 1987.

26. The Meeting was closed at 13.00 h of 16 January 1987.

Annex I

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Annex II

List of Documents

1. Provisional Agenda UNEP/IAAC-XX/1
2. Provisional List of documents UNEP/IAAC-XX/2
3. Provisional List of Participants UNEP/IAAC-XX/3
4. Monitoring UNEP/IAAC-XX/4
5. List of Research Projects (83-86) UNEP/IAAC-XX/5
6. List of Research Projects (ongoing) UNEP/IAAC-XX/6
7. List of Research Projects submitted for 1987
by agencies UNEP/IAAC-XX/7
8. List of Assessments UNEP/IAAC-XX/8
 - A. Under preparation
 - B. Land-Based Sources Protocol implementation workplan
and budget for 1986 and 1988 to 1995.
9. Reference Methods UNEP/IAAC-XX/9
Summary sheet, status as per January 1986
10. List of service visits to the National Institutions
from December 1984 to December 1985 UNEP/IAAC-XX/10
11. Summary sheet on intercalibration exercises UNEP/IAAC-XX/11
12. List of MAP Technical Series UNEP/IAAC-XX/12
13. List of Meetings UNEP/IAAC-XX/13
 - A. October 1985 - December 1986
 - B. Planned for 1987
14. Relevant decisions from Genoa Meeting and follow-up
actions UNEP/IAAC-XX/14
15. Relevant decisions from LBS Meeting and follow-up
actions UNEP/IAAC-XX/15
16. Relevant decisions from WGSTC Meeting and follow-up
actions UNEP/IAAC-XX/16
17. Relevant decisions from XIX IAAC Meeting and follow-up
actions UNEP/IAAC-XX/17
18. Draft Provisional Agenda for the fifth WGSTC
Meeting UNEP/IAAC-XX/18
19. Minutes of the XX Meeting of the Inter-Agency
Advisory Committee (IAAC) for MED POL UNEP/IAAC-XX/19

Annex III

Agenda

1. Review of activities since XIX IAAC
 - a. Monitoring
 - b. Research
 - c. Assessments
 - d. Reference methods
 - e. Maintenance
 - f. Intercalibration
 - g. Publications
 - h. Meetings
2. Review of decisions and recommendations of the Fourth Ordinary Meeting of Contracting Parties, Genoa, 9-13 September 1985 and follow-up activities.
3. Review of decisions and recommendations of the Meeting of Experts of the Technical Implementation of the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources, Athens, 9-13 December 1985, and follow-up activities.
4. Review of decisions and recommendations of the Fourth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL, Athens, 16-20 June 1986 and follow-up activities.
5. Review of decisions and recommendations of the XIX Meeting of the Inter-Agency Advisory Committee (IAAC) for MED POL, Athens, 13-17 January 1986.
6. Preparation for the Fifth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL, Athens, 6-10 April 1987.
7. Information by agencies on projects carried out by agencies and related to the Mediterranean Action Plan.
8. Other matters.

Annex IV

Report on the Consultation Meeting on the assessment
of the MED POL monitoring programme

Athens, 8-9 January 1987

A meeting was convened by UNEP on 8 and 9 January 1987 at the office of the Co-ordinating Unit for the Mediterranean Action Plan in Athens to review the monitoring component of the MED POL - PHASE II programme, and to make recommendations for possible modifications for improvements. The list of participants is attached as an annex.

A general description of the MED POL programme was given by Mr. L. Jetic, UNEP, MEDU, with special reference to the state of development of the monitoring component. A general discussion was held during which problems and shortcomings were highlighted and suggestions and recommendations were formulated as follows:

Geographical coverage

A discussion was held on how to improve the geographical coverage of the MED POL monitoring network and in particular how to stimulate and gather data from the southern Mediterranean countries. It was suggested to create long-term relations between more developed institutes from the North and institutes from the South with the launching of joint projects and exchanges of visiting scientists in order to stimulate collection and analysis of data and create a long-lasting scientific collaboration. It was agreed that the Med Unit would find the ways of implementing the idea by using structures and budget allocations already existing in the MED POL programme.

Component coverage

It was agreed that in the formulation of the National Monitoring Programmes, priority should be given to sources of pollution and coastal/estuarine waters as obligatory components of any National Programme.

Selection of parameters

A complete revision was made of the priority and non-priority of parameters for the monitoring of sources, coastal/estuarine waters and reference areas.

a) Parameters to be determined in effluents:

Priority parameters:

- Total mercury;
- Total cadmium;
- Total suspended solids;
- Total phosphorus;
- Total nitrogen;
- Faecal coliforms;
- Volume of discharge.

Other parameters:

- Petroleum hydrocarbons;
- High molecular weight chlorinated hydrocarbons;
- Biochemical oxygen demand (BOD₅);
- Chemical oxygen demand (COD);
- Detergent (anionic);
- Phenols (index);
- Total chromium;
- Selected radionuclides;
- Other pollutants known to be discharged in significant quantities.

b) Parameters to be determined in coastal waters:

Priority parameters:

- Total mercury in organisms;
- Organic mercury in organisms;
- High-molecular weight halogenated hydrocarbons in organisms;
- Faecal coliforms in recreational waters and edible bivalves;
- Basic oceanographic and meteorological parameters; in particular, standard physical and chemical parameters (salinity, oxygen, temperature, chlorophyll and wind).

Other parameters:

- Cadmium in organisms;
- Petroleum hydrocarbons in water and tar balls in water and seashores (survey after 5 years);
- Total arsenic in organisms;
- Radionuclides in organisms;
- Pathogens in bivalves.

c) Parameters to be determined in estuaries:

Priority parameters:

- Total mercury in organisms and suspended matter;
- Organic matter in organisms;
- High-molecular weight halogenated hydrocarbons in water and organisms;
- Faecal coliforms in water and bivalves;
- Total phosphorus in water and suspended matter;
- Total nitrogen in water and suspended matter;
- Total suspended matter;
- Basic oceanographic and meteorological parameters; in particular, standard physical and chemical parameters (salinity, oxygen, temperature and chlorophyll).

Other parameters:

- Cadmium in organisms and suspended matter;
- Radionuclides in water and suspended matter;
- Oil residues in water and suspended matter;
- Pathogens in water;
- Phenols in water.

d) Parameters to be determined in reference areas:

The same parameters selected for coastal waters.

Pilot monitoring exercises

In addition to the above parameters, it was suggested to launch pilot studies for the determination of the levels in selected areas and to select the analytical method which could be recommended for the following parameters:

- Organotin substances;
- Organophosphorus substances;
- Polynuclear aromatic hydrocarbons in organisms;
- High-molecular weight halogenated hydrocarbons in sediments in shallow water;
- Floating/sinking litter.

On the basis of the results of the pilot studies, recommendations could be formulated for the introduction of the parameters in the National Monitoring Programmes.

Data collection

As to the collection of MED POL monitoring data it was recommended to proceed through:

- Official channels, through MED POL National Monitoring Programmes under agreements;
- Official channels, through ongoing monitoring programmes in countries with no agreement on National Monitoring Programme;
- Open scientific literature of high international standards;
- Regional and sub-regional research and monitoring programmes;
- "Grey" literature.

Data quality assurance

In order to ensure a high quality and reliability of the data collected the following was recommended:

- Formulation, review and amendment, as appropriate, of Reference Methods;
- Training courses on sampling, preservation and sample treatment;
- Regular intercalibration of analytical techniques for priority parameters;
- Provision of standards and reference materials;
- Visits of experts to laboratories in order to work together with local scientists on sampling, analysis, quality assurance procedures, presentation and evaluation of results;
- Joint exercises on monitoring;
- Assistance to countries in preparation and designing of monitoring programmes.

Data processing, management and utilization

It was agreed that the processing of the monitoring data should continue with the following objectives:

- To prepare maps (contouring if possible) of pollution in the Mediterranean, or its sub-regions;
- To prepare periodically reports on the overall state of marine pollution in the Mediterranean or its sub-regions;
- To prepare standard statistical and correlation analysis of available data;
- To prepare assessments of the state of pollution of the Mediterranean Sea with respect to particular pollutants;
- To help countries to prepare national reports on the state of marine pollution in the areas under their jurisdiction;
- To exchange processed data with other international bodies and organizations.

The group felt that in order to achieve better results, small expert groups on any of the above topics should be convened as appropriate.

MED POL Research Component

In view of its close relationship to the monitoring component, a brief discussion was also held on the research component of MED POL - PHASE II, particularly on the best possible utilization of the limited funds allocated to this component. It was agreed that, because of the problems involved, no changes in the approved topics should be formally submitted. However, within the framework of the present structure, priority should be accorded to topics of specific relevance to the Mediterranean and not to those of more general relevance which were already the subject of study in other regions. Results of ongoing studies in other regions should also be used in support of the MED POL monitoring programme in order to avoid duplication of effort and waste of resources.

During the discussion, the utility of retaining activity J was queried. A suggestion was also made that activities B, C and E could possibly be transferred to the LBS implementation programme. In this respect however, it was explained that this latter programme did not constitute research, but evaluation and synthesis of already-existing knowledge.

It was also suggested that some of the better-known publishing houses could be contacted with the view of exploring the possibility of publishing selected issues of the MAP Technical Reports Series.

Annex

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Annex V

Monitoring

A. Status of National Monitoring Agreements

Country	Year of first agreement	Programmes			Data submitted		
		Sources of pollution	Coastal and Estuarine	Reference areas	Sources of pollution	Coastal and Estuarine	Reference areas
Algeria	1985	1985 1986	1985 1986	- -	- -	- -	- -
Cyprus	1983	1983 1984 1985 1986	1983 1984 1985 1986	- - - -	1983 1984 1985 -	1983 1984 1985 -	- - - -
Egypt	1986	1986	1986	1986	-	-	-
Israel	1983	- - - -	- 1983 1984 1985 1986	- - - -	- - - -	1982 1983 1984 1985 <i>1986</i>	- - - - -
Lebanon	1983	- - - -	1983 - 1985 1986	- - - -	- - - -	- 1984 1985 -	- - - -
Libya	1986	1986	1986	1986	-	-	-
Malta	1983	- 1983 - 1985 1986	- 1983 - 1985 1986	- - - -	1982 1983 1984 1985 -	1982 1983 1984 1985 <i>1986</i>	- - - - -
Morocco	1985	- - 1985 1986	- - 1985 1986	- - - -	1983 1984 1985 -	1983 1984 1985 -	- - - -
Syria	1986	1986	1986	-	-	-	-
Yugoslavia	1983	1983 1984 1985 1986	1983 1984 1985 1986	1983 1984 1985 1986	1983 1984 - -	1983 1984 - -	1983 1984 - -

B. Status of other National Monitoring Programmes as at December 1986

State	not submitted to UNEP	submitted to UNEP	sent for revision	signed by UNEP and sent for signature
France <u>1/</u>		1986	1986	
Greece		1983	1983	1985
Italy <u>1/</u>	X			
Monaco	X			
Spain <u>1/</u>	X			
Tunisia		1983	1984 1986	
Turkey		1983		1983

1/ France, Italy and Spain submitted 1983-1985 data.

C. MED POL - PHASE I
Summary of Database file

No. of entries of average levels of metals

	<u>Mytilus galloprovincialis</u>	<u>Mullus barbatus</u>	<u>Thunnus thynnus thynnus</u>	<u>Mullus surmuletus</u>	Others	Total
Mercury	554	1227	222	-	1998	4001
Cadmium	378	584	104	-	1056	2122
Zinc	210	476	-	21	590	1297
Copper	220	466	-	19	534	1239
Lead	-	-	-	-	1386	1386
Selenium	-	-	-	-	187	187
Chromium	-	-	-	-	111	111
Nickel	-	-	-	-	66	66
	1362	2753	326	40	5928	10409

No. of entries of average levels of chlorinated hydrocarbons

	<u>Mytilus galloprovincialis</u>	<u>Mullus barbatus</u>	Others	Total
PCB	201	251	298	750
DDT	-	-	-	968
DDD	-	-	-	584
DDE	-	-	-	993
Dieldrin	-	-	-	365
Aldrin	-	-	-	181
Hexachlor cyclohexane	-	-	-	251
Lindane	-	-	-	187
GRAND TOTAL	-	-	-	4279

Microbial Pollution in seawater

Total of about 12,500 water samples were determined from about 700 sampling stations.

D. MED POL - PHASE II
 Summary of Database file

MONITORING IN THE FRAME OF MED POL
 SUMMARY OF DATABASE FILE-PHASE II
 AS OF 31 DECEMBER 1986

COUNTRY *****	HALOGENATED HYDROCARBONS IN MARINE ORGANISMS		MICROBIAL POLLUTION IN SEA WATER		HEAVY METALS IN MARINE ORGANISMS											
	1983		1984		1983				1984				1985			
	1983	1984	1983	1984	CD	HG	OTHR	CD	HG	OTHR	CD	HG	OTHR	CD	HG	OTHR
CYPRUS	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
ISRAEL	0	0	805	890	80	86	28	146	91	63	147	154	457	147	154	457
LEBANON	0	115	0	0	0	0	0	74	24	0	42	42	0	42	42	0
MALTA	0	0	45	0	0	0	0	27	27	81	8	8	24	8	8	24
MOROCCO	0	0	43	66	0	9	9	0	0	13	0	0	14	0	0	14
YUGOSLAVIA	148	198	512	900	108	107	122	138	138	201	0	0	0	0	0	0
*** Total ***	198	348	1405	1856	188	202	169	335	283	258	197	204	495	197	204	495

Annex VI

MED POL Research projects

(1982-1986)

 FAO ALG-3 G
 P. BENSALAH
 RECHERCHES SUR LA TOXICITE LA PERSISTANCE LA BIOACCUMULATION LA
 CARCINOGENICITE ET LA MUTAGENICITE 82: 0
 83: WIT
 84: 0
 85: 0
 UNITE DE RECHERCHE D'ORAN, UNIVERSITE D'ORAN 86: 0

FAO ALG-4 H
 F. AID
 EUTROPHISATION ET FLORAISONS CONCOMITANTES DE PLANCTON DANS LE PO 82: 0
 RT D'ALGER 83: 2000
 84: 2000
 85: EXP
 CENTRE DE RECHERCHES OCEANOGRAPHIQUES ET DES PECHEES, ALGER 86: 0

FAO ALG-6 J
 A. BAH'ALEM
 EFFETS DES POLLUTIONS THERMIQUES SUR LES ORGANISMES ET ECOSYSTEMES 82: 0
 COTIERES 83: 0
 84: 0
 85: 0
 INSTITUT DES SCIENCES DE LA MER ET DE L'AMENAGEMENT DU LITTORAL (I 86: 3000
 SMAL), ALGER

FAO CYP-1 J
 A. DEMETROPOULOS
 STUDY OF LITTORAL BENTHIC AND FISH COMMUNITIES IN THE VASILIKOS-M 82: 0
 ONI AREA IN RELATION TO THE EFFECT ON THESE OF POLLUTION FROM THER 83: 4500
 MAL EFFLUENTS 84: 4000
 85: 4500
 FISHERIES DEPARTMENT, MINISTRY OF AGRICULTURE, NICOSIA 86: EXP

FAO CYP-2 G
 M. HADJICHRISTOPHOROU
 EFFECTS OF TURBIDITY AND BLANKETING OF GYPSUM ON LITTORAL AND SUBL 82: 0
 ITTORAL MARINE ORGANISMS 83: 0
 84: 0
 85: 0
 FISHERIES DEPARTMENT, MINISTRY OF AGRICULTURE, NICOSIA 86: 3000

FAO EGY-1 H
 H. A. SULTAN
 EUTROPHICATION AND CONCOMITANT PLANKTON BLOOMS 82: 0
 83: WIT
 84: 0
 85: 0
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, ALEXANDRIA 86: 0

FAO EGY-2 G
 S. D. WAHBY
 RESEARCH ON THE TOXICITY PERSISTANCE TRANSFER AND ACCUMULATION O 82: 0
 F PETROLEUM HYDROCARBONS MERCURY CADMIUM AND LEAD IN THE NEARSHO 83: 0
 RE WATER OFF ALEXANDRIA 84: WIT
 85: 0
 DEPARTMENT OF MARINE CHEMISTRY, INSTITUTE OF OCEANOGRAPHY AND FISH 86: 0
 ERIES, ALEXANDRIA

FAO EGY-4 G
 A. H. EL-SABAE
 ACUTE AND CHRONIC TOXICITY TO MARINE BIOTA OF WIDELY USED DISPERSANTS
 PCBs CHLORINATED PESTICIDES AND THEIR COMBINATIONS AND THEIR
 COMBINATIONS AND THEIR BIOMAGNIFICATION IN ALEXANDRIA REGION

82:	0
83:	4000
84:	4000
85:	2000-
86:	EXP

FACULTY OF AGRICULTURE, UNIVERSITY OF ALEXANDRIA

FAO EGY-5 I
 Y. HALIM
 POLLUTION INDUCED ECOSYSTEM MODIFICATIONS

82:	0
83:	WIT
84:	0
85:	0
86:	0

UNIVERSITY OF ALEXANDRIA RESEARCH CENTRE (UNARC), ALEXANDRIA

FAO EGY-6 A
 I. H. ELSOKKARY
 DEVELOPMENT AND TESTING OF SAMPLING AND ANALYTICAL TECHNIQUES FOR
 MONITORING OF MARINE POLLUTANTS

82:	0
83:	WIT
84:	0
85:	0
86:	0

UNIVERSITY OF ALEXANDRIA RESEARCH CENTRE (UNARC), ALEXANDRIA

FAO EGY-7 K
 I. H. ELSOKKARY
 BIOGEOCHEMICAL CYCLES OF SPECIFIC POLLUTANTS

82:	0
83:	0
84:	3000
85:	3500
86:	EXP

UNIVERSITY OF ALEXANDRIA RESEARCH CENTRE (UNARC), ALEXANDRIA

FAO EGY-9 A
 M. F. MACHLAD
 DEVELOPMENT AND TESTING OF SAMPLING AND ANALYTICAL TECHNIQUES FOR
 MONITORING OF MARINE POLLUTANTS

82:	0
83:	WIT
84:	0
85:	0
86:	0

UNIVERSITY OF ALEXANDRIA RESEARCH CENTRE (UNARC), ALEXANDRIA

FAO FRA-1 G
 R. A. L'AIM-MALIA
 RECHERCHES SUR LA TOXICITE, LA PERSISTANCE, LA BIOACCUMULATION, LA
 CARCINOGENICITE ET LA MUTAGENICITE

82:	0
83:	0
84:	NIL
85:	0
86:	0

STATION MARINE D'ENDOUME, CENTRE D'OCEANOLOGIE DE MARSEILLE

FAO FRA-3 I
 G. STORA
 ELABORATION DE CRITERES FONDAMENTAUX POUR LA SURVEILLANCE BIOLOGIQUE
 A LONG TERME DE LA POLLUTION

82:	0
83:	0
84:	NIL
85:	0
86:	0

STATION MARINE D'ENDOUME, CENTRE D'OCEANOLOGIE DE MARSEILLE

 FAO FRA-6 K
 N. VICENTE
 CONTROLE DES METAUX LOURDS DANS LES ECOSYSTEMES LITTORAUX ET LES C 82: 0
 HAINES ALIMENTAIRES MARINES 83: 1000
 84: 1000
 85: 3000

CENTRE D'ETUDE DES RESSOURCES ANIMALES MARINES ST. JEROME, MARSEILLE 86: EXP
 E

 FAO FRA-8 G
 M. AUBERT
 ETUDE DE LA TOXICITE DE COMPOSES SILICONES EN MILIEU MARIN 82: 0
 83: 0
 84: 0
 85: 4000

CENTRE D'ETUDES ET DE RECHERCHES DE BIOLOGIE ET D'OCEANOGRAPHIE ME 86: EXP
 DICALE (CERBOM), NICE

 FAO FRA-9 D
 C. ALZIEU
 EVALUATION DES TENEURS EN MERCURE METHYLMERCURE ET SELENIUM DANS 82: 0
 LES POISSONS ET COQUILLAGES DES COTES FRANCAISES DE LA MEDITERRANE 83: 0
 E 84: 0
 85: 3500
 IFREMER, CENTRE DE NANTES 86: EXP

 FAO FRA-13 A
 D. COSSA
 PERFORMANCES ANALYTIQUES DE LA METHODE DE DOSAGE DE L'ARSENIC TOTA 82: 0
 L DANS LES TISSUS BIOLOGIQUES PROPOSEE PAR LE PROGRAMME "ENVIRONNE 83: 0
 MENT" DES NATIONS UNIES 84: 0
 85: WIT
 IFREMER, CENTRE DE NANTES 86: 0

 FAO FRA-21 G
 J. F. AZZOLINA
 ETUDE DE LA TENEUR EN METAUX LOURDS DE L'OURSIN COMESTIBLE Paracen 82: 0
 trotus lividus DANS LA RADE DE MARSEILLE 83: 0
 84: 0
 85: 0
 FACULTE DES SCIENCES DE LUMINY, MARSEILLE 86: NAC

 FAO FRA-24 G
 C. CHASSARD-BOUCHAUD
 TOXICITE, PERSISTANCE ET BIOACCUMULATION DU CHROME DANS UNE CHAINE 82: 0
 TROPHIQUE D'ORGANISMES MARINS COMESTIBLES. ASPECTS STRUCTURAUX U 83: 0
 LTRASTRUCUTRAUX ET MICROANALYTIQUES 84: 0
 85: 0
 UNIV. P. ET M. CURIE, LABORATOIRE DE BIOLOGIE, PARIS 86: 3000

 FAO FRA-25 G
 C. ALZIEU
 EFFETS DE CONCENTRATIONS SUBLETALES DE TRIBUTYLETAIN SUR UN MOLLUS 82: 0
 QUE BIVALVE 83: 0
 84: 0
 85: 0
 IFREMER, CENTRE DE NANTES 86: WIT

FAO FRA-28 G	
N. VICENTE	
INFLUENCE DES FACTEURS TEMPERATURE, NUTRITION ET DE MICROPOLLUANTS	82: 0
(EXEMPLE: LE CADMIUM) SUR UN BIVALVE MARIN DE MEDITERRANEE: <i>Ruditapes decussatus</i> . MODIFICATIONS METABOLIQUES ET ULTRASTRUCTURALES	83: 0
	84: 0
	85: 0
CERAM, UNIV. AIX-MARSEILLE	86: NAC

FAO FRA-29 G	
J. BRUSLE	
EXPERIMENTALE DE L'EFFET DU CADMIUM SUR LES JUVENILES (CIVELLES ET	82: 0
ANGUILLETES DE L'ANGUILLE EUROPEENNE <i>Anguilla anguilla</i> : ANALYSE	83: 0
STRUCTURALE ET METABOLIQUE DES PERTURBATIONS INDUITES PAR CONTAMINATION PAR L'EAU	84: 0
	85: 0
LABORATOIRE DE BIOLOGIE MARINE, UNIV. DE PERPIGNAN	86: 4000

FAO FRA-35 H	
G. JACQUES	
EUTROPHISATION ET FLORAISSONS DANS L'ETANG DE THAU	82: 0
	83: 0
	84: 0
	85: 0
LAB. ARAGO PRODUCTION PRIMAIRE PELAGIQUE, BANYULS SUR MER	86: NAC

FAO GRE-2 G	
M. MORAITOU-APOSTOLOPOULOU	
STUDIES ON TOXICITY OF OIL, OIL DISPERSANTS AND OIL/DISPERSANT MIXTURES ON VARIOUS MARINE ORGANISMS AS WELL AS THE COMBINED EFFECTS OF DISPERSANTS AND SOME HEAVY METALS	82: 0
	83: NIL
	84: 4000
	85: 2000
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS	86: 0

FAO GRE-3 I	
A. ZARFANELLAS	
STRUCTURAL AND PHYSIOLOGICAL CHANGES IN BENTHIC COMMUNITIES AS A MEASURE OF THE STATE OF POLLUTION IN MARINE ENVIRONMENTS	82: 0
	83: WIT
	84: 0
	85: 0
ENVIRONMENTAL POLLUTION CONTROL PROJECT, MIN. OF ENVIRON, ATHENS	86: 0

FAO GRE-7 G	
J. CASTRITSI-CATHARIOS	
L'INFLUENCE TOXIQUE DES DISPERSANTS	82: 0
	83: 2500
	84: 1200
	85: EXP
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS	86: 0

FAO GRE-14 I	
J. CASTRITSI-CATHARIOS	
ETUDE COMPARATIVE DES MODIFICATIONS DES ECOSYSTEMES DES EAUX COTIERES DU GOLFE ET DU PORT DE PATRAS SOUMISES A L'INFLUENCE DES POLLUANTS	82: 0
	83: 0
	84: 2000
	85: 2000
ZOOLOGICAL LABORATORY UNIVERSITY OF ATHENS	86: EXP

FAO GRE-15 G
M. MORAITOU-APOSTOLOPOULOU
INFLUENCE OF DIFFERENT PHYSICO-CHEMICAL FACTORS ON THE TOXICITY OF
A) CRUDE OIL B) OIL DISPERSANT C) OIL/OIL DISPERSANT MIXTURE TO
Artemia salina AND OTHER MARINE ORGANISMS 82: 0
83: 0
84: 0
85: NAC
86: 0
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS

FAO GRE-17 I
A. NICOLAIDOU
EFFECTS OF POLLUTION ON THE DISTRIBUTION OF MOLLUSCS IN MESSOLONGHI
LAGOON AND ADJACENT AREAS 82: 0
83: 0
84: 3000
85: 3000
86: EXP
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS

FAO GRE-22 K
A. V. CATSIKI
BIOACCUMULATION DU MERCURE ET D'AUTRES METAUX DANS L'ECOSYSTEME MA-
RIN 82: 0
83: 0
84: 3000
85: 3000
86: EXP
NATIONAL CENTRE FOR MARINE RESEARCH, ATHENS

FAO GRE-23 I
P. PANAYOTIDIS
ETUDE DE L'IMPACT DE LA POLLUTION SUR LES HERBIERS DE Posidonia oc-
ceanica DANS LE GOLFE SARONNIOS (MER EGEE, GRECE) 82: 0
83: 0
84: 3000
85: 2000
86: EXP
CENTRE NATIONAL DE RECHERCHES MARINES, ATHENS

FAO GRE-26 G
A. HARITOS
STUDY OF THE RESPONSES OF MARINE ORGANISMS TO POLLUTANTS AT THE LE-
VEL OF FUNCTIONAL PROTEINS 82: 0
83: 0
84: 4000
85: 3000
86: 2000
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS

FAO GRE-31 G
S. E. PAPOUTSOGLOU
EFFECT OF CADMIUM AND OTHER POLLUTANTS ON THE SURVIVAL, GROWTH RATE
AND REPRODUCTION OF COMMERCIALY CULTURED MARINE AND BRACKISH WA-
TER FISH OF THE MEDITERRANEAN 82: 0
83: 0
84: 0
85: 4500
86: 3000
DEPT. OF APPLIED HYDROBIOLOGY, AGRICULTURAL UNIVERSITY OF ATHENS

FAO GRE-32 G
A. HARITOS
STUDY OF THE EFFECT OF HEAVY METALS ON POLYPEPTIDES IN FISH AND CR-
USTACEAN SPECIES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY 82: 0
83: 0
84: 0
85: 4500
86: 2000
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS

FAO GRE-33 G	
J. CASTRITSI-CATHARIOS	
STUDY OF THE ANTIFOULING PAINTS TOXIC ACTION. CHECK OF THE AFFORDE	82: 0
D EFFECTIVE PROTECTION IN RELATION TO THE MAIN POLLUTING ORGANISMS	83: 0
	84: 0
	85: NAC
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS	86: 0

FAO GRE-34 I	
A. NICOLAIDOU	
IDENTIFICATION OF BIOLOGICAL INDICATORS OF HEAVY METALS AT THE SIT	82: 0
E OF A SMELTIN IN LARYMNA, GREECE	83: 0
	84: 0
	85: 0
ZOOLOGICAL LABORATORY, UNIVERSITY OF ATHENS	86: 3000

FAO GRE-36 G	
J. CASTRITIS-CATHARIOS	
ETUDE DE LA TOXICITE AIGUE ET DES EFFETS SUBLETHAUX DES COMPOSANTS	82: 0
D'ORGANOTINE SUR LES NAUPLII D'artemia salina L DE MESSOLONGHI,	83: 0
GRECE	84: 0
	85: 0
LABORATOIRE DE ZOOLOGIE, UNIVERSITE D'ATHENES	86: NAC

FAO GRE-38 I	
I. SIOKOU-FRANCOU	
ETUDE DE L'IMPACT DE LA POLLUTION SUR LE ZOOPLANCTON DU GOLFE SARO	82: 0
NIKOS (MER EGEE, GRECE)	83: 0
	84: 0
	85: 0
CENTRE NATIONAL DE RECHERCHES MARINES, ATHENES	86: 3000

FAO ISR-2 A	
B. S. KRUMGALZ	
DEVELOPMENT OF SAMPLING AND ANALYTICAL TECHNIQUES FOR MONITORING O	82: 0
F TOTAL MERCURY CONTENT IN MARINE ORGANISMS AND SEDIMENTS	83: WIT
	84: 0
	85: 0
ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE, HAIFA	86: 0

FAO ISR-4 I	
B. S. KRUMGALZ	
BIOGEOCHEMICAL CYCLE OF MERCURY IN A POLLUTED AREA	82: 0
	83: WIT
	84: 0
	85: 0
ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE, HAIFA	86: 0

FAO ISR-5 A	
B. S. KRUMGALZ	
DEVELOPMENT OF SAMPLING AND ANALYTICAL TECHNIQUES FOR MONITORING O	82: 0
F CADMIUM IN MARINE ORGANISMS	83: WIT
	84: 0
	85: 0
ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE, HAIFA	86: 0

FAO ISR-7 G
 E. NEVO
 THE GENETIC STRUCTURE OF MARINE ORGANISMS AS A DETECTOR AND MONITOR OF MARINE POLLUTION 82: 0
 83: 4000
 84: 4000
 85: EXP
 86: 0
 INSTITUTE OF EVOLUTION, UNIVERSITY OF HAIFA

FAO ISR-9 G
 E. NEVO
 COMPLEX POLLUTION EFFECTS OF TWO HEAVY METALS (MERCURY AND CADMIUM) ON THE GENETIC STRUCTURE OF MARINE ORGANISMS 82: 0
 83: 0
 84: 5000
 85: 4000
 86: 3000
 INSTITUTE OF EVOLUTION, UNIVERSITY OF HAIFA

FAO ISR-10 G
 H. HORNING
 BIOACCUMULATION OF MERCURY AND ITS DISTRIBUTION IN VARIOUS ORGANS OF SOME SHORE FISHES OFF THE MEDITERRANEAN SEA COAST 82: 0
 83: 0
 84: 4000
 85: 4000
 86: 2000
 ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE, HAIFA

FAO ISR-11 K
 H. HORNING
 SOME ASPECTS OF THE BIOGEOCHEMICAL CYCLE OF MERCURY IN A POLLUTED AREA OFF THE ISRAEL MEDITERRANEAN COAST 82: 0
 83: 0
 84: 0
 85: 3000
 86: 2000
 ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE, HAIFA

FAO ISR-15 G
 Y. ACHITUV
 THE INFLUENCE OF POLLUTION BY HEAVY METALS ON VARIOUS PHYSIOLOGICAL ASPECTS AND ENERGY BUDGET OF *Donax trunculus* (BIVALVIA), *Nassarius circumcincta* AND *N. gibbosa* (GASTROPODS) 82: 0
 83: 0
 84: 0
 85: 5000
 86: 3000
 DEPT. OF LIFE SCIENCES, BAR-ILAN UNIVERSITY, RAMAT-GAN

FAO ISR-17 A
 D. WYNNE
 ORGANOPHOSPHORUS COMPOUNDS IN THE MARINE ENVIRONMENT - FISH 82: 0
 83: 0
 84: 0
 85: 0
 86: 3000
 THE KINNERET LIMNOLOGICAL LABORATORY, TIBERIAS

FAO ITA-1 F
 M. BERNHARD
 MODELLING OF THE BIOGEOCHEMICAL CYCLE OF MERCURY IN THE MEDITERRANEAN 82: 0
 83: WIT
 84: 0
 85: 0
 86: 0
 E.N.E.A., LA SPEZIA

FAO ITA-7 I
G. ZURLINI
DATA COLLECTION APPLICATION AND DEVELOPMENT OF METHODS FOR THE AS
SESSMENT OF MODIFICATIONS IN BENTHIC ECOSYSTEMS 82: 0
83: WIT
84: 0
85: 0
E.N.E.A., LA SPEZIA 86: 0

FAO ITA-8 I
M. SARA
EVALUATION OF THE CONDITIONS OF SOME POSIDONIA MEADOWS IN THE NORT
H- WESTERN MEDITERRANEAN SEA AND EVENTUAL EFFECTS OF POLLUTANTS ON
THE ASSOCIATED FAUNA 82: 0
83: 2000
84: 2000
85: 2000
ISTITUTO DI ZOOLOGIA, UNIVERSITA DI GENOVA 86: EXP

FAO ITA-10 A
R. CAPELLI
DEVELOPPEMENT ET MISE AU POINT DE TECHNIQUES D'ECHANTILLONAGE ET D
E TECHNIQUES ANALYTIQUES POUR L'ETUDE ET LE DOSAGE DE POLLUANTS EN
MILIEU MARIN 82: 0
83: WIT
84: 0
85: 0
ISTITUTO DI CHIMICA GENERALE, UNIVERSITA DI GENOVA 86: 0

FAO ITA-13 J
E. TARAMELLI-RIVOSECCHI
EFFECTS OF THERMAL EFFLUENTS ON SEASHORE ORGANISMS AT TORVALDALIGA
(CIVITAVECCHIA-ROMA) 82: 0
83: 1000
84: 3000
85: 4500
ISTITUTO DI ZOOLOGIA, UNIVERSITA DI ROMA "LA SAPIENZA" 86: EXP

FAO ITA-15 G
R. DE SIMONE
PCB'S HIGH CHLORINATED IN MARINE ENVIRONMENT: A) REVIEW ON EFFECTS
B) STUDIES OF PERSISTENCE AND BIOACCUMULATION C) STUDIES OF ACUTE
AND CHRONIC TOXICITY ON MICROORGANISMS 82: 0
83: WIT
84: 0
85: 0
ISTITUTO GUIDO DONEGANI, CENTRO RICERCHE NAPOLI 86: 0

FAO ITA-21 G
L. DALLA VENEZIA
PHYSIOLOGICAL AND BIOCHEMICAL RESPONSE OF MARINE ORGANISMS TO PCB
POLLUTION IN A WIDE RANGE OF ENVIRONMENTAL FACTORS 82: 0
83: 1500
84: 1500
85: 3000
ISTITUTO DI BIOLOGIA DEL MARE CNR, VENEZIA 86: EXP

FAO ITA-22 I
S. DI GERONIMO
RELATIONS BETWEEN POLLUTION AND BIOCOENOSSES IN THE ROADSTEAD OF AU
GUSTA (EASTERN SICILY) 82: 0
83: 4000
84: 3000
85: 2000
ISTITUTO DI SCIENZE DELLA TERRA, UNIVERSITA DI CATANIA 86: EXP

 FAO ITA-24 I
 G. COGNETTI
 EFFECTS OF POLLUTION ON BENTHOS 82: 0
 83: 1000
 84: 3000
 85: 2000
 ISTITUTO DI ZOOLOGIA E ANATOMIA COMPARATA, UNIVERSITA DI PISA 86: EXP

FAO ITA-25 I
 A. RENZONI
 BIOGEOCHEMICAL CYCLE OF MERCURY AND SELENIUM (INCLUDING MARINE RES 82: 0
 IDENT AND MIGRATORY BIRDS) 83: 2500
 84: 2500
 85: 2000
 DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DI SIENA 86: EXP

FAO ITA-26 I
 G. ALBERTELLI
 CONDITIONS ACTUELLES DES BIOCOENOSSES BENTHIQUE DU PLATEAU LIGURIEN 82: 0
 ET DES ILES DE L'ARCHIPEL TOSCAN 83: 0
 84: 3000
 85: 2000
 ISTITUTO SCIENZE AMBIENTALI MARINE, UNIVERSITA DI GENOVA 86: EXP

FAO ITA-27 G
 V. ALBERGONI
 TOXIC EFFECTS AND METABOLISM OF HEAVY METALS RELATED ALSO TO MUTA 82: 0
 GENIC AND CARCINOGENIC SHORT TERM TESTS ACCORDING TO THEIR CHEMIC 83: WIT
 AL SPECIES AND TO THE INTERACTIONS WITH ORGANIC POLLUTANTS IN 84: 0
 85: 0
 ISTITUTO DI BIOLOGIA ANIMALE, UNIVERSITA DI PADOVA 86: 0

FAO ITA-31 G
 M. DRUNESU
 ENZYMIC ASPECTS OF THE XENOBIOTIC METABOLIZING SYSTEM IN *Mytilus g* 82: 0
alloprovincialis LAM. 83: 3000
 84: 3000
 85: 2000
 ISTITUTO DI FISIOLOGIA GENERALE, UNIVERSITA DI GENOVA 86: EXP

FAO ITA-36 I.
 A. RENZONI
 BIOCHEMICAL CYCLE OF MERCURY AND SELENIUM (INCLUDING MARINE MIGRAT 82: 0
 ORY BIRDS) 83: WIT
 84: 0
 85: 0
 DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DI SIENA 86: 0

FAO ITA-38 D
 R. CAPELLI
 DETERMINATION DU MERCURE TOTAL, DE METHYLMERCURE ET DE SELENIUM DA 82: 0
 NS LES ORGANISMES MARINS DE CONSOMMATION AFIN D'ETUDIER LEUR CORRE 83: 0
 LATION 84: 3000
 85: 3500
 ISTITUTO DI CHIMICA GENERALE, UNIVERSITA DI GENOVA 86: NIL

FAO ITA-39 G	
A. RENZONI	
CONTAMINANTS IN RESIDENT AND MIGRATORY BIRDS IN THE EASTERN MEDITERRANEAN FLYWAY	82: 0
	83: 0
	84: 2000
	85: 2000
DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DI SIENA	86: NIL

FAO ITA-40 G	
A. VIARENGO	
EFFECTS OF ORGANIC XENOBIOTIC COMPOUNDS (AROCOR 1254) ON THE METABOLISM OF THE MUSSEL <i>Mytilus galloprovincialis</i> LAM.	82: 0
	83: 0
	84: 0
	85: NAC
ISTITUTO DI FISIOLOGIA GENERALE, UNIVERSITA DI GENOVA	86: 0

FAO ITA-52 D	
A. RENZONI	
EVALUATION OF METHYLMERCURY IN MEDITERRANEAN POPULATIONS: SEAFOOD ANALYSES	82: 0
	83: 0
	84: 0
	85: 3000
DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DI SIENA	86: 2000

FAO ITA-57 A	
V. U. FOSSATO	
TESTING OF THE METHOD OF ANALYSIS OF DDTs AND PCBS IN MARINE ORGANISMS	82: 0
	83: 0
	84: 0
	85: 3000
ISTITUTO DI BIOLOGIA DEL MARE CNR, VENEZIA	86: NIL

FAO ITA-64 G	
V. ALBERGONI	
BIOACCUMULATION STUDIES AND PHYSIOLOGICAL AND BIOCHEMICAL RESPONSES IN MARINE ORGANISMS EXPOSED TO HEAVY METALS AND POLYCHLORINATED BIPHENYLS	82: 0
	83: 0
	84: 0
	85: 0
DIPARTIMENTO DI BIOLOGIA, UNIVERSITA DI PADOVA	86: 3000

FAO ITA-65 C	
L. DALLA VENEZIA	
STUDY OF OSMOREGULATION MECHANISMS IN MARINE INVERTEBRATES UNDER POLLUTION CONDITIONS	82: 0
	83: 0
	84: 0
	85: 0
INSTITUTE OF MARINE BIOLOGY, NATIONAL RESEARCH COUNCIL (CNR), VENICE	86: NIL

FAO ITA-67 G	
M. NICOLA-GIUDICI	
PHYSIOLOGICAL AND BIOCHEMICAL RESPONSE TO PCB POLLUTION OF <i>Idotea balthica</i> IN RESPECT TO SALINITY, TEMPERATURE AND IN COMPARISON WITH HEAVY METALS (CD, HG, CU)	82: 0
	83: 0
	84: 0
	85: 0
DEPT. GENETICA, UNIVERSITA DEGLI STUDI DI NAPOLI	86: NAC

FAO ITA-68 F
E. BACCI
ENVIRONMENTAL DISTRIBUTION AND FATE OF ORGANOTIN COMPOUNDS (MAINLY BUTYL TIN AND METHYL TIN SPECIES) WITH PARTICULAR ATTENTION TO THE MARINE ENVIRONMENT

82: 0
83: 0
84: 0
85: 0
86: 1000

DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DEGLI STUDI DI SIENA
NA

FAO ITA-69 F
F. BALDI
ISOLATION AND ASSESSMENT OF BACTERIA WHICH TRANSFORM THE INORGANIC AND ORGANIC FORMS OF MERCURY IN THE MARINE ENVIRONMENT; METHOD TO EVALUATE THE BIOTRANSFORMING FEATURES OF MERCURY RESISTANT BACTERIA

82: 0
83: 0
84: 0
85: 0
86: 1000

DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DEGLI STUDI DI SIENA
NA

FAO ITA-72 G
A. RENZONI
POLYCYCLIC AROMATIC HYDROCARBONS (PAH) AND MIXED FUNCTION OXIDASES (MFO) INDUCTION IN MIGRATORY BIRDS

82: 0
83: 0
84: 0
85: 0
86: NAC

DIPARTIMENTO DI BIOLOGIA AMBIENTALE, UNIVERSITA DI SIENA

FAO ITA-74 I
M. SARA
ANALYSIS OF SOME POLLUTION INDUCED MODIFICATIONS IN A POSIDONIA MEADOW INFLUENCED BY A TERRIGENOUS DISCHARGE AND SEWAGE EFFLUENTS IN THE LIGURIAN SEA

82: 0
83: 0
84: 0
85: 0
86: NAC

ISTITUTO DI ZOOLOGIA, UNIVERSITA DI GENOVA

FAO ITA-75 J
E. TARAMELLI-RIVOSECCHI
ANALYSIS OF THE STRUCTURE OF THE *Posidonia oceanica* MEADOW FACING THE THERMOELECTRIC CENTRES AT TORVALDALIGA

82: 0
83: 0
84: 0
85: 0
86: NAC

DIP. BIOLOGIA ANIMALE E DELL'UOMO, UNIVERSITA DI ROMA

FAO ITA-77 G
G. ALBERTELLI
CONDITIONS ACTUELLES DES BIOCOENOCES BENTHIQUE DU PLATEAU DES ILES "EOLIE"

82: 0
83: 0
84: 0
85: 0
86: NAC

ISTITUTO DI SCIENZE AMBIENTALI MARINE DELL'UNIVERSITA DI GENOVA

FAO ITA-78 D
N. CRESCENTI
INVESTIGATION ON THE METHYLMERCURY OCCURRING IN *Lepidopus caudatus* euphrasen COMING FROM THE MESSINA STRAITS

82: 0
83: 0
84: 0
85: 0
86: UND

DEPARTMENT OF ANIMAL BIOLOGY, UNIVERSITY OF MESSINA

FAO	ITA-81 II		
L. ROTTINI-SANDRINI			
PERIODICITY AND CAUSES OF IRREGULAR MACRO- AND MICRO-PLANKTON BLOOMS APPEARING IN EUTROPHICATED AREAS IN NORTHERN ADRIATIC AND GULF OF TRIESTE	82:	0	
	83:	0	
	84:	0	
	85:	0	
LABORATORY OF MARINE BIOLOGY - CIMAM, TRIESTE	86:	3000	
<hr/>			
FAO	LEB-1 I		
S. LAKHIS			
MODIFICATIONS DES ECOSYSTEMES PAR LA POLLUTION	82:	0	
	83:	3000	
	84:	2000	
	85:	2000	
CENTRE DE RECHERCHES MARINES, BEYROUTH	86:	EXP	
<hr/>			
FAO	LEB-2 I		
N. M. SHAIRALLAH			
POLLUTION-INDUCED ECOSYSTEMS MODIFICATIONS	82:	0	
	83:	0	
	84:	0	
	85:	3000	
CENTRE FOR MARINE RESEARCH, BEIRUT	86:	2000	
<hr/>			
FAO	LEB-3 I		
S. H. LAKHIS			
POLLUTION-INDUCED ECOSYSTEMS MODIFICATIONS: SURVEY ON ICHTHYOPLANKTON ALONG THE COAST OF LEBANON PARTICULARLY IN POLLUTED ZONES	82:	0	
	83:	0	
	84:	0	
	85:	0	
MARINE RESEARCH CENTRE, BEIRUT	86:	3000	
<hr/>			
FAO	MAL-1 G		
V. AXIAK			
RESEARCH ON THE EFFECTS OF OIL DISPERSANTS ON MARINE ORGANISMS	82:	0	
	83:	3000	
	84:	3000	
	85:	2000	
DEPARTMENT OF MATHEMATICS AND SCIENCES, UNIVERSITY OF MALTA	86:	EXP	
<hr/>			
FAO	MAL-2 G		
V. AXIAK			
RESEARCH ON THE EFFECTS OF OIL DISPERSANTS ON MARINE ORGANISMS	82:	0	
	83:	0	
	84:	0	
	85:	NAC	
DEPARTMENT OF MATHEMATICS AND SCIENCE, UNIVERSITY OF MALTA	86:	0	
<hr/>			
FAO	MAL-4 G		
V. AXIAK			
AN INVESTIGATION ON THE BIOLOGICAL RESPONSES TO THE ORGANOPHOSPHOROUS PESTICIDES OF SELECTED MARINE INVERTEBRATES	82:	0	
	83:	0	
	84:	0	
	85:	0	
BIOLOGY SECTION OF THE MATHS DEPT, UNIVERSITY OF MALTA	86:	3000	

FAO MON-2 I
R. VAISSIERE
MODIFICATION DES CONDITIONS ECOLOGIQUES DANS UN SYSTEME COTIER SEM
I-FERME SOUMIS AUX EFFETS DE L'ACTIVITE HUMAINE 82: 0
83: WIT
84: 0
85: 0
CENTRE SCIENTIFIQUE DE MONACO 86: 0

FAO MOR-2 G
M. KESSABI
RECHERCHE SUR LA TOXICITE, LA PERSISTANCE ET LA BIOACCUMULATION D
ES CERTAINS POLLUANTS 82: 0
83: 0
84: 0
85: 5000
INSTITUT NATIONAL AGRONOMIQUE ET VETERINAIRE, RABAT 86: 2000

FAO SPA-1 A
M. GASSIOT-MATAS
ANALISI DE DDT'S EN MEJILLONES ESTUDIO METODOLOGICO Y ANALISIS DE
MUESTRAS DEL DELTA DEL EBRO Y DE BATEAS PARA EL CONSUMO HUMANO 82: 0
83: WIT
84: 0
85: 0
INSTITUTO QUIMICO DE SARRIA, BARCELONA 86: 0

FAO SPA-5 A
J. OBIOLS SALVAT
PUESTA A FUNTO DE LA DETERMINACION DE TRAZAS DE SELENIO, ARSENICO,
PLOMO, CADMIO Y MERCURIO ORGANICO EN SEDIMENTOS AGUA Y ORGANISM
OS 82: 0
83: WIT
84: 0
85: 0
INSTITUTO QUIMICO DE SARRIA, BARCELONA 86: 0

FAO SPA-12 A
J. MEDINA ESCRICHE
NEW CONTRIBUTIONS TO THE ANALYTICAL METHODOLOGY IN THE DETERMINATI
ON OF HEAVY METALS AND PESTICIDES IN MARINE ORGANISMS, SEDIMENTS A
ND WASTEWATERS 82: 0
83: 0
84: 0
85: NAC
UNIVERSITY COLLEGE OF CASTELLON, UNIVERSITY OF VALENCIA 86: 0

FAO SPA-13 G
J. MEDINA ESCRICHE
STUDY OF THE TOXICITY, BIOACCUMULATION AND PERSISTENCE OF SOME HEA
VY METALS AND PESTICIDES IN THE CRAYFISH *Procambarus clarkii* (GIRA
RD) ON THE ALBUFERA LAKE 82: 0
83: 0
84: 0
85: 4000
UNIVERSITY COLLEGE OF CASTELLON, UNIVERSITY OF VALENCIA 86: 3000

FAO SPA-14 A
J. OBIOLS SALVAT
STUDIES ON METHODOLOGY FOR DETERMINATION OF TOTAL ARSENIC IN SELEC
TED MARINE ORGANISMS 82: 0
83: 0
84: 0
85: 3000
INSTITUTO QUIMICO DE SARRIA, BARCELONA 86: 3000

FAO SPA-20 3
 B. MORALES-NIN
 LIFE HISTORY PATTERNS OF MEDITERRANEAN BLUEFIN TUNA

	82:	0
	83:	0
	84:	0
	85:	0
INSTITUTO DE CIENCIAS DEL MAR, BARCELONA	86:	3000

FAO TUN-1 I
 C. CAPAPE
 MODIFICATION DES ECOSYSTEMES PAR LA POLLUTION

	82:	0
	83:	WIT
	84:	0
	85:	0
SERVICE DE BIOLOGIE MARINE, INSTITUT "PASTEUR", TUNIS	86:	0

FAO TUN-4 H
 M. HADJ ALI
 EUTROPHISATION ET FLORAISSONS CONCOMITANTES DE PLANCTON

	82:	0
	83:	3000
	84:	3000
	85:	3000
INSTOR, SALAMMO	86:	EXP

FAO TUR-3 K
 I. SALIHCOGLU
 BIOGEOCHEMICAL CYCLE OF MERCURY IN THE NORTH-EASTERN MEDITERRANEAN
 (SOUTHERN COAST OF TURKEY)

	82:	0
	83:	2000
	84:	2500
	85:	2000
MIDDLE EAST TECHNICAL UNIVERSITY, ERDEMLI, ICEL	86:	EXP

FAO TUR-5 G
 H. BAGCI
 DESIGN AND DEVELOPMENT OF BIO-TEST METHODS THAT WILL BE USED TO AS
 SAY THE POLLUTANTS LISTED IN THE ANNEXES OF THE PROTOCOLS WITH RES
 PECT TO THEIR TOXICITY, RESIDUAL EFFECTS, BIO-DEGRADABILITY, MUTAG
 ENICITY AND

	82:	0
	83:	4000
	84:	2500
	85:	2000
DEPT. OF BIOLOGICAL SCIENCES, MIDDLE EAST TECHNICAL UNIV., ANKARA	86:	NIL

FAO TUR-6 K
 H. UYSAL
 BIOCHEMICAL CYCLES OF SPECIFIC POLLUTANTS. (STUDIES ON SOME HEAVY
 METALS ESPECIALLY MERCURY, CADMIUM AND LEAD CONCENTRATION OF SOME
 SELECTED INDICATOR MARINE ORGANISMS FROM THE IZMIR BAY AND VICINIT
 Y)

	82:	0
	83:	WIT
	84:	0
	85:	0
BIOLOGY DEPT. FACULTY OF SCIENCE, EGE UNIVERSITY, IZMIR	86:	0

FAO TUR-7 I
 A. FOCCATAS
 THE EFFECTS OF POLLUTION ON THE BENTHIC AND PELAGIC ECOSYSTEMS IN
 THE BAY OF IZMIR

	82:	0
	83:	2500
	84:	2500
	85:	2000
HYDROBIOLOGICAL DEPT., EGE UNIVERSITY, IZMIR	86:	EXP

 FAC TUR-8 H
 E. IZDAR
 ELEMENTAL TRANSFER PROCESS AND EUTROPHICATION IN BUYUK MEANDERES DELTA (GREAT MEANDER DELTA) AND THEIR OFFSHORE DISTRIBUTION, EASTERN AEGEAN- TURKEY
 82: 0
 83: 3000
 84: 2500
 85: 2000
 86: EXP
 INSTITUTE OF MARINE SCIENCES AND TECHNOLOGY, DOKUZ EYLUL UNIV., IZMIR

 FAC TUR-9 I
 E. IZDAR
 POLLUTANT TRANSFER PROCESS AND BIOGEOCHEMICAL CYCLE OF SPECIFIC POLLUTANTS AT THE SELECTED LOCATION OF CANDARLI GULF, TURKEY
 82: 0
 83: 2000
 84: 2500
 85: 2000
 86: EXP
 INSTITUTE OF MARINE SCIENCES AND TECHNOLOGY, DOKUZ EYLUL UNIV., IZMIR

 FAC TUR-11 G
 M. UNSAL
 INVESTIGATION OF SELENIUM-MERCURY INTERACTION AND PROTECTIVE EFFECT OF SELENIUM AGAINST MERCURY TOXICITY IN MARINE FOOD CHAIN ORGANISMS
 82: 0
 83: 0
 84: 0
 85: WIT
 86: 0
 MIDDLE EAST TECHNICAL UNIVERSITY, ERDEMLI ICEL

 FAC YUG-2 I
 D. REGNER
 POLLUTION-INDUCED ECOSYSTEM MODIFICATION IN THE COASTAL AREA OF CENTRAL ADRIATIC
 82: 0
 83: 2000
 84: 2000
 85: 2000
 86: EXP
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT

 FAC YUG-3 H
 I. MARASOVIC
 EUTROPHICATION AND CONCOMITANT PLANKTON BLOOMS IN THE COASTAL AREA OF CENTRAL ADRIATIC
 82: 0
 83: 3000
 84: 3000
 85: 2000
 86: EXP
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT

 FAC YUG-5 G
 M. TUDOR
 RESEARCH ON THE EFFECTS OF OIL DISPERSANTS ON MARINE ORGANISMS
 82: 0
 83: 3000
 84: 3000
 85: 2000
 86: EXP
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT

 FAC YUG-7 I
 A. BENOVIC
 INVESTIGATION OF ZOOPLANKTON COMMUNITIES IN THE NORTHERN ADRIATIC SEA
 82: 0
 83: 2000
 84: 2000
 85: 2000
 86: EXP
 BIOLOGICAL INSTITUTE, DUBROVNIK

FAO YUG-8 F
 V. ZUTIC
 RELATIONSHIP BETWEEN PHYTOPLANKTON BLOOMS AND DISSOLVED ORGANIC MATTER IN THE NORTHERN ADRIATIC

82:	0
83:	0
84:	2000
85:	3500
86:	EXP

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ZAGREB

FAO YUG-12 J
 V. PRAVDIC
 DEVELOPMENT OF SCIENTIFIC CRITERIA FOR A CODE-OF-GOOD-PRACTICE IN SITING OF THERMAL EFFLUENTS IN THE MEDITERRANEAN REGION

82:	0
83:	WIT
84:	0
85:	0
86:	2

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ZAGREB

FAO YUG-13 H
 T. LEGOVIC
 MODELLING EUTROPHICATION PROCESSES IN THE NORTHERN ADRIATIC

82:	0
83:	0
84:	2000
85:	3500
86:	EXP

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ZAGREB

FAO YUG-16 A
 M. PICER
 IMPROVEMENTS AND TESTING OF THE METHODS OF ANALYSIS FOR CHLORINATED AND PETROLEUM HYDROCARBONS IN WATER AND SEDIMENTS

82:	0
83:	WIT
84:	0
85:	0
86:	0

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ZAGREB

FAO YUG-19 I
 D. ZAVODNIK
 MONITORING OF ECOSYSTEMS MODIFICATIONS IN THE NORTHERN ADRIATIC SEA INDUCED BY EUTROPHICATION AND ANTHROPOGENIC ACTIVITIES

82:	0
83:	3000
84:	3000
85:	2000
86:	EXP

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ

FAO YUG-21 G
 M. OZRETIC
 TOXICITY AND BIOACCUMULATION OF POLLUTANTS IN MARINE ORGANISMS

82:	0
83:	3000
84:	3500
85:	EXP
86:	0

CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ

FAO YUG-23 G
 M. GASIC
 HALOGEN-CONTAINING TERPENOIDS AND RELATED SUBSTANCES IN MARINE ORGANISMS

82:	0
83:	0
84:	3000
85:	4000
86:	EXP

INSTITUTE OF CHEMISTRY, UNIVERSITY OF BELGRADE

FAO YUG-24 H
N. FANUKO
EUTROPHICATION AND CONCOMITANT PLANKTON BLOOMS 82: 0
83: 2500
84: 2000
85: 2000
MARINE RESEARCH AND TRAINING CENTRE, PIRAN 86: EXP

FAO YUG-26 D
R. BUZINA
THE ANALYSIS OF MERCURY AND METHYL MERCURY IN SEAFOOD IN VARIOUS PARTS OF THE MEDITERRANEAN REGION 82: 0
83: 0
84: 3000
85: 4000
INSTITUTE OF PUBLIC HEALTH OF SR CROATIA, ZAGREB 86: NIL

FAO YUG-37 H
D. ZAVODNIK
MONITORING OF ECOSYSTEMS MODIFICATIONS IN THE NORTHERN ADRIATIC SEA INDUCED BY EUTROPHICATION AND ANTHROPOGENIC ACTIVITIES 82: 0
83: 0
84: 0
85: NAC
CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: 0

FAO YUG-38 G
M. OZRETIC
TOXICITY OF POLLUTANTS TO MARINE ORGANISMS: PHYSIOLOGICAL AND BIOCHEMICAL STUDIES 82: 0
83: 0
84: 3000
85: 3000
CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: EXP

FAO YUG-40 H
N. FANUKO
EUTROPHICATION OF THE NORTH ADRIATIC AND CONCOMITANT PLANKTON BLOOMS 82: 0
83: 0
84: 0
85: NAC
MARINE RESEARCH AND TRAINING CENTRE, PIRAN 86: 0

FAO YUG-43 H
I. MARASCOVIC
STUDIES OF TOXIC DINOFLAGELLATE SPECIES IN THE INSHORE WATERS OF THE EAST ADRIATIC COAST 82: 0
83: 0
84: 0
85: 3000
INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 3000

FAO YUG-46 H
D. VILICIC
RELATIONSHIP BETWEEN LAND-BASED SOURCES AND PLANKTON COMPOSITION AT THREE NEARSHORES (DUBROVNIK, STON, SIBENIK) - EASTERN ADRIATIC 82: 0
83: 0
84: 0
85: NAC
BIOLOGICAL INSTITUTE, DUBROVNIK 86: 0

FAO YUG-47 G
 N. FANUJO
 TOXICITY OF CADMIUM, MERCURY AND PCBS TO THE REPRESENTATIVE NORTHE
 RN- ADRIATIC PHYTOPLANKTON SPECIES CULTURED IN VITRO 82: 0
 83: 0
 84: 0
 85: 4000
 MARINE RESEARCH AND TRAINING CENTRE, PIRAN 86: NIL

FAO YUG-48 G
 M. TUDOR
 RESEARCH ON THE EFFECTS OF OIL AND HEAVY METALS ON FISHES 82: 0
 83: 0
 84: 0
 85: NAC
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 0

FAO YUG-49 I
 T. ZVONARIC
 STUDY OF THE MERCURY ECOCYCLE IN THE MARINE SYSTEM OF THE KASTEL B
 AY 82: 0
 83: 0
 84: 0
 85: 4500
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 3000

FAO YUG-51 H
 D. REGNER
 INFLUENCE OF EUTROPHICATION ON THE COPEPOD NUTRITION IN THE COASTA
 L ENVIRONMENT 82: 0
 83: 0
 84: 0
 85: NAC
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 0

FAO YUG-52 H
 I. VUKADIN
 EFFECTS OF EUTROPHICATION ON THE ECOSYSTEM IN SEMI-ENCLOSED BASINS
 (KASTELA BAY AND ELEFSIS BAY) 82: 0
 83: 0
 84: 0
 85: NAC
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 0

FAO YUG-53 C
 M. OZRETIC
 SERUM ENZYMES IN FISH AS BIOCHEMICAL INDICATORS OF MARINE POLLUTIO
 N 82: 0
 83: 0
 84: 0
 85: 5000
 CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: NIL

FAO YUG-54 I
 R. PRECALI
 EFFECTS OF LIGHT ON THE PATHWAYS OF CARBON ASSIMILATION IN THE REL
 ATION TO GROWTH RATE FOR NATURAL POPULATIONS OF MARINE PHYTOPLANKT
 ON 82: 0
 83: 0
 84: 0
 85: NAC
 CENTRE FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: 0

FAO YUG-56 I
 F. IROINIC
 INFLUENCE OF SEWAGE ON TINTINNINES IN THE BAY OF GRUZ (DUBROVNIK) 82: 0
 83: 0
 84: 0
 85: 0
 BIOLOGICAL INSTITUTE, DUBROVNIK 86: NAC

FAO YUG-57 3
 C. LUCU
 INTERACTION OF METAL POLLUTANTS WITH GILL EPITHELIA OF MARINE BRGA 82: 0
 NISMS. TRANSPORT AND EFFECTS 83: 0
 84: 0
 85: 0
 CENTER FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: NAC

FAO YUG-58 I
 D. REGNER
 IMPACT OF POLLUTION ON THE COPEPOD COMMUNITY AT THE MOST POLLUTED 82: 0
 AREAS OF THE EASTERN ADRIATIC COAST 83: 0
 84: 0
 85: 0
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: NAC

FAO YUG-59 H
 T. PUCHER-PETKOVIC
 INVESTIGATIONS OF DOMINANT DIATOM POPULATIONS CHARACTERISTIC FOR A 82: 0
 N EUTROPHICAT ENVIRONMENT (MIDDLE ADRIATIC) 83: 0
 84: 0
 85: 0
 INSTITUTE OF OCEANOGRAPY AND FISHERIES, SPLIT 86: NAC

FAO YUG-64 F
 M. BRANICA
 BIOGEOCHEMICAL CYCLE OF MERCURY SPECIES IN THE MARINE ENVIRONMENT 82: 0
 83: 0
 84: 0
 85: 0
 CENTER FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ZAGREB 86: 3000

FAO YUG-69 H
 D. VILICIC
 PHYTOPLANKTON CELL VOLUME AND CARBON CONTENT AS INDICATIONS OF EUT 82: 0
 ROPHICATION I N THREE ECOLOGICALLY DIFFERENT AREAS OF THE ADRIATIC 83: 0
 SEA 84: 0
 85: 0
 BIOLOGICAL INSTITUTE, DUBROVNIK 86: NAC

FAO YUG-70 G
 B. OZRETIC
 DEVELOPMENT OF SHORT-TERM TOXICITY TESTS: THE USE OF SEA URCHIN GA 82: 0
 METES AND THEIR DEVELOPMENTAL STAGES 83: 0
 84: 0
 85: 0
 CENTER FOR MARINE RESEARCH, RUDJER BOSKOVIC INSTITUTE, ROVINJ 86: 3000

IAEA FRA-2 I
 D. BELLAN-SANTINI
 MODIFICATIONS DANS LES ECOSYSTEMES BENTHIQUES DE SUBSTRATS DURS ET
 DEMI-DURS 82: 0
 83: WIT
 84: 0
 85: 0
 STATION MARINE D'ENDOUME, CENTRE D'OCEANOLOGIE DE MARSEILLE 86: 0

IAEA FRA-22 I
 D. CALMET
 ETUDES DES TRANSFERTS DE RADIONUCLÉIDES ARTIFICIELS DANS L'ENVIRON
 NEMENT MARIN MEDITERRANÉEN SOUMIS A L'INFLUENCE DES EAUX DU RHON 82: 0
 E: APPLICATION AU SUIVI SPATIO-TEMPOREL DES ZONES DE MYTILICULTU 83: 0
 RE REGIONALES 84: 0
 85: 0
 IFREMER LA SEYNE SUR MER 86: UND

IAEA FRA-31 I
 J. P. BETHOUX/G. COPIN-MON
 CYCLES BIO-GEOCHIMIQUES DE L'AZOTE DE METAUX TRACE ET EVOLUTION 82: 0
 TEMPORELLE DES CONCENTRATIONS MARINES EN MEDITERRANEE 83: 0
 84: 0
 85: 0
 LAB. DE PHYSIQUE ET CHIMIE MARINES VILLEFRANCHE SUR MER 86: NAC

IAEA GRE-30 L
 S. VARNAVAS
 DISPERSION AND TRANSPORT PROCESSES OF HEAVY METALS IN A CHROMITE W 82: 0
 ATER DUMPING SITE IN A SEMI-ENCLOSED EMBAYMENT OF LOW CURRENT AND 83: 0
 WAVE ENERGY 84: 0
 85: WIT
 DEPARTMENT OF GEOLOGY UNIVERSITY OF PATRAS 86: 0

IAEA GRE-37 I
 A. P. GRIMANIS
 TRANSFER OF POLLUTANTS (HEAVY METALS-HYDROCARBONS) IN THE MARINE E 82: 0
 NVIRONMENT OF SARONIC GULF 83: 0
 84: 0
 85: 0
 CHEMISTRY DEPARTMENT NUCLEAR RESEARCH CENTER "DEMOKRITOS" ATHENS 86: 2500

IAEA GRE-41 L
 G. KARAIWMANIS
 DETERMINATION OF PARTICLE SIZE DISTRIBUTION (PSD) OF COLLOIDAL POL 82: 0
 LU- TANTS IN COASTAL WATERS BY SEDIMENTATION FIELD-FLOW FRACTIONATI 83: 0
 ON CORRELATION OF PSD WITH THE CONCENTRATION OF POLLUTANTS AND MO 84: 0
 DELING 85: 0
 DEPARTMENT OF CHEMISTRY UNIVERSITY OF PATRAS 86: 3000

IAEA GRE-46 L
 C. VASILIOIOTIS
 TRANSPORT MECHANISMS DISTRIBUTION MOBILIZATION OF HEAVY METALS IN 82: 0
 WATER AND SEDIMENTS IN AXIOS RIVER ITS ESTUARIES AND THERMAIKOS G 83: 0
 ULF 84: 0
 85: 0
 CHEMISTRY DEPARTMENT ARISTOTELIAN UNIVERSITY OF THESSALONIKI 86: 2500

IAEA IGR-12 A
D. WYNNE
ORGANOSPHOSPHORUS COMPOUNDS IN THE MARINE ENVIRONMENT - SEDIMENTS

82:	0
83:	0
84:	0
85:	0
86:	5000

THE FINNERET LIMNOLOGICAL LABORATORY TIBERIAS

IAEA ITA-11 L
O. HIEKE MERLIN
TEXTURAL AND MINERALOGICAL CHARACTERS AND ROLE IN THE POLLUTION PROCESSES OF BOTTOM SEDIMENTS IN THE NORTHERN ADRIATIC SEA

82:	0
83:	0
84:	0
85:	5000
86:	0

ISTITUTO CHIMICA GENERALE ED INORGANICA SEZIONE MINERALOGICA VENEZIA

IAEA ITA-14 L
L. TASSI-PELATI
STUDY ON THE ¹³⁷C AND ²³⁹Pu FLUXES INTO MEDITERRANEAN MARINE ENVIRONMENT

82:	0
83:	0
84:	0
85:	4000
86:	0

ISTITUTO DI ZOOLOGIA UNIVERSITA DI PARMA

IAEA ITA-19 A
M. GALLDRINI
NUCLEAR METHODS FOR TRACE ELEMENTS DETERMINATION IN ENVIRONMENTAL RELATED MATRICES

82:	0
83:	0
84:	0
85:	3000
86:	0

CNR CENTRO DI RADIOCHIMICA UNIVERSITA DI PAVIA

IAEA ITA-32 L
R. FRACHE
CHEMISTRY AND DYNAMICS IN THE TRANSPORT OF HEAVY METALS IN PARTICULATE MATTER IN LIGURIAN AND TYRRHENIAN SEA

82:	0
83:	0
84:	0
85:	5000
86:	NAC

ISTITUTO DI CHIMICA GENERALE GENOVA

IAEA ITA-70 A
R. CECCHI
MENTAL PROGRESSES IN HEAVY METALS FIXE ANALYSIS IN SEA WATERS

82:	0
83:	0
84:	0
85:	0
86:	NAC

OSSERVATORIO GEOFISICO DELL'UNIVERSITA DI MODENA

IAEA ITA-71 I
A. LONGINELLI
STABLE ISOTOPE ENVIRONMENTAL CONDITIONS

82:	0
83:	0
84:	0
85:	0
86:	UND

LABORATORY OF MARINE BIOLOGY - CIMAM TRIESTE

IAEA ITA-76 I
 L. TASSI PELATI
 BEHAVIOUR OF PU-239 IN THE MARINE ENVIRONMENT WITH PARTICULAR ATTENTION TO ITS TRANSFERS THROUGH THE FOOD-CHAINS 82: 0
 83: 0
 84: 0
 85: 0
 ISTITUTO DI ZOOLOGIA DELL'UNIVERSITA DI FARMA 86: 2000

IAEA CPA-10 A
 M. GASSIOT-MATAS
 STUDY OF ORGANOCHELORINATED POLLUTANTS TRANSFER THROUGH THE MARINE INTERFACE 82: 0
 83: 0
 84: 0
 85: UND
 INSTITUTO QUIMICA DE SARRIA BARCELONA 86: 6000

IAEA TUR-4 A
 I. SALIHOGU
 DEVELOPMENT AND TESTING OF SAMPLING AND ANALYTICAL TECHNIQUES FOR MONITORING OF POLYCHLOROTERPENES AND CHLORDANE 82: 0
 83: 0
 84: 0
 85: WIT
 MIDDLE EAST TECHNICAL UNIVERSITY ERDEMLI ICEL 86: 0

IAEA YUG-9 A
 V. VALKOVIC
 DEVELOPMENT OF X-RAY EMISSION SPECTROSCOPY AS MULTIELEMENTAL ANALYTICAL TECHNIQUES FOR MONITORING MARINE POLLUTANTS 82: 0
 83: 0
 84: 0
 85: 2000
 DEPARTMENT OF PHYSICS RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IAEA YUG 10 L
 V. PRAVDIC
 THE ROLE OF SEDIMENTS AND SUSPENDED MATTER IN THE TRANSFER OF SELECTED POLLUTANTS IN THE NORTHERN ADRIATIC BASIN 82: 0
 83: 0
 84: 0
 85: 4000
 CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IAEA YUG-11 I
 M. BRANICA
 ANTHROPOGENIC INFLUENCE ON THE DISTRIBUTION AND FLUXES OF LEAD SPECIES INTO THE MARINE ENVIRONMENT 82: 0
 83: 0
 84: 0
 85: 4000
 CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IAEA YUG-22 I
 N. AJDAGIC
 ACCUMULATION AND TRANSPORT OF RADIONUCLIDES IN THE BIOTA OF THE SOUTHERN ADRIATIC REGION 82: 0
 83: 0
 84: 0
 85: 2000
 UNIVERSITY "VELJKO VLAHOVIC" TITOGRAD 86: 0

 IAEA YUG-41 B
 B. COSOVIC
 STUDY OF THE PHYSICO-CHEMICAL INTERACTIONS OF NATURAL AND ARTIFICI
 AL SURFACE ACTIVE SUBSTANCES WITH TOXIC SUBSTANCES IN THE SEA 82: 0
 83: 0
 84: 0
 85: WIT
 CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTJE ZAGREB 86: 0

IAEA YUG-41 A
 M. BRANICA
 DEVELOPMENT OF ELECTROCHEMICAL TECHNIQUES AND THEIR APPLICATION FO
 R DETERMINATION AND SPECIATION OF HEAVY TRACE METALS (CD PD ETC)
 IN SEAWATER 82: 0
 83: 0
 84: 0
 85: 0
 CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: NAC

IAEA YUG-65 L
 M. JURACIC
 POLLUTANT TRANSFER PROCESSES: THE ROLE OF SUSPENDED MATTER AND SED
 IMENTS IN THE LAND-TO-SEA TRANSPORT IN A MARSTIC ESTUARY 82: 0
 83: 0
 84: 0
 85: 0
 CENTER FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: UND

IAEA YUG-66 A
 J. FAGANELI
 INPUT AND TRANSFORMATIONS OF ALLOCHTHONOUS ORGANIC MATTER IN THE CO
 ASTAL WATERS 82: 0
 83: 0
 84: 0
 85: UND
 INSTITUTE OF BIOLOGY UNIVERSITY OF LJUBLJANA PIRAN 86: 0

IOC ALG-1 A
 A. CHOUIKHI
 MISE AU POINT ET ESSAI DE TECHNIQUES D'ECHANTILLONNAGES ET D'ANALY
 SE POUR LA SURVEILLANCE DES POLLUANTS DE LA MER 82: 0
 83: 0
 84: 0
 85: WIT
 INSTITUT DES SCIENCES DE LA MER ET DE L'AMENAGEMENT DU LITTORAL (I
 SMAL) ALGER-BOURSE 86: 0

IOC ALG-5 L
 D. AIT-KACI-AHMED
 LA DYNAMIQUE DE PRODUITS POLLUANTS ASSOCIES AUX APPORTS FLUVIATILE
 S EN SUSPENSION ET LEUR DISPERSION DANS LES SEDIMENTS DU PLATEAU C
 ONTINENTAL ALGERIEN 82: 0
 83: 0
 84: 0
 85: 0
 INSTITUT DES SCIENCES DE LA MER ET DE L'AMENAGEMENT DU LITTORAL (I
 SMAL) ALGER 86: UND

IOC EEC-1 L
 P. FRAYSSE
 ETUDE DU TRANSPORT COTIER DE LA POLLUTION 82: 0
 83: 0
 84: 0
 85: NIL
 COMMISSIONE DELLE COMUNITA EUROPEE CENTRO COMUNE DI RICERCA STA
 BILIMENTO DI ISPRA 86: 0

IOC EGY-8 L
M. F. MACHLAD
POLLUTANT TRANSFER PROCESSES 82: 0
83: 0
84: 0
85: 5100
UNIVERSITY OF ALEXANDRIA RESEARCH CENTRE (UNARC) 86: 0

IOC FRA-4 L
A. ARNOUX
SEDIMENTATION ET EVOLUTION DES DEPOTS DANS UNE ZONE LITTORALE INDUSTRIELLE 82: 0
83: 0
84: 0
85: WIT
LABORATOIRE D'HYDROLOGIE UNIVERSITE D'AIX-MARSEILLE II 86: 0

IOC FRA-7 L
A. MONACO
ROLE DES COUCHES NEPHELOIDES ET DES COLLOIDES ORGANIQUES DANS LE TRANSPORT DES METAUX LOURDS (PB CD CU ZN) DU MILIEU ESTUARIEN AU MILIEU MARIN. EXEMPLE DU RHONE 82: 0
83: 0
84: 0
85: 7700
LABORATOIRE DE SEDIMENTOLOGIE ET GEOCHIMIE MARINES UNIVERSITE DE PERPIGNAN 86: 0

IOC FRA-18 L
J. M. MARTIN
MECANISMES DE TRANSFERT DE RADIONUCLEIDES ARTIFICIELS ENTRE LE RHONE ET LA MEDITERRANEE 82: 0
83: 0
84: 0
85: 0
ECOLE NORMALE SUPERIEURE PARIS 86: UND

IOC FRA-19 L
M. AUBERT
ETUDE DU TRANSFERT DES POLLUANTS ENTRE LE BASSIN ORIENTAL ET LE BASSIN OCCIDENTAL DE LA MEDITERRANEE 82: 0
83: 0
84: 0
85: 0
CERBOM NICE 86: UND

IOC FRA-20 F
P. M. LEUCHER
MEDMODEL (MODELISATION HYDRODYNAMIQUE DU BASSIN OCCIDENTAL DE LA MEDITERRANEE) 82: 0
83: 0
84: 0
85: 0
SERVICE HYDRAULIQUE CENTRE D'ETUDES TECHNIQUE LES MILLES 86: UND

IOC FRA-23 L
J. M. MARTIN
REEVALUATION DES APFONTS RHODANIENS DE METAUX A LA MEDITERRANEE 82: 0
83: 0
84: 0
85: 0
ECOLE NORMALE SUPERIEURE PARIS 86: UND

IOC FRA-26 L
 A. CAILLOT
 PROCESSUS DE TRANSFERT DES POLLUANTS: LOCALISATION DES ZONES DE DE
 POT DES POLLUANTS DANS LE CONE DE DEJECTION MARIN DU DELTA DU RHON
 E

82:	0
83:	0
84:	0
85:	0
86:	UND

COMMISSARIAT A L'ENERGIE ATOMIQUE GIF SUR YVETTE

IOC FRA-27 F
 A. CAILLOT
 DEVENIR DES POLLUANTS SOUS FORME PARTICULAIRES DANS LE CHAMP PROCH
 E EN PRESENCE ET EN L'ABSENCE DE THERMOCLINE

82:	0
83:	0
84:	0
85:	0
86:	UND

COMMISSARIAT A L'ENERGIE ATOMIQUE GIF SUR YVETTE

IOC FRA-30 L
 G. CAUWET
 ROLE DE LA DYNAMIQUE MENTAIRE EN MILIEU STRATIFIE

82:	0
83:	0
84:	0
85:	0
86:	UND

LABOR. DE SEDIMENTOLOGIE ET GEOCHIMIE MARINES UNIV. DE PERPIGNAN

IOC FRA-33 L
 A. SALIOT
 ETUDE DU CYLCE BIOGEOCHIMIQUE ET DES PROCESSUS DE TRANSFERT DES PO
 LLUANTS ORGANIQUES EN MER MEDITERRANEE

82:	0
83:	0
84:	0
85:	0
86:	UND

LAB. DE PHYSIQUE ET CHIMIE MARINES UNIV. P. ET M. CURIE PARIS

IOC GRE-1 F
 J. GANOUKIS
 DEVELOPMENT OF MATHEMATICAL MODELS FOR HORIZONTAL TRANSPORT OF POL
 LUTANTS IN COASTAL AREAS OF THE MEDITERRANEAN SEA

82:	0
83:	0
84:	0
85:	3400
86:	0

SCHOOL OF TECHNOLOGY ARISTOTLE UNIVERSITY OF THESSALONIKI

IOC GRE-4 L
 M. J. SCOLLLOS
 STUDY OF THE TRANSPORT OF PARTICLES IN GREEK ESTUARIES

82:	0
83:	0
84:	4000
85:	1500
86:	0

DEPARTMENT OF CHEMISTRY UNIVERSITY OF ATHENS

IOC GRE-6 F
 A. LASCARATOS
 DYNAMICAL STUDY OF SURFACE COLD WATER PATTERNS APPEARING IN THE GU
 LF OF KORINTH

82:	0
83:	0
84:	0
85:	9900
86:	0

LABORATORY OF PHYSICAL GEOGRAPHY UNIVERISITY OF ATHENS

IOC	GRE-10 F		
M. BONAZUNTAS			
MODELLING POLLUTANT CIRCULATION IN COASTAL WATERS		82:	0
		83:	0
		84:	0
		85:	5000
DEPARTMENT OF CIVIL ENGINEERING NATIONAL TECHNICAL UNIVERSITY ATHENS		86:	0
IOC	GRE-16 F		
A. LASCARATOS			
DYNAMICAL STUDY OF SURFACE COLD WATER PATTERNS APPEARING IN THE GULF OF CORINTH		82:	0
		83:	0
		84:	0
		85:	9900
LABORATORY OF PHYSICAL GEOGRAPHY UNIVERSITY OF ATHENS		86:	0
IOC	GRE-10 L		
M. BONAZUNTAS			
MEDITERRANEAN WATER POLLUTION FROM PINIOS RIVER		82:	0
		83:	0
		84:	0
		85:	5000
DEPARTMENT OF CIVIL ENGINEERING NATIONAL TECHNICAL UNIVERSITY ATHENS		86:	0
IOC	GRE-19 L		
G. FERENTINOS			
RIVER PLUME DISPERSION INTO COASTAL WATERS		82:	0
		83:	0
		84:	0
		85:	6000
DEPARTMENT OF GEOLOGY UNIVERSITY OF PATRAS		86:	0
IOC	GRE-35 L		
M. BONAZUNTAS			
OPTIMIZATION OF POLLUTANT TRANSFER REDUCTION TO THE MEDITERRANEAN FROM LAND-BASED AND RIVER SOURCES		82:	0
		83:	0
		84:	0
		85:	0
DEPARTMENT OF CIVIL ENGINEERING NATIONAL TECHNICAL UNIVERSITY OF ATHENS		86:	UND
IOC	GRE-40 F		
G. FERENTINOS			
A STUDY OF THE CIRCULATION PATTERNS IN A FJORD TYPE SEMI-ENCLOSED SEA AMBRAKIOS BAY IONIAN SEA. A) MECHANISMS GOVERNING THE WATER EXCHANGE BETWEEN THE OPEN SEA AND THE FJORD B) RIVER PLUME DISPERSION		82:	0
		83:	0
		84:	0
		85:	0
DEPARTMENT OF GEOLOGY UNIVERSITY OF PATRAS		86:	UND
IOC	GRE-44 L		
N. E. KOTSOVINOS			
EUTROPHICATION IN NESTOS RIVER ESTUARY IN NORTHERN GREECE - HYDROLOGIC ANALYSIS TIDAL MIXING AND FLUSHING TIME		82:	0
		83:	0
		84:	0
		85:	0
LABORATORY OF HYDRAULICS DEMOCRITUS UNIVERSITY OF THRACE		86:	UND

IOC GRE-45 L
S. D. FILIKIDIS
EUTROPHICATION IN NESTOS RIVER ESTUARY IN N. GREECE. NUTRIENTS AND
OTHER FACTORS INFLUENCING ESTUARINE EUTROPHICATION 82: 0
83: 0
84: 0
85: 0
* FACULTY OF MEDICINE ARISTOTELIAN UNIVERSITY OF THESSALONIKI 86: UND

IOC ISR-1 L
A. GOLIK
TAR BALLS DISPERSAL AND ACCUMULATION ON THE BEACH AND THEIR RELATI
ON TO WAVE AND CURRENT REGIME 82: 0
83: 0
84: 0
85: WIT
ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE HAIFA 86: 0

IOC ISR-12 A
A. GOLIK
QUANTITATIVE ESTIMATION OF BEACH TAR BALLS BY REMOTE SENSING 82: 0
83: 0
84: 0
85: 6000
ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INTITUTE HAIFA 86: 0

IOC ITA-2 F
M. ASTRALDI
DYNAMIC CONDITION IN THE EASTERN LIGURIAN SEA 82: 0
83: 0
84: 0
85: WIT
ISTITUTO PER LO STUDIO DELLA DINAMICA DELLE GRANDI MASSE VENEZIA 86: 0

IOC ITA-5 F
F. STRAVISI
COASTAL DYNAMIC PROCESSES AND SURFACE TRANSPORT IN THE GULF OF TRI
ESTE (NORTHERN ADRIATIC) - "DYOUTS" 82: 0
83: 0
84: 0
85: WIT
ISTITUTO TALASSOGRAFICO DI TRIESTE 86: 0

IOC ITA-12 F
P. MALANOTTE RIZZOLI
MODELLING OF CIRCULATION PROCESSES IN THE NORTHERN ADRIATIC AND TH
EIR INFLUENCE ON THE DISTRIBUTION OF POLLUTANTS CONSIDERED AS PAS
SIVE SCALARS 82: 0
83: 0
84: 0
85: 6000
ISTITUTO PER LO STUDIO DELLA DINAMICA DELLE GRANDI MASSE VENEZIA 86: 0

IOC ITA-16 L
* T. LA NOCE
STUDY OF FACTORS CONTROLLING THE FATE AND EFFECTS OF SOME POLLUTAN
TS CARRIED OUT FROM THE TIBER RIVER TO THE SEA 82: 0
83: 0
84: 0
85: NIL
ISTITUTO DI RICERCA SULLE ACQUE ROMA 86: 0

IOC ITA-18 A
 G. C. PAPPALARDO
 STUDIES AND MONITORING OF TRACE METALS IN MARINE WATERS BY INDUCTIVELY COUPLED PLASMA (ICP) EMISSION SPECTROMETRY

82:	0
83:	0
84:	0
85:	4000
86:	0

ISTITUTO DIPARTIMENTALE DI CHIMICA UNIVERSITA DI CATANIA

IOC ITA-23 F
 G. CUNSOLO
 VERTICAL TRANSPORT PROCESSES OF MARINE WATER NEAR THE ITALIAN COASTS

82:	0
83:	0
84:	0
85:	3600
86:	0

DEPARTIMENTO DI FISICA UNIVERSITA "LA SAPIENZA" ROMA

IOC ITA-33 F
 R. SANTANGELO
 APPROXIMATE MODELS FOR THE NORTHERN ADRIATIC SEA AND EXPERIMENTAL CHECKS OF CURRENTS IN FIXED POINTS

82:	0
83:	0
84:	0
85:	0000
86:	0

OSSERVATORIO GEOFISICO UNIVERSITA DI MODENA

IOC ITA-35 L
 F. COSTA
 FLOW OF POLLUTANTS (NUTRIENTS AND HEAVY ELEMENTS) INTO THE LAGOON OF VENICE FROM NATURAL AND AGRICULTURAL RIVERS

82:	0
83:	0
84:	0
85:	WIT
86:	0

CONSIGLIO NAZIONALE DELLE RICERCHE VENEZIA

IOC ITA-37 L
 A. A. ORIO
 TRANSPORT MECHANISMS OF POLLUTANTS AT THE SEDIMENT-WATER INTERFACE

82:	0
83:	0
84:	0
85:	9600
86:	0

ISTITUTO DI CHIMICA GENERALE ED INORGANICA VENEZIA

IOC ITA-56 L
 S. FIERRO
 SEDIMENT AND PARTICULATE MATTER STUDIES IN THE LIGURIAN SEA; MECHANISM OF INTERACTION WITH POLLUTANT MATTER

82:	0
83:	0
84:	0
85:	0000
86:	0

ISTITUTO DI GEOLOGIA UNIVERSITA DI GENOVA

IOC ITA-61 A
 G. C. PAPPALARDO
 STUDIED AND MONOMAJOR AND MINOR ELEMENTS IN MEDITERRANEAN SEAWATERS BY SIMULTANEOUS INDUCTIVELY COUPLED PLASMA (ICP) EMISSION SPECTROMETRY

82:	0
83:	0
84:	0
85:	0
86:	UND

DIPARTIMENTO DI SCIENZE CHIMICHE UNIVERSITA DI CATANIA

IOC ITA-77 L
 R. SANTANGELO
 BOX MODEL FOR EVOLUTION OF METALS IN MEDITERRANEAN SEA

82:	0
83:	0
84:	0
85:	0
86:	UND

IOC MON-1 F
 R. VAISSIERE
 ETUDE DE LA CIRCULATION SUPERFICIELLE LITTORALE DE LA COTE D'AZUR
 (AIRE DE MONACO) ET DE SES RELATIONS AVEC LA CIRCULATION GENERALE
 EN MER LIGURE

82:	0
83:	0
84:	0
85:	WIT
86:	0

CENTRE SCIENTIFIQUE DE MONACO

IOC MON-4 L
 R. VAISSIERE
 EVALUATION DES ETUDES EN COURS SUR LES FLUX A TRAVERS LES DETROITS
 ET LES SEUILS SEPARANT LES DIFFERENTS BASSINS DE LA MEDITERRANEE
 (ETUDE BIBLIOGRAPHIQUE)

82:	0
83:	0
84:	0
85:	WIT
86:	0

CENTRE SCIENTIFIQUE DE MONACO

IOC SPA-16 L
 J. ALBAIGES RIER
 TRANSPORT AND FATE OF WASTEWATER DISCHARGES OF THE CITY OF BARCELONA
 AND ADJACENT RIVERS (BESOS AND LLOBREGAT) INTO THE COASTAL WATER

82:	0
83:	0
84:	0
85:	0
86:	0

INSTITUTE OF BIO-ORGANIC CHEMISTRY BARCELONA

IOC SPA-18 L
 J. ALBAIGES RIERA
 TRANSPORT AND FATE OF WASTEWATER DISCHARGES OF THE CITY OF BARCELONA
 AND ADJACENT RIVERS (BESOS AND LLOBREGAT) INTO THE COASTAL WATER

82:	0
83:	0
84:	0
85:	0
86:	UND

ENVIRONMENTAL CHEMISTRY CENTRO DE INVESTIGACION Y DESARROLLO BARCELONA

IOC SPA-19 F
 J. SALAT
 EASTERN MEDITERRANEAN DRIFT-CARD EXPERIMENT (DRIFTEX)

82:	0
83:	0
84:	0
85:	0
86:	UND

INSTITUTO DE INVESTIGACIONES PESQUERAS DE BARCELONA

IOC TUR-1 F
 U. UNLUATA
 OCEANOGRAPHIC PROCESSES IN THE NORTHEASTERN LEVANTINE COASTAL WATER

82:	0
83:	0
84:	0
85:	7000
86:	0

MIDDLE EAST TECHNICAL UNIVERSITY ERDEMLI ICEL

IOC TUR-2 F
E. OZDOY
POLLUTANT TRANSPORT PROCESSES AT GOKSU SEYHAN AND CEYHAN RIVER MO
UTHE 82: 0
83: 0
84: 0
85: NIL
MIDDLE EAST TECHNICAL UNIVERSITY ERDEMLI ICEL 86: 0

IOC YUG-6 F
M. GAGIC
LOW-FREQUENCY CURRENT FIELD OSCILLATIONS IN THE COASTAL ZONE OF TH
E CENTRAL ADRIATIC 82: 0
83: 0
84: 0
85: 3000
INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT 86: 0

IOC YUG-15 F
M. KUZMIC
MATHEMATICAL MODELLING OF HORIZONTAL CIRCULATION AND VERTICAL DIST
RIBUTION OF CURRENTS IN THE NORTHERN ADRIATIC 82: 0
83: 0
84: 3000
85: 0
CENTER FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IOC YUG-17 A
M. BRANICA
DEVELOPMENT OF ELECTROCHEMICAL TECHNIQUES AND THEIR APPLICATION IN
LABORATORY AND "ON BOARD" FOR DETERMINATION AND SPECIATION OF HEA
VY METALS IN THE MEDITERRANEAN 82: 0
83: 0
84: 0
85: WIT
CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IOC YUG-18 A
B. COSOVIC
DEVELOPMENT OF NEW ELECTROANALYTICAL TECHNIQUES FOR DETERMINATION
OF SURFACE ACTIVE SUBSTANCES AND DETERGENTS IN SEA-WATER AND SEA S
URFACE MICROLAYER 82: 0
83: 0
84: 0
85: 3500
CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IOC YUG-25 F
J. FABANELI
MODIFICATIONS OF THE SUSPENDED ORGANIC MATTER COMPOSITION AND SEDIMENT
ATION IN THE POLLUTED COASTAL WATERS 82: 0
83: 0
84: 0
85: 6300
MARINE RESEARCH AND TRAINING CENTRE PIRAN 86: 0

IOC YUG-33 L
V. ZUTIC
VERTICAL TRANSPORT OF POLLUTANTS IN THE ESTUARY: THE IMPORTANCE OF
ORGANIC AGGREGATES 82: 0
83: 0
84: 0
85: 7900
CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

IOC YUG-55 F
M. BONE
STUDY OF THE INFLUENCE OF ATMOSPHERIC VORTICITY ON TRANSPORT PROCESSES IN THE NORTH ADRIATIC 82: 0
83: 0
84: 0
85: 0
INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT 86: UND

IOC YUG-60 F
D. JUSTIC
OXYGEN CONTENT AND OXYGEN METABOLISM OF THE NORTHERN ADRIATIC SEA: A MODEL APPROACH 82: 0
83: 0
84: 0
85: 0
DEPARTMENT OF ZOOLOGY UNIVERSITY OF NATURAL SCIENCES AND MATHEMATICS ZAGREB 86: UND

IOC YUG-62 A
M. PICER
IMPROVEMENTS AND TESTING OF THE METHODS OF ANALYSIS PETROLEUM HYDROCARBONS IN WATER SEDIMENTS AND MUGSELS BY SPECTROFLUOROMETRY 82: 0
83: 0
84: 0
85: 0
CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: UND

IOC YUG-68 F
M. CADIC
PHYSICAL OCEANOGRAPHY COMPONENT OF POLLUTION MONITORING 82: 0
83: 0
84: 0
85: 0
INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT 86: UND

IOC YUG-36 F
M. ZORE-ARMANDA
TURBIDITY TRANSPORT BY RESIDUAL CURRENTS 82: 0
83: 0
84: 0
85: 5000
INSTITUTE OF OCEANOGRAPHY AND FISHERIES, SPLIT 86: 0

MONI ITA-9 0
R. FERRARA
BIOGEOCHEMICAL CYCLE OF MERCURY AND LEAD IN THE MEDITERRANEAN AREA 82: 0
83: 0
84: 0
85: NAC
C.N.R. ISTITUTO DI BIOFISICA PISA 86: 0

MONI ITA-11 0
G. LAKITZ
ASSESSMENT OF POLLUTION LOAD REACHING COASTAL SEA-WATERS SEDIMENTS AND LIVING ORGANISMS FROM LAND SOURCES THROUGH DIRECT MEASUREMENTS OF PESTICIDES AND OF SOME ORGANOHALOGEN COMPOUNDS AND SUBSTANCES WHICH 82: 0
83: 0
84: 0
85: NAC
ISTITUTO DI IGIENE UNIVERSITA DI GENOVA 86: 0

MONI	MON-3 0		
R. VAISSIERE			
ETUDE DE LA CONCENTRATION EN METAUX LOURDS (PB ET CD) AU NIVEAU DE		82:	0
S ORGANES D'UN CRUSTAC BENTHIQUE DE L'ETAGE BATHYAL (CALOCARIS MAC		83:	0
ANDREA)		84:	0
		85:	NAC
CENTRE SCIENTIFIQUE DE MOO		86:	0

MONI	YUG-1 0		
I. VUKADIN			
STUDY AND MONITORING OF TOXIC HEAVY METALS (ZN CD PB CU HG) IN		82:	0
SEA-WATER SEDIMENTS AND ORGANISMS IN KASTELA BAY		83:	0
		84:	0
		85:	NAC
INSTITUTE OF OCEANOGRAPHY AND FISHERIES	SPLIT	86:	0

MONI	YUG-4 0		
S. SOBOT			
COASTAL WATER QUALITY CONTROL IN THE SPLIT AREA		82:	0
		83:	0
		84:	0
		85:	NAC
INSTITUTE OF OCEANOGRAPHY AND FISHERIES	SPLIT	86:	0

UNEP	FRA-11 Z		
J. SOY			
MODELISATION DES FLORAISSONS DE MEDUS UNE ZONE D'EUTROPHISATION EN		82:	0
MER LIGURE		83:	0
		84:	0
		85:	9000
ICHTYOLOGIE GENERALE ET APPLIQUEE	MUSEUM NATIONAL D'HISTOIRE NATU	86:	4000
RELLE	PARIS		

UNEP	FRA-12 Z		
P. BERNARD			
SURVEILLANCE DES PROLIFERATIONS DE MEDUSES URTICANTES DURANT LA PE		82:	0
RIODE ESTIVALE 1985 SUR LE LITTORAL DE LA REGION PROVENCE-ALPES- C		83:	0
OTE D'AZUR (FRANCE)		84:	0
		85:	NIL
INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE UNITE IN		86:	2000
GERM "MER ET SANTE"	NICE		

UNEP	GRC-21 Z		
J. GANOULIS			
HYDRODYNAMIC STUDY OF THE COASTAL TRANSPORT OF JELLYFISH		82:	0
		83:	0
		84:	0
		85:	3000
SCHOOL OF TECHNOLOGY	ARISTOTLE UNIVERSITY OF THESSALONIKI	86:	WIT

UNEP	GRC-24 Z		
E. PAPATHANASSIOU			
STUDIES ON THE ECOLOGY AND BIOLOGY OF JELLYFISH IN GREECE		82:	0
		83:	0
		84:	0
		85:	12150
NATIONAL CENTER FOR MARINE RESEARCH	ATHENS	86:	2500

 UNEP GRE-25 Z
 J. CASTRITSI-CATHARIOS
 DISTRIBUTION QUANTITATIVE QUALITATIVE DES MEDUSES COMMUNES DANS LES ZONES
 PROCHES DE LA COTE DES ILES: HYDRA POROS ET AUSSI AU N.E. DU GOLFE
 DE KORINTHE 82: 0
 83: 0
 84: 0
 85: 3800
 86: 1000
 ZOOLOGICAL LABORATORY UNIVERSITY OF ATHENS

 UNEP GRE-27 Z
 A. DAVAI IS
 DATA COLLECTION/DISSEMINATION AND SUPPORT OF RESEARCH ON THE MEDUSAS
 IN THE MEDITERRANEAN 82: 0
 83: 0
 84: 0
 85: WIT
 86: 0
 LIBRARY MINISTRY OF PHYSICAL PLANNING HOUSING AND ENVIRONMENT
 ATHENS

 UNEP GRE-28 Z
 A. P. GRIMANIS
 USE OF ISOTOPES TO IDENTIFY THE FOOD SOURCES OF JELLYFISH BLOOMS:
 NATURAL ECOSYSTEMS OR SEWAGE EFFLUENTS 82: 0
 83: 0
 84: 0
 85: NIL
 86: 0
 CHEMISTRY DEPARTMENT DEMOCRITOS NUCLEAR RESEARCH CENTER ATHENS

 UNEP ITA-42 Z
 L. ROTTINI-SANDRINI
 MONITORING DES MEDUSES EN ADRIATIQUE ET DOMMAGE A LA PECHE 82: 0
 83: 0
 84: 0
 85: 6000
 86: NIL
 CIMAM LABORATORIO DI BIOLOGIA MARINA UNIVERSITA DI TRIESTE

 UNEP ITA-43 Z
 L. ROTTINI-SANDRINI
 ETUDE ECOLOGIQUE EXPERIMENTALE DE PELAGIA NOCTILUCA 82: 0
 83: 0
 84: 0
 85: NIL
 86: 0
 CIMAM LABORATORIO DI BIOLOGICAL MARINA UNIVERSITA DI TRIESTE

 UNEP ITA-44 G
 F. STRAVISI
 WATER CIRCULATION AND TRANSPORT IN NE ADRIATIC 82: 0
 83: 0
 84: 0
 85: NAC
 86: 0
 ISTITUTO TALASSOGRAFICO DI TRIESTE

 UNEP ITA-45 G
 F. STRAVISI
 STUDY ON THE CLIMATIC VARIATIONS IN NORTHERN ADRIATIC DURING THE
 LAST CENTURY AND THEIR ROLE ON MARINE PHENOMENA "NA CLI" 82: 0
 83: 0
 84: 0
 85: NAC
 86: 0
 ISTITUTO TALASSOGRAFICO DI TRIESTE

UNEP	ITA-46 Z		
R. DELLA LOGGIA			
INDIVIDUATION AND TOXICOLOGICAL EVALUATION OF THE DERMATOTOXIC PRINCIPLES OF PELAGIA NOCTILUCA AND OTHER MEDUSAE		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI FARMACOLOGIA E FARMACOGNOSIA UNIVERSITA DI TRIESTE		86:	1500

UNEP	ITA-47 Z		
C. SCARPA			
STUDY ON THE HISTOLOGY AND ON THE LOCAL TREATMENT OF HUMAN SKIN IN JURIES FROM JELLYFISH STINGS		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI CLINICA DERMATOLOGICA DELL'UNIVERSITA DI TRIESTE		86:	1500

UNEP	ITA-48 Z		
A. CARLI			
SAMPLE-MONITORING OF PELAGIA NOCTILUCA IN THE LIGURIAN SEA: BIOLOGICAL AND ECOLOGICAL ASPECTS		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI SCIENZE AMBIENTALI MARINE UNIVERSITA DI GENOVA		86:	1500

UNEP	ITA-49 Z		
G. C. PAPPALARDO			
MULTI-ELEMENT ANALYSIS OF MEDITERRANEAN SEA-WATERS AND ASSESSMENT OF ENVIRONMENTAL QUALITY IN RELATION TO JELLYFISH SWARMINGS AND STRUCTURE CHARACTERIZATION OF CHEMICAL COMPONENTS OF VENOM PRODUCED BY		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DIPARTIMENTALE DI CHIMICA UNIVERSITA DI CATANIA		86:	1500

UNEP	ITA-50 Z		
A. SALLEO			
DISCHARGE MECHANISM OF THE NEMATOCYSTS OF PELAGIA NOCTILUCA		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI FISIOLOGIA GENERALE UNIVERSITA DI MESSINA		86:	1500

UNEP	ITA-51 Z		
A. LONGINELLI			
STABLE ISOTOPE RESEARCH (D/H AND ¹³ C/ ¹² C) AS A NEW TOOL FOR STUDYING THE RELATIONSHIPS BETWEEN SOME ENVIRONMENTAL PARAMETERS AND THE BEHAVIOUR OF JELLYFISH		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI MINERALOGIA E PETROGRAFIA LABORATORIO DI GEOCHIMICA TRIESTE		86:	0

UNEP	ITA-55 Z		
F. BOERO			
PROJECT ON JELLYFISH ON THE MEDITERRANEAN SEA		82:	0
		83:	0
		84:	0
		85:	NIL
ISTITUTO DI ZOOLOGIA UNIVERSITA DI GENOVA		86:	1500

UNEP ITA-58 Z
L. SCALERA LIACI
JELLYFISH IN THE MEDITERRANEAN SEA

82:	0
83:	0
84:	0
85:	NIL
86:	1500

ISTITUTO DI ZOOLOGIA ED ANATOMIA COMPARATA UNIVERSITA DI BARI

UNEP MAL-3 Z
V. AXIAK
MONITORING OF JELLYFISH SWARMINGS IN THE COASTAL WATERS OF MALTA

82:	0
83:	0
84:	0
85:	6000
86:	2000

DEPARTMENT OF MATHEMATICS AND SCIENCES UNIVERSITY OF MALTA

UNEP SPA-7 Z
C. BAS / A. CASTELLON M
DISTRIBUTION AND ABUNDANCE OF JELLYFISH IN THE CATALAN COAST

82:	0
83:	0
84:	0
85:	3000
86:	WIT

INSTITUTO DE INVESTIGACIONES PESQUERAS BARCELONA

UNEP TUR-12 Z
F. BINGEL
PROJECT ON JELLYFISH IN THE MEDITERRANEAN SEA. JELLYFISH MONITORING PROGRAMME FOR THE EASTERN MEDITERRANEAN COAST OF TURKEY

82:	0
83:	0
84:	0
85:	0
86:	3000

MIDDLE EAST TECHNICAL UNIVERSITY ERDEMLI ICEL

UNEP YUG-30 Z
A. BENOVIC
INVESTIGATION OF JELLYFISHES (MEDUSAE) IN THE SOUTHERN ADRIATIC

82:	0
83:	0
84:	0
85:	7450
86:	2000

BIOLOGICAL INSTITUTE DUBROVNIK

UNEP YUG-31 0
F. KRŠINIĆ
TOTAL DAY-NIGHT COMPOSITION OF ZOOPLANKTON IN THE BAY OF MALI STON NEAR DUBROVNIK

82:	0
83:	0
84:	0
85:	NAC
86:	0

BIOLOGICAL INSTITUTE DUBROVNIK

UNEP YUG-32 Z
T. LEBOVIC
SWARMING AND TRANSPORT OF PELAGIA NOCTILUCA IN THE ADRIATIC SEA

82:	0
83:	0
84:	0
85:	4000
86:	1500

CENTRE FOR MARINE RESEARCH RUDJEYUCOJSEVIC INSTITUTE ZAGREB

UNEP YUG-34 Z	
B. CEZAREVIC	
INVESTIGATION OF MEDICAL EFFECTS OF JELLYFISH ON HUMANS IN THE REG	82: 0
ION OF DUBROVNIK	83: 0
	84: 0
	85: 500
MEDICAL CENTER DUBROVNIK:	86: WIT

UNEP YUG-35 Z	
Z. MARETIC	
DEPARTMENT FOR COMMUNICABLE DISEASES, PULA	82: 0
	83: 0
	84: 0
	85: 600
PELAGIA NOCTILUCA - HUMAN HEALTH ASPECTS	86: 500

UNEP YUG-39 Z	
D. ZAVODNIK	
MONITORING OF JELLYFISH PELAGIA NOCTILUCA ALONG THE WEST ISTRIAN R	82: 0
IVIERA (NORTHERN ADRIATIC)	83: 0
	84: 0
	85: 7500
CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB	86: WIT

UNEP YUG-42 Z	
T. VUCETIC	
COMPARATIVE STUDY OF THE UNUSUAL APPEARANCE OF PELAGIA AND CHANGES	82: 0
OF THE ENVIRONMENTAL FACTORS	83: 0
	84: 0
	85: 2000
INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT	86: 1000

UNEP YUG-44 Z	
B. SEDMAI	
CYTOLITIC TOXINS FROM JELLYFISH; PELAGIA NOCTILUCA COTYLORRHIZA T	82: 0
UBERCULATA	83: 0
	84: 0
	85: 2700
INSTITUTE OF BIOLOGY UNIVERSITY EDVARD KARDELJ LJUBLJANA	86: WIT

UNEP YUG-45 Z	
A. MALEJ	
RATE OF METABOLISM OF JELLYFISH AS RELATED TO BODY WEIGHT CHEMICA	82: 0
L COMPOSITION AND TEMPERATURE	83: 0
	84: 0
	85: 5850
MARINE RESEARCH AND TRAINING CENTRE PIRAN	86: 3000

WHO ALG-2 D	
S. KRIM	
ETUDES EPIDEMIOLOGIQUES RELATIVES AUX CRITERES DE QUALITE DE L'ENV	82: 0
IRONNEMENT	83: 0
	84: WIT
	85: 0
CENTRE DE RECHERCHES OCEANOGRAPHIQUES ET DES PECHEES ALGER-BOURSE	86: 0

WHO EGY-3 K
 F. EL-SHARAWI
 BIOGEOCHEMICAL CYCLES OF SPECIFIC POLLUTANTS. SURVIVAL OF PATHOGENS IN THE MEDITERRANEAN

82:	0
83:	5
84:	5
85:	0
86:	0

HIGH INSTITUTE OF PUBLIC HEALTH ALEXANDRIA

WHO EGY-10 C
 F. EL-SHARAWI
 FORMULATION OF SCIENTIFIC RATIONALE FOR MEDITERRANEAN ENVIRONMENTAL QUALITY CRITERIA

82:	0
83:	0
84:	0
85:	UND
86:	0

HIGH INSTITUTE OF PUBLIC HEALTH ALEXANDRIA

WHO EGY-11 E
 F. EL-SHARAWI
 DEVELOPMENT OF PROPOSALS FOR GUIDELINES AND CRITERIA GOVERNING THE APPLICATION OF THE LAND-BASED SOURCES PROTOCOL

82:	0
83:	0
84:	0
85:	UND
86:	0

HIGH INSTITUTE OF PUBLIC HEALTH ALEXANDRIA

WHO FRA-10 A
 P. BERNARD
 REVIVIFICATION DE GERMES FECAUX INDICATEURS DE POLLUTION MARINE. NUMERATIONS PAR FILTRATION SUR MEMBRANES DES EAUX MARINES A VOCATION BALNEAIRE

82:	0
83:	0
84:	0
85:	2000
86:	0

INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE UNITE INSERM "MER ET SANTE" NICE

WHO FRA-14 A
 P. BERNARD
 RECHERCHE DE DERMATOPHYTES ET MOISSISSURES PATHOGENES DANS LE SABLE DES ZONES MARINES

82:	0
83:	0
84:	0
85:	3000
86:	3500

INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE UNITE INSERM "MER ET SANTE" NICE

WHO FRA-16 K
 P. BERNARD
 RECHERCHE DE DERMATOPHYTES ET MOISSISSURES PATHOGENES DANS LE SABLE DES ZONES MARINES A VOCATION BALNEAIRE PAR LA METHODE DE FILTRATION SUR MEMBRANES ET SENSIBILITE DES DERMATOPHYTES ISOLEES VIS-A-VIS DE

82:	0
83:	0
84:	0
85:	0
86:	3500

INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) VILLEFRANCHE/MER

WHO FRA-17 L
 M. GAUTHIER
 ADAPTATION DES ENTEROBACTERIES PATHOGENES A L'EAU DE MER

82:	0
83:	0
84:	0
85:	0
86:	3500

INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) NICE

WHO FRA-34 K
 Y. MARTIN
 ESTIMATION DES APPORTS PAR LES EFFLUENTS URBAINS ET CAPACITES DE S
 URVIE DANS LE MILIEU MARIN DE CERTAINS MICROORGANISMES PATHOGENES. 82: 0
 VARIATIONS EN FONCTION DE LA FILIERE D'EPURATION UTILISEE 83: 0
 84: 0
 85: 0
 DEPT. RECHERCHE FONDATION OCEANOGRAPHIQUE RICARD SIX FOURS LES P 86: 3500
 LAGES

WHO FRA-36 G
 M. LAFAURIE
 ABSORPTION DES XENOBIOTIQUES BIOTRANSFORMATION ET TUMORGENESE CH 82: 0
 EZ LES POISSONS MARINS 83: 0
 84: 0
 85: 0
 FACULTE DE MEDECINE NICE 86: 3500

WHO GRC-5 A
 G. P. GABRIELIDES
 ANALYSIS OF COPROSTANOL AND ITS USE AS AN INDICATOR OF FAECAL POLL 82: 0
 UTION 83: WIT 0
 84: 0
 85: 0
 NATIONAL CENTRE FOR MARINE RESEARCH ATHENS 86: 0

WHO GRE-8 D
 J. A. PAPADAKIS
 EVALUATION OF HEALTH RISK: AT DIFFERENT BACTERIOLOGICAL GRADING OF 82: 0
 SEA WATER. RELATION BETWEEN DENSITIES OF INDICATOR ORGANISMS AND M 83: 0
 ICROBIAL PATHOGENS IN SEA-WATER 84: 5000
 85: 5500
 ATHENS SCHOOL OF HYGIENE 86: 0

WHO GRE-9 D
 V. KRIKELIS
 RESEARCH OF ENTERIC VIRUSES IN AQUATIC ENVIRONMENTS (SEWAGE EFFLUE 82: 0
 NTS COASTAL SEA-WATERS FRESH WATERS) 83: 0
 84: 0
 85: 4500
 PASTEUR INSTITUTE ATHENS 86: 0

WHO GRE-11 Z
 P. VLACHOS
 EPIDEMIOLOGY AND THERAPEUTIC METHODS OF JELLYFISH. POISONING IN GR 82: 0
 EECE 83: 0
 84: 0
 85: 2500
 POISON CONTROL CENTER CHILDREN'S HOSPITAL "P.A. KYRIAKOU" ATHENS 86: 500

WHO GRE-12 Z
 S. K. MASTRONICOLIS
 ISOLATION AND IDENTIFICATION OF NEW MOLECULES PHOSPHONOLIPIDS IN J 82: 0
 ELLYFISH 83: 0
 84: 0
 85: 4500
 SCHOOL OF CHEMISTRY UNIVERSITY OF ATHENS 86: 500

WHO GRE-13 D
 J. A. PAPADAMIO
 INVESTIGATION FOR NEUROTOXINS IN SHELLFISH OF ELEFSIS AND SARONICO
 S GULFS

82:	0
83:	0
84:	0
85:	5000
86:	0

ATHENS SCHOOL OF HYGIENE

WHO GRE-29 D
 S. NAKOU
 HAIR SAMPLING IN HIGH RISK GREEK POPULATIONS

82:	0
83:	0
84:	0
85:	3500
86:	0

INSTITUTE OF CHILD HEALTH AGHIA SOPHIA CHILDREN'S HOSPITAL ATHEN
 S

WHO GRE-30 D
 A. TRICHOPOULOU
 PILOT DIETARY SURVEY OF HIGH RISK POPULATION GROUPS

82:	0
83:	0
84:	0
85:	5000
86:	0

ATHENS SCHOOL OF HYGIENE

WHO GRE-47 E
 J. GANOULIS
 DEVELOPMENT OF GUIDELINES FOR THE DESIGN OF SUBMARINE OUTFALLS IN
 THE MEDITERRANEAN

82:	0
83:	0
84:	0
85:	0
86:	4000

DEPARTMENT OF HYDRAULICS ARISTOTELIAN UNIVERSITY OF THESSALONIKI

WHO ISR-3 K
 B. CAVARI
 EFFECT OF POLLUTION ON MICROBIAL COMMUNITIES IN THE EASTERN MEDITERRANEAN SEA.

82:	0
83:	0
84:	0
85:	WIT
86:	0

ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH INSTITUTE HAIFA

WHO ISR-6 D
 H. SHUVAL
 EPIDEMIOLOGICAL STUDY ON THE RELATIONSHIP BETWEEN THE MICROBIAL QUALITY OF COASTAL SEA-WATER AND THE HEALTH OF SWIMMERS

82:	0
83:	0
84:	10000
85:	10000
86:	0

ENVIRONMENTAL HEALTH LABORATORY HEBREW UNIVERSITY JERUSALEM

WHO ISR-8 K
 Y. YOSHPE-PURER
 STUDIES ON THE OCCURRENCE OF STAPHYLOCOCCUS AUREUS AND PSEUDOMONAS AERUGINOSA IN COASTAL WATER IN ISRAEL

82:	0
83:	0
84:	5000
85:	5000
86:	0

DR. A. FELIX PUBLIC HEALTH LABORATORY MINISTRY OF HEALTH TEL AVI

V

WHO	ISR-13 A
Y. YONA YOSHPE-PURER	
IS H.F-STREPTOCOCCUS AGAR THE MOST SUITABLE MEDIUM FOR ENUMERATION	02: 0
OF FAECAL STREPTOCOCCI IN MARINE WATER?	03: 0
	04: 0
	05: 4000
DR. A. FELIX PUBLIC HEALTH LABORATORY MINISTRY OF HEALTH TEL AVI	06: 0
V	

WHO	ISR-14 A
A. MATES	
DETERMINATION OF E. COLI. FROM FAECAL COLIFORMS IN SEA-WATER BY T	02: 0
HE MEMBRANE FILTRATION CULTURE METHOD	03: 0
	04: 0
	05: 4000
DISTRICT PUBLIC HEALTH LABORATORY MINISTRY OF HEALTH HAIFA	06: 0

WHO	ISR-16 D
B. FATTAL	
EPIDEMIOLOGICAL STUDY OF MORBIDITY AND VIRAL ANTIBODIES AMONG BATH	02: 0
ERS EXPOSED TO VARYING LEVELS OF MICROBIAL POLLUTION OF SEA-WATER	03: 0
	04: 10000
	05: 10000
ENVIRONMENTAL HEALTH LABORATORY HEBREW UNIVERSITY JERUSALEM	06: 0

WHO	ISR-19 G
H. RAV-ACHA	
MUTAGENICITY OF CHLORINATED SEAWATER FROM POWER PLANTS COOLING SYS	02: 0
TEMS	03: 0
	04: 0
	05: 3000
SCHOOL OF APPLIED SCIENCES AND TECHNOLOGY THE HEBREW UNIVERSITY	06: 0
JERUSALEM	

WHO	ITA-6 G
S. DE FLORA	
MUTAGENICITY GENOTOXICITY INTERACTIONS AND METABOLISM OF CHEMICA	02: 0
COMPOUNDS IN THE MARINE ENVIRONMENT AND IN MARINE ORGANISMS	03: 3000
	04: 4000
	05: 4000
ISTITUTO DI IGIENE UNIVERSITA DI GENOVA	06: 0

WHO	ITA-28 G
G. BRONZETTI	
MUTAGENICITY AND CARCINOGENICITY STUDIES ON MARINE POLLUTANTS	02: 0
	03: 3000
	04: 4000
	05: 4000
ENVIRONMENTAL MUTAGENESIS DEPARTMENT PISA	06: 0

WHO	ITA-29 A
L. VILLA	
STUDIES ON THE HYGIENIC CONDITIONS OF COASTAL WATERS AND THEIR TO	02: 0
PUBLIC HEALTH	03: 0
	04: 5500
	05: 5000
ISPETTORATO CENTRALE PER LA DIFESA DEL MARE MINISTERO DELLA MARIN	06: 0
E MERCANTILE ROME	

WHO ITA-30 G
 G. P. DE RENZI
 RESEARCH INTO THE TOXICITY PERSISTENCE BIOACCUMULATION AND MUTAGENICITY OF HYDROCARBONS DETERGENTS AND HEAVY METALS IN THE SEA

82:	0
83:	NIL
84:	3000
85:	3000
86:	0

FACOLTA DI MEDICINA UNIVERSITA DI ROMA

WHO ITA-53 D
 A. RENZONI
 EVALUATION OF METHYLMERCURY IN MEDITERRANEAN POPULATIONS: SAMPLING OF HUMAN HAIR

82:	0
83:	0
84:	0
85:	7500
86:	0

DIPARTIMENTO DI BIOLOGIA AMBIENTALE UNIVERSITA DI SIENA

WHO ITA-54 D
 A. RENZONI
 EVALUATION OF METHYLMERCURY IN MEDITERRANEAN POPULATIONS: DIETARY SURVEY

82:	0
83:	0
84:	0
85:	5000
86:	0

DIPARTIMENTO DI BIOLOGIA AMBIENTALE UNIVERSITA DI SIENA

WHO ITA-59 C
 L. VOLTERRA
 DEVELOPMENT OF ANALYTICAL TECHNIQUES FOR MONITORING THE HYGIENIC QUALITY OF SHELLFISH

82:	0
83:	0
84:	0
85:	0
86:	3000

LABORATORIO DI IGIENE ISTITUTO SUPERIORE DI SANITA ROMA

WHO ITA-62 D
 S. MARTELLA
 INVESTIGATION ON THE OCCURRENCE OF METHYLMERCURY IN SAMPLING FROM A HUMAN POPULATION IN WHICH PREVAILING FISHERMEN (GANZIRRI VILLAGE OF MESSINA). POSSIBLE CORRELATIONS WITH THE FEEDING DIET

82:	0
83:	0
84:	0
85:	0
86:	UND

DEPARTMENT OF ANIMAL BIOLOGY UNIVERSITY OF MESSINA

WHO ITA-66 C
 G. DE FLORA
 MUTAGENICITY OF CHEMICAL COMPOUNDS IN THE MARINE ENVIRONMENT

82:	0
83:	0
84:	0
85:	0
86:	3000

INSTITUTE OF HYGIENE UNIVERSITY OF GENOVA

WHO ITA-79 G
 G. P. DE RENZI
 CORRELATION BETWEEN MARINE POLLUTANTS AND DEGENERATIVE DISEASE

82:	0
83:	0
84:	0
85:	0
86:	3000

FACULTY OF MEDICINE UNIVERSITY OF ROME "LA SAPIENZA"

WHO	ITA-00 B			
G. L. BRONZETTI				
DETECTION OF MUTAGENIC AND CARCINOGENIC POLLUTANTS IN SEAWATER		82:	0	
		83:	0	
		84:	0	
		85:	0	
INSTITUTO DI MUTAGENESI E DIFFERENZIAMENTO DEL CNR	PISA	86:	3000	

WHO	LIB-1 A			
A. F. BOARGO				
ASSESSMENT OF MICROBIOLOGICAL POLLUTION IN BATHING SEA WATER		82:	0	
		83:	0	
		84:	0	
		85:	0	
ENVIRONMENTAL PROTECTION PROGRAMME	SECRETARIAT OF SCIENTIFIC RESE	86:	3000	
ARCH	TRIPOLI			

WHO	LIB-2 E			
M. KHALIFA				
EFFECT ON GROWTH CROP YIELD AND INVESTIGATION OF HEAVY METAL UPTAKE BY SOME LIBYAN CROPS		82:	0	
		83:	0	
		84:	0	
		85:	0	
ENVIRONMENTAL PROTECTION PROGRAMME	SECRETARIAT OF SCIENTIFIC RESE	86:	WIT	
ARCH	TRIPOLI			

WHO	LIB-3 E			
S. OMAR TUMI				
ASSESSMENT OF WASTE OIL IN SPLAJ		82:	0	
		83:	0	
		84:	0	
		85:	0	
PETROLEUM RESEARCH CENTRE	TRIPOLI	86:	4000	

WHO	SPA-2 A			
F. LUCENA-GUTIERREZ				
FLUCTUATIONS DE LA POLLUTION BACTERIENNE D'ORIGINE FECALE LE LONG DU LITTORAL DE BADALONA		82:	0	
		83:	0	
		84:	4000	
		85:	4000	
CONSELLERIA DE ECOLOGIA I MEDIO AMBIENTE	AJUNTAMENT DE BADALONA	86:	0	

WHO	SPA-3 D			
J. IZQUIERDO				
ETUDE DE L'INCIDENCE DE CHAMPIGNONS SUR UNE PLACE POLLUEE ET LEUR IMPORTANCE RELATIVEMENT A LA SANTE		82:	0	
		83:	0	
		84:	3000	
		85:	5000	
LABORATORIO MUNICIPAL	BARCELONA	86:	0	

WHO	SPA-4 A			
F. LUCENA-GUTIERREZ				
DIFERENCIAS DE EFICACIA EN LA RECUPERACION DE ESTREPTOCOCCOS FECALE S EN LAS TEMPERATURAS DE INCUBACION DE 37 Y 44 C		82:	0	
		83:	0	
		84:	NIL	
		85:	0	
CONSELLERIA DE ECOLOGIA I MEDIO AMBIENTE	AJUNTAMENT DE BADALONA	86:	0	

WHO SPA-6 I.
 P. ROMERO RAYA
 SURVIVAL OF PATHOGENIC MICROORGANISMS IN SEA-WATER

82:	0
83:	0
84:	0
85:	4500
86:	0

FACULTY OF SCIENCE UNIVERSITY OF MALAGA

WHO SPA-9 C
 A. CRUZADO
 STUDY OF THE BIOGEOCHEMICAL PROCESSES CONTROLLING THE WASTE RECEIVING CAPACITY OF SOME COASTAL AREAS OF CATALONIA

82:	0
83:	0
84:	0
85:	WIT
86:	0

CENTRO DE ESTUDIOS AVANZADOS DE BLANES (GIRONA)

WHO SPA-17 A
 J. JOFRE TORROELLA
 BACTERIOPHAGES OF BACTERIOIDES AS INDICATORS OF PATHOGENIC HUMAN VIRUSES IN COASTAL SEA-WATERS

82:	0
83:	0
84:	0
85:	1500
86:	0

FACULTAD DE BIOLOGIA UNIVERSIDAD DE BARCELONA

WHO SPA-21 C
 T. FELIU MENDEZ
 STUDY OF METHODS IN MICROBIOLOGICAL ANALYSIS OF SEAWATER FOR FAECA L STREPTOCOCCI

82:	0
83:	2
84:	0
85:	0
86:	2000

HEALTH AND SOCIAL SECURITY DEPARTMENT TERRITORIAL DELEGATION OF TARRAGONA

WHO TUN-2 A
 A. CHADLI
 ETUDES COMPARATIVES SUR LES INDICATEURS DE LA POLLUTION FECALE DES EAUX DE BAINADE

82:	0
83:	0
84:	3000
85:	3000
86:	0

INSTITUT PASTEUR TUNIS BELVEDERE

WHO TUN-3 I
 S. JEKOV
 SURVIE DES ENTERO-BACTERIES PATHOGENES DES VIBRIONS ET DES GERMES MARQUEURS DE POLLUTION FECALE EN RELATION AVEC CERTAINS FACTEURS PHYSICO-CHEMIIQUES DU MILIEU MARIN

82:	0
83:	0
84:	2350
85:	2300
86:	0

INSTITUT PASTEUR TUNIS BELVEDERE

WHO TUR-13 E
 G. SURUCL
 GUIDELINES AND CRITERIA FOR THE APPLICATION OF LAND-BASED SOURCE PROTOCOL (SUBMARINE OUTFALLS)

82:	0
83:	0
84:	0
85:	0
86:	UND

DEPARTMENT OF ENVIRONMENTAL ENGINEERING MIDDLE EAST TECHNICAL UNIVERSITY (METU) ANKARA

WHO TUR-14 B
S. SOYUPAK
DEVELOPMENT OF REPORTING FORMATS ACCORDING TO THE REQUIREMENT OF DUMPING EMERGENCY AND LBS PROTOCOL

82: 0
83: 0
84: 0
85: 0

DEPARTMENT OF ENVIRONMENTAL ENGINEERING MIDDLE EAST TECHNICAL UNIVERSITY (METU) ANKARA 86: 4000

WHO TUR-14 E
S. SOYUPAK
DEVELOPMENT OF APPROACHES FOR THE CONTINUOUS ASSESSMENT OF POLLUTANT LOADS

82: 0
83: 0
84: 0
85: 0

DEPT. OF ENVIRONMENTAL ENGINEERING METU ANKARA 86: 4000

WHO TUR-15 C
Y. F. OZTURK
FORMULATION OF SCIENTIFIC RATIONALE FOR MEDITERRANEAN ENVIRONMENTAL QUALITY CRITERIA

82: 0
83: 0
84: 0
85: 0

DEPARTMENT OF ENVIRONMENTAL ENGINEERING MIDDLE EAST TECHNICAL UNIVERSITY (METU) ANKARA 86: 4000

WHO TUR-15 E
Y. F. OZTURK
FORMULATION OF SCIENTIFIC RATIONALE FOR EMISSION STANDARDS OF SELECTED POLLUTANTS

82: 0
83: 0
84: 0
85: 0

DEPT. OF ENVIRONMENTAL ENGINEERING METU ANKARA 86: 4000

WHO YUG-14 G
B. FURELEC
THE CORRELATION BETWEEN LEVELS AND EFFECTS OF MUTAGENIC POLLUTANTS IN THE MARINE ENVIRONMENT

82: 0
83: 0
84: 0
85: 5000

CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB 86: 0

WHO YUG-20 I
D. FURS
SURVIVAL OF SOME INTESTINAL PATHOGENS IN THE MARINE ENVIRONMENT

82: 0
83: 3000
84: 3000
85: 3000

CENTRE FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ROVINJ 86: 0

WHO YUG-27 D
R. BUZINA
EVALUATION OF METHYLMERCURY IN MEDITERRANEAN POPULATIONS AND RELATED HEALTH HAZARDS

82: 0
83: 0
84: 8000
85: 6000

INSTITUTE OF PUBLIC HEALTH OF CROATIA ZAGREB 86: 0

WHO YUG-28 D
 P. STEGNAR
 ANALYSIS OF HUMAN HAIR FOR ASSESSING EXPOSURE AND POSSIBLE HEALTH HAZARDS IN MEDITERRANEAN POPULATIONS DUE TO METHYLMERCURY IN SEAFOOD
 82: 0
 83: 0
 84: 3500
 85: 7500
 86: 2
 INSTITUTE JOSEF STEFAN UNIVERSITY E. LARDELJ LJUBLJANA

WHO YUG-63 C
 V. PRAVDIC
 ENVIRONMENTAL CAPACITY: A STRATEGY TO CONTROL POLLUTION FROM LAND-BASED SOURCES. IMPLEMENTATION AND ADAPTATION FOR THE MEDITERRANEAN REGION
 82: 0
 83: 0
 84: 0
 85: 0
 86: 3500
 CENTER FOR MARINE RESEARCH RUDJER BOSKOVIC INSTITUTE ZAGREB

WHO YUG-63 E
 V. PRAVDIC
 DEVELOPMENT OF MODELS FOR CALCULATION OF ENVIRONMENTAL CAPACITY OF SEAWATER IN THE MEDITERRANEAN
 82: 0
 83: 0
 84: 0
 85: 0
 86: 3500
 CENTRE OF MARINE RESEARCH RUDER BOSKOVIC INST. ZAGREB

WHO YUG-67 C
 N. KRSTULOVIC
 COMPARISON OF FAECAL COLIFORM LEVELS INCL FLESH AND FLESH/INTERVULAR FLUID
 82: 0
 83: 0
 84: 0
 85: 0
 86: 3000
 INSTITUTE OF OCEANOGRAPHY AND FISHERIES SPLIT

WHO FRA-5 L
 P. BUAT-MENARD
 AIR/SEA AND WATER COLUMN METALLIC POLLUTANT TRANSFER IN THE MEDITERRANEAN SEA
 82: 0
 83: 0
 84: 0
 85: NIL
 86: 2
 CENTRE DES FAIBLES RADIOACTIVITIES LABORATOIRE DU CNRS GIF SUR YVETTE

WHO FRA-15 L
 J. MORELLI
 CONTRIBUTION A L'ETUDE DU CYCLE DE METAUX POTENTIELLEMENT TOXIQUES DANS L'ENVIRONNEMENT ATMOSPHERIQUE MEDITERRANEEN. ORIGINES ET EVALUATION DE L'APPORT AU MILIEU MARIN
 82: 2
 83: 2
 84: 2
 85: 2
 86: UND
 ECOLE NORMALE SUPERIEURE PARIS

WHO FRA-32 L
 P. BUAT-MENARD
 DYNAMIQUE DU TRANSPORT ET DE LA RETOMBEE ATMOSPHERIQUE DES POLLUANTS METALLIQUES (CD, PB, ZN, CU) EN MER LIGURE; REPONSE DE LA COLONNE D'EAU AUX PERTURBATIONS INDUITES
 82: 0
 83: 0
 84: 0
 85: 0
 86: 3000
 LAB. MIXTE CNRS-CEA GIF SUR YVETTE

WMO GRE-42 L N. A. KATSANOS POLLUTANTS AT THE AIR-SEA INTERFACE	82: 0 83: 0 84: 0 85: 0 86: UND

WMO GRE-43 L N. E. POTSOVINOS NUMERICAL MODELING OF AEROSOL TRANSFER PROCESS FROM AIR TO SEA	82: 0 83: 0 84: 0 85: 0 86: UND

WMO ISR-20 L U. DAYAN / J.M. MILLER METEOROLOGICAL REVIEW FOR THE ASSESSMENT OF ATMOSPHERIC TRANSPORT OF POLLUTANTS INTO THE MEDITERRANEAN	82: 0 83: 0 84: 0 85: 0 86: 5000

WMO ITA-4 L L. SANTOMAURO DYNAMIC CLIMATOLOGY AND MODELLING OF LONG RANGE TRANSPORT OF AIR POLLUTION OVER MEDITERRANEAN SEA	82: 0 83: 0 84: 0 85: NAC 86: 0

WMO ITA-17 L A. PALUMBO POLLUTANT TRANSPORT MODELS AT THE AIR-SEA INTERFACE	82: 0 83: 0 84: 0 85: 4000 86: 0

WMO ITA-20 L I. DAGNINO MONITORING OF THE TRANSPORT OF POLLUTANTS THROUGH THE ATMOSPHERE	82: 0 83: 0 84: 0 85: WIT 86: 0

WMO ITA-34 L R. CECCHI TRANSFER OF POLLUTANTS FROM THE ATMOSPHERE TO THE NORTHERN ADRIATIC SEA AND TO THE NORTHERN TYRRHENIAN SEA	82: 0 83: 0 84: 0 85: NAC 86: 0

WMO ITA-41 L
G. CLERICI
TRANSPORT OF HEAVY METALS INTO MEDITERRANEAN SEA 82: 0
83: 0
84: 0
85: 5500
OSSERVATORIO METEOROLOGICA DI BRERA MILANO 86: 0

WMO ITA-60 L
A. PALUMBO
ATMOSPHERIC SOURCES OF OCEANIC POLLUTION 82: 0
83: 0
84: 0
85: 0
OSSERVATION METEOROLOGICO UNIVERSITA DI NAPOLI 86: UND

WMO ITA-63 L
S. GUERZONI
RIVERINE AND ATMOSPHERIC TRANSPORT OF DUSTS AND CONTAMINANTS INTO 82: 0
THE MEDITERRANEAN REGION 83: 0
84: 0
85: 0
ISTITUTO DI GEOLOGIA MARINE CONSIGLIO NAZIONALE DELLE RICERCHE 86: UND
BOLOGNA

WMO MOR-1 L
M. NEJJAR
CONTRIBUTION A L'ETUDE DES MECANISMES DE TRANSPORT ET DU FLUX DE P 82: 0
OLLUANTS A TRAVERS L'INTERFACE AIR/MER 83: 0
84: 0
85: NAC
ECOLE MOHAMMADIA D'INGENIEURS RABAT 86: 0

WMO MOR-3 L
M. NAJJAR
CONTRIBUTION A L'ETUDE DES MECANISMES DE TRANSFERTS DU POINT DE VU 82: 0
E HYDRODYNAMIQUE ET DE POLLUTION 83: 0
84: 0
85: NAC
ECOLE MOHAMMADIA D'INGENIEURS RABAT 86: 0

WMO SPA-8 L
A. CRUZADO
STUDY OF LONG AND MEDIUM RANGE ATMOSPHERIC POLLUTANT TRANSPORT INT 82: 0
O THE NORTHWEST MEDITERRANEAN SEA 83: 0
84: 0
85: 5000
CENTRO DE ESTUDIOS AVANZADOS DE BLANES (GIRONA) 86: 0

WMO SPA-11 L
M. G. MARINO
STUDY OF THE ROUTES AND BIOMAGNIFICATION PROCESSES AFFECTING AIRBO 82: 0
RNE POLLUTANTS ENTERING THE MEDITERRANEAN IN THE VICINITY OF CATAL 83: 0
UNA INDUSTRIAL AREA (SPAIN) 84: 0
85: NAC
ESCUELA NACIONAL DE SANIDAD CIUDAD UNIVERSITARIA MADRID 86: 0

WMO SPA-15 L
J. OBIOLS SALVAT
SPECIATION OF HEAVY METALS IN THEIR ATMOSPHERIC FLUX FROM LAND TO
COCCIDENTAL MEDITERRANEAN SEA 82: 0
83: 0
84: 0
85: NAC
INSTITUTO QUIMICO DE BARRIA BARCELONA 86: 0

WMO TUR-10 L
C. SAYDAM
MONITORING OF ATMOSPHERIC TRACE METAL TRANSPORTED TO THE EASTERN M
EDITERRANEAN 82: 0
83: 0
84: 0
85: NAC
MIDDLE EAST TECHNICAL UNIVERSITY ERDEMLL 86: 0

WMO YUG-29 L
Z. I. JANJIC
PRELIMINARY STUDY OF POTENTIAL LONG-RANGE CADMIUM TRANSPORT FROM M
AJOR IDENTIFIED SOURCES IN EUROPE INTO THE MEDITERRANEAN REGION 82: 0
83: 0
84: 0
85: 9500
FEDERAL HYDROMETEOROLOGICAL INSTITUTE BELGRADE 86: 0

RESEARCH PROJECTS - BUDGET ALLOCATIONS

(In U.S. Dollars)

ACTIVITY	1982	1983	1984	1985	1986	1987	TOTAL
A	-	42,000	30,000	30,000	35,000	36,000	173,000
B	-	18,000	16,000	18,000	16,000	18,000	86,000
C	-	36,000	16,000	18,000	16,000	18,000	104,000
D	49,000	41,000	20,000	30,000	25,000	36,000	201,000
E	-	18,000	16,000	18,000	16,000	18,000	86,000
F	14,000	18,000	16,000	18,000	20,000	26,000	112,000
G	39,500	18,000	16,000	18,000	20,000	26,000	137,500
H	14,000	23,000	20,000	20,000	25,000	26,000	128,000
I	24,000	10,000	10,000	15,000	12,000	20,000	91,000
J	5,000	10,000	10,000	10,000	14,000	12,000	61,000
K	37,500	33,000	20,000	20,000	25,000	30,000	165,500
L	50,000	33,000	20,000	30,000	25,000	30,000	188,000
GRAND TOTAL:-	233,000	300,000	210,000	245,000	249,000	296,000	1,533,000

In the 1982 budget, allocations were made for:

Study of pollutant transfer processes by sedimentation \$5,000
Study of pollutant transfer process through the Straits \$12,000

By AGENCY
Value = 1983

Crosstabulation: ACTIVITY
Controlling for YEAR

AGENCY-->	Count	FAO	WHD	Row Total
ACTIVITY G		28000	6000	34000
H		13700		13700
I		19500		19500
J		5500		5500
K		8300	3005	11305
Column Total		75000	9005	84005
		89.3	10.7	100.0

By AGENCY
Value = 1984

ACTIVITY
Controlling for YEAR

AGENCY->	Count	FAD	IOC	WHO	Row Total
A				12500	12500
D		6000		44500	50500
F			3800		3800
G		50700		11000	61700
H		16500			16500
I		30500			30500
J		7000			7000
K		14500		10355	24855
L			6800		6800
Column Total		125200	10600	76355	214155
		58.5	4.9	36.6	100.0

Crosstabulation: ACTIVITY Controlling for YEAR

By AGENCY Value = 1985

AGENCY-->	Count	FAO	IAEA	IOC	UNEP	WHO	WMO	Row Total
ACTIVITY								
A		6000	5000	13500		27500		52000
D		14000				70500		84500
F				72100				72100
G		71000				19000		90000
H		18000						18000
I		30000						30000
J		9000						9000
K		23000	6000			14500		43500
L			18000	55000			27000	100000
Z					73850	7000		80850
Column Total		171000	29000	140600	73850	138500	27000	579950
		29.5	5.0	24.2	12.7	23.9	4.7	100.0

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09/03/1987

Crosstabulation: ACTIVITY Controlling for YEAR By AGENCY Value = 1986

AGENCY→	Count	FAO	IAEA	UNEP	WHO	WMO	Row Total
ACTIVITY A	6000	11000		6500			23500
B				4000			4000
C				15500			15500
D	2000						2000
E				19500			19500
G	42000			12500			54500
H	6000						6000
I	11000						11000
J	2000						2000
K	14000	4500		10500			29000
L		5500				8800	14300
Z			22000	1000			24000
Column Total	84000	21000	22000	69500	8800		216300
	36.8	9.7	15.2	32.1	4.1		128.0

Number of Missing Observations = 0

54

Crosstabulation: ACTIVITY

BY AGENCY

AGENCY→ ACTIVITY	Count	FAO	IAEA	IOC	UNEP	WHO	WMO	Row Total
A		12000	16000	13500		46500		88000
B						4000		4000
C						15500		15500
D		22000				115000		127000
E						19500		19500
F				75900				75900
G		191700				48500		240200
H		54200						54200
I		91000						91000
J		24500						24500
K		59800	10500			38360		108660
L			27500	61800			35800	121100
Z					106850	8000		114850
Column Total		455200 11.6	50000 4.6	151200 13.8	106850 9.8	295360 27.0	35800 0.3	777441 100.0

Number of Missing Observations = 0

\$ 1,094,410

BY YEAR

rosstabilation: COUNTRY

YEAR→	Count	1983	1984	1985	1986	Row Total
DUNTRY						
ALB		2000	2000		3000	7000
CYP		4500	4000	4500	3000	16000
EGY		4005	7005	10600		21610
FRA		1000	1000	34700	33500	70200
GRE		2500	32000	117150	29500	181150
ISR		4000	38000	58000	23800	123800
ITA		21000	42500	131200	38500	233200
LEB		3000	2000	5000	5000	15000
LIB					7000	7000
MAL		3000	3000	9000	5000	19000
MOR				5000	2000	7000
SFA			7000	31000	17000	55000
TUN		3000	8350	7000		18350
TUR		14500	12500	17220	19000	63220
YUG		21500	54800	150800	30000	257100
Column Total:		84005	214155	579950	216300	**441
		7.7	19.6	53.0	19.8	100.0

umber of Missing Observations = 0

\$ 1,094,420

By YEAR

Crosstabulation: ACTIVITY

YEAR→	Count	1983	1984	1985	1986	Row Total
A			12500	52000	23500	88000
B					4000	4000
C					15500	15500
D			50500	84500	2000	137000
E					19500	19500
F			7900	72100		75900
G		34000	61700	90000	54500	240200
H		13700	16500	18000	6200	54200
I		19500	30500	30000	11000	91000
J		5500	7000	9000	3000	24500
K		11305	24855	43500	29000	108660
L			6900	100000	14300	121100
Z				80850	34000	114850
Column Total		84005	214155	579950	216300	**7441
Total		7.7	19.6	53.0	19.8	100.0

Number of Missing Observations = 0

\$ 1,094,410

Annex VII

Research projects submitted for 1987
(by Agency)

FAO research projects for 1987

FAO FRA/37
GOY, J.

Evolution de l'écosystème pélagique depuis le début du siècle en mer Ligure -
modélisation de son fonctionnement en milieux naturel et perturbé

FAO FRA/38 (Not endorsed)
WILKERSON, F.

Measurement of chemical composition and rates of ingestion, excretion,
respiration and DOM uptake by Mediterranean Medusae

FAO GRE/49
CASTRITSI-CATHARIOS, J.

Etude de la toxicité aiguë et des effets sublétaux des composants d'organotine
sur les Nauplii d'Artemia salina L. de Messolonghi, Grèce

FAO ISR/24
GALIL, B.S.

Pollution induced modifications in the composition and diversity of planktonic
larval Decapoda off the Mediterranean coast of Israel

FAO ITA/64 (Extension)
ALBERGONI, V.

Bioaccumulation studies and physiological and biochemical responses in marine
organisms exposed to heavy metals and polychlorinated biphenyls

FAO ITA/65 (Extension)
DALLA VENEZIA, L.

Study of osmoregulation mechanisms in marine invertebrates under polluted
conditions

FAO ITA/67
DE NICOLA GIUDICI

Physiological and biochemical response to PCB pollution of Idotea balthica in
respect to salinity, temperature and in comparison with heavy metals (Cd, Hg,
Cu)

FAO ITA/81 (Extension)
ROTTINI-SANDRINI, L.

Periodicity and causes of irregular macro- and microplankton blooms appearing
in eutrophicated areas in northern adriatic and gulf of Trieste

FAO ITA/83

CAPELLI, R.

Tin, organotin compounds and thallium in marine organisms

FAO ITA/91

GIORGI, R.

Bioaccumulation de Hg, Cr, Cd et Pb dans les stades juveniles des quelques espèces des poissons utilisés en aquaculture

FAO ITA/92

SCALERA LIACI, L.

Analysis of reproductive capacity of macroplankton blooms

FAO ITA/93

BOERO, F.

Activity, behaviour and diet of jellyfish along the Ligurian coast

FAO ITA/94

BRESSAN, G.

Monitorage des phanérogames marines du golfe de Trieste: analyse des variations de l'écosystème

FAO ITA/95

COGNETTI, G.

Comparative karyological and electrophoretical analysis of some groups of Invertebrata in polluted and brackish environments

FAO ITA/96

TARAMELLI-RIVOSACCHI, E

Cadmium in water, sediments and benthic organisms from a stretch of coast facing the thermoelectric centres at Torvaldaliga (Civitavecchia-Roma)

FAO ITA/97

BARCIGIANI, C.

Mercury presence in benthic organisms of the northern Tyrrhenian sea in relation to the cinnabar anomaly of Mount Amiata

FAO ITA/102

COSTANTINI, S.

Trace element evaluation in water, sediments and marine organisms of twenty stations of the Italian coasts

FAO ITA/104

FERRARA ROMANO

Role of Posidonia oceanica (L.) Delile prairies on bioavailability of mercury in marine environment

FAO ITA/105
DI MUCCIO, A.
Organic industrial chemicals: monitoring and impact assessment on sediments?
Seawater and marine organisms sampled in selected Italian coast areas

FAO ITA/106
MARANO, G.
Monitoring of macroplankton aggregation in the southern Adriatic Sea

FAO MOR/02 (Extension)
KESSABI, M.
Etude de la toxicité, de la bioaccumulation et de la persistance du DDT chez
le poisson

FAO TUN/05 (Not endorsed)
BELKHIR, M.
Biologie des eaux décolorées

FAO YUG/57
LUCU, C.
Interaction of metal pollutants with gill epithelia of marine organisms.
Transport and effects

FAO YUG/72
PAVICIC, J.
Metal-binding proteins similar to metallothioneins as a potential indicator of
metal pollution

FAO YUG/76
LOVRIC, A.-Z.
Ecological mapping of phyto-indicators of coastal pollution induced
degradation along the east Adriatic coast, islands, and estuaries

WHO Research projects for 1987

WHO GRE/52
KRIKELIS, V.
Inactivation of viruses in water environments

WHO GRE/53
MARCELOU-KINTI, A. and PAPADAKIS, J.
A study on the comparative distribution of microbial and yeast population in
sand and seawater

WHO GRE/54
VLACHOS, P.
Dermal diseases in sea swimmers

WHO ISR/23
MATES, A.
A simple rapid method for enumerating E. coli in seawater

WHO ITA/46 (Extension)
DELLA LOGGIA, R.
The potential toxicity of blooms in relation to their biochemical composition

WHO ITA/50
SALLEO, A.
Discharge mechanism of the nematocysts of Pelagia noctiluca. Comparative and toxicological aspects

WHO ITA/59 (Extension)
VOLTERRA, L.
Hygienic quality of shellfish: microbiological indicators of pollution versus other microbiological parameters

WHO ITA/66 (Extension)
DE FLORA, S.
Mutagenicity, genotoxicity, interactions and metabolism of chemical compounds in the marine environment and in marine organisms

WHO ITA/80 (Extension)
BRONZETTI, G.
Short term test in the mutagenic and carcinogenic detection of seawater pollutants

WHO ITA/82
CARLI, A.
Ecological and medical aspects of jellyfish

WHO ITA/84
TORREGROSSA, M.V.
Bacterial and chemical indicators of coastal waters pollution of human origin

WHO ITA/87
ZAMPIERI, A.
Relation between coastal water quality and health effects

WHO ITA/88
ZAPPONI, G. A.
The health component of environmental impact assessment - EIA of selected projects and developments in the Mediterranean coastal areas

WHO MOR/04 (Not endorsed)

BELEMLIH, A.

Bilan des pollutions microbiennes des eaux et coquillages en parallèle avec l'eutrophisation et les floraisons du plancton

WHO YUG/71

BATEL, R.

Genotoxic risk assessment in the marine environment using invertebrates as indicator organisms

WMO Research projects for 1987

WMO ISR/21

MAHRER, Y.

Three-dimensional modeling of the effects of sea and land breezes on pollution transport in the eastern Mediterranean sea

WMO ISR/22

WAKSHAL, E.

Chemical composition of major elements and cadmium content of rainwater and suspended particulate matter along the central and coastal plain of Israel

WMO ITA/60

PALUMBO, A.

Atmospheric sources of oceanic pollution

WMO ITA/63

GUERZONI, S.

Atmospheric transport of dusts and contaminants into the Mediterranean region

WMO MOR/03 (Extension)

NEJJAR

Contribution à l'étude des mécanismes de transferts des polluants aux points de contact entre les cours d'eau et la mer et à l'interface air/mer

WMO YUG/29 (Extension)

JANJIC, Z.

Definition of synoptic scale driving parameters for a model of atmospheric pollution transport towards and into the Mediterranean sea

WMO YUG/73

KLASINC, L.

Photochemical oxidants in the troposphere - Significance of land to sea transport in the Mediterranean

IAEA Research projects for 1987

IAEA GRE/51
KOUTSOUKOS, P.
The interaction of pollutants at the air/water/ sediment interfaces

IAEA ITA/70 (Extension)
CECCHI, R.
Experimental progresses in heavy metals PIXE analysis in seawaters

IAEA ITA/76 (Extension)
TASSI PELATI, L.
Biological transfer of radionuclides in the Sea

IAEA ITA/85
GUERZONI, S.
Development and testing of large-volume sampling and analytical techniques for trace metals in suspended and bottom sediments (for monitoring of marine pollutants)

IAEA ITA/98
ORIO, A.A.
The transport and fate of contaminants in a lagoon ecosystem: the Venice Lagoon case study

IAEA ITA/100
FRACHE, R.
Relationships between organically bound trace metals in settling particulate matter and biological processes in Ligurian sea

IAEA MOR/05
RAISSOUNI, B.
Trace metals (Hg, Pb, Fe, Cu, Ni) speciations and behaviour at estuarine and coastal water (Oued Moulouya - Mediterranean coast of Morocco)

IAEA YUG/74
HORVAT, M.
Establishment of mercury levels in the Adriatic sea

IAEA YUG/75
JUZNIC, K.
Distribution of Cs-137 and Sr-90 in adriatic marine organisms and sediments after the Chernobyl accident

IAEA YUG/77 (Not endorsed)

SKREBLIN, M.

Optimization of procedures for the determination of mercury in environmental samples using the M-511 gold film mercury analyzer

IAEA YUG/78 (Not endorsed)

MALEJ, A.

Chemical and isotopic composition of marine organic matter as indicators of its origin

IOC Research projects for 1987

IOC GRE/48

BONAZOUNTAS, M.

Optimization of sea outfalls

IOC GRE/50

KOUTITAS, C.

Physical investigation and modelling of circulation and pollutants transport in Aegean Sea

IOC ITA/23 (Extension)

CUNSOLO, S.

Vertical transport processes of marine water near the coasts (extension of ongoing project)

IOC ITA/56 (Extension)

FIERRO, G.

Sediment and particulate matter studies in the Ligurian sea: Mechanism of interaction with pollutant matter

IOC ITA/86

SANTANGELO, R.

Longshore currents

IOC ITA/89

PIERINI, S.

Low frequency oscillations in the Mediterranean sea

IOC ITA/90

STRAVISI, F.

A revision of the climatological series in the northern Adriatic with respect to oceanographic processes

IOC ITA/99
PURINI, R.
Air-sea interactions in the Mediterranean sea

IOC ITA/101
DE RENZI, G.P.
Evaluation of the contribution of hydrocarbons to the coastal pollution in
Tyrrhenian and Adriatic seas

IOC ITA/103
GUERZONI, S.
Transport of pollutant by sedimentation

IOC TUR/16
UNLUATA, U.
The transport of water and selected substances through the Strait of Canakkale
- the sea of Marmara - the Strait of Istanbul

IOC YUG/15 (Extension)
KUZMIC, M.
Mathematical modeling of horizontal circulation and vertical distribution of
currents in the northern Adriatic - second year

Annex VIII

A. List of assessments under preparation

ACTIONS	RESPONSIBLE AGENCY	DOCUMENT AT MEDU
1. Assessment of the state of pollution in the Mediterranean Sea by used lubricating oils and proposed measures	UNIDO/MEDU	Draft available. Sent for revision, Dec. '86.
2. Assessment of the state of pollution in the Mediterranean Sea by mercury and mercury compounds and proposed measures	FAO/MEDU	In preparation. Draft to be ready by 25 Jan. '87.
3. Assessment of the state of pollution in the Mediterranean Sea by cadmium and cadmium compounds and proposed measures	FAO/MEDU	In preparation. Draft to be submitted to MEDU by the end of Jan. '87.
4. Assessment of the state of pollution by petroleum hydrocarbons in the Mediterranean Sea	IOC/MEDU	Revised version of part I submitted to MEDU. Revised version of part A to be given to Jestic in London by 23 Jan. '87.
5. Assessment of the state of microbial pollution in the Mediterranean Sea and proposed measures for shellfish and shellfish growing waters	WHO/MEDU	Ros and Vaccarezza to be contacted. Revised version to be prepared based on information received.
6. Survey of land-based sources and amounts of pollutants reaching the Mediterranean Sea	WHO/MEDU	Draft questionnaire at MEDU. To be discussed.

ACTIONS	RESPONSIBLE AGENCY	DOCUMENT AT MEDU
7. Assessment of the state of pollution in the Mediterranean Sea by organohalogen compounds and proposed measures	FAO/MEDU	Draft of assessment prepared and it will be finalized during '87 for internal use.
8. Assessment of effects of organosilicon compounds and risk to marine life and human health	MEDU/WHO/FAO	Finalization at MEDU by 23 Jan. '87.
9. Mediterranean Regional Report. IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP. Joint Group of Experts on Scientific Aspects of Marine Pollution. GESAMP Working Group 26	MEDU	Draft at London Meeting.

B. Land-based Sources Protocol Implementation workplan and Budget for 1986
(Annex VII of document UNEP/WG.125/10)
Annex IV of document UNEP/WG.144/6)

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE	CONSULTANCY REQUIREMENTS	BUDGETARY REQUIREMENTS (US \$)
1. Completion and Revision of the Glossary	Protocol and Annexes	UNEP/MEDU, WHO	Dec. 1986 Jan. 1987	-	2,000
2. List of substances falling within each of the Groups in Annex I to the Protocol	Annex I	UNEP/MEDU, IRPTC	Dec. 1986 23 Jan. 1987	1 Consultant	4,000
3. List of substances falling within each of the Groups in Annex II to the Protocol	Annex II	UNEP/MEDU, IRPTC	Dec. 1986 23 Jan. 1987	1 Consultant	4,000
4. Assessment of the state of pollution in the Mediterranean Sea by used lubricating oils and proposed measures	Article 5; Annex I	UNEP/MEDU, UNIDO	Dec. 1986 23 Jan. 1987	1/	1/
5. Survey of land-based sources and amounts of pollutants reaching the Mediterranean Sea	Article 5 and 6; Annexes I and II	UNEP/MEDU, WHO	Dec. 1986	3 Consultants	37,000

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE	CONSULTANCY REQUIREMENTS	BUDGETARY REQUIREMENTS (US \$)
6. Assessment of the state of microbial pollution in the Mediterranean Sea and proposed measures for shell-fish and shell-fish growing waters	Article 6; Annex II	UNEP/MEDU, WHO	Dec. 1986	1 Consultant	5,000
7. An evaluation of the benefits and limitations of submarine pipelines, whether or not associated with treatment plants, for discharge of liquid effluents.	Article 7; para 1 (a)	UNEP/MEDU, WHO	Dec. 1986 WHO to proposed Consultant	1 Consultant	6,000
8. Formulation of the procedure for the collection and submission of information from the parties on measures taken, results achieved and difficulties encountered in the application of the Protocol	Article 13	UNEP/MEDU, WHO	Dec. 1986 End Jan. 1987	-	-
9. Draft guidelines for the issue of authorisations for the discharge of liquid wastes into the Mediterranean	Article 6	UNEP/MEDU, WHO	Dec. 1987 WHO to propose Consultant	2-3 Consultants	10,000
Total					68,000

* Budgeted in 1985 with US \$ 5,000 (with no additional cost in 1986)

Land-based Sources Protocol Implementation Workplan and Budget for 1987

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE (US \$)	CONSULTANCY REQUIREMENTS	BUDGETARY REQUIREMENTS
1. Assessment of the state of pollution in the Mediterranean Sea by cadmium and cadmium compounds and proposed measures	Article 5; Annex I	UNEP/MEDU, FAO	Dec. 1987 End Jan. 1987	1 Consultant	3,000
2. Assessment of the state of pollution in the Mediterranean Sea by organohalogen compounds and proposed measures	Article 5; Annex I	UNEP/MEDU, FAO	Dec. 1987	1 Consultant	3,000
3. Assessment of the state of pollution in the Mediterranean Sea by mercury and mercury compounds and proposed measures	Article 5, Annex I	UNEP/MEDU, FAO	Dec. 1987 End Jan. 1987	1 Consultant	5,000
4. A comparative review of the various types of treatment existing in the Mediterranean area for wastewaters, with the view to their re-use or their discharge into the sea	Article 7, para 1 (a)	UNEP/MEDU, WHO	Dec. 1987 Terms of reference by WHO by mid-February	1 Consultant	15,000

Land-based Sources Protocol Implementation Workplan and Budget for 1987

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE (US \$)	CONSULTANCY REQUIREMENTS	BUDGETARY REQUIREMENTS
5. Compilation of detailed information on existing legislative measures regarding the discharge of wastes through submarine outfalls in Mediterranean countries together with similar information from selected countries outside the region, to enable comparison and evaluation of applicability.	Article 7; para 1 (a)	UNEP/MEDU, WHO	Dec. 1987 Terms of reference by WHO by mid-February	1 Consultant	10,000
6. Identification and categorization of effluents requiring special and/or separate treatment and listing of such treatment and/or other requirements normally associated with or advisable for such effluents	Article 7, para 1(b)	UNEP/MEDU, WHO, UNIDO	Dec. 1987 Terms of reference by WHO by mid-February	1-2 Consultants	25,000
Total:					61,000
TOTAL FOR 1986 - 1987 BIENNIUM					: 129,000

Indicative Workplan and Timetable for the formulation of programmes and measures in terms of Articles 4, 5, 6, 7 and 13 of the Protocol from 1988 to 1995

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
1. Assessment of the state of pollution in the Mediterranean Sea by persistent synthetic materials which may float, sink or remain in suspension, and proposed measures	Article 5; Annex I	UNEP/MEDU, UNIDO IOC/FAO	Dec. 1988 Meeting Nov. 1987
2. Assessment of the state of pollution in the Mediterranean Sea by organophosphorous compounds and proposed measures	Article 5; Annex I	UNEP/MEDU, FAO FAO/IAEA	Dec. 1988 Meeting Oct. 1987
3. Assessment of the state of pollution in the Mediterranean Sea by organotin compounds and proposed measures	Article 5; Annex I	UNEP/MEDU, FAO FAO/IAEA	Dec. 1988 Meeting May or June 1987
4. Completion and revision of the list of substances included in the groups contained in annexes I and II to the Protocol	Annexes I, II	UNEP/MEDU, IRPTC FAO	Dec. 1988 Ongoing
5. Evaluation of in situ investigations on selected submarine outfalls to determine their technical efficiency and cost-effectiveness	Article 7, para 1(a)	UNEP/MEDU, WHO To be financed through MED POL monitoring	Dec. 1988

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
6. Survey of the situation currently existing with regard to products, installations and other processes within the region actually or potentially causing significant pollution of the marine environment	Article 7, para 1(d)	UNEP/MEDU, WHO UNIDO Terms of reference by WHO	Dec. 1988
7. Preparation of draft Annex IV to the Protocol concerning pollution from land-based sources transported by the atmosphere	Article 4	UNEP/MEDU, WMO WMO to explore with ECE and EEC	Dec. 1988
8. Assessment of the state of pollution in the Mediterranean Sea by radioactive substances and proposed measures	Article 5; Annex I	UNEP/MEDU, IAEA 1 Consultant by IAEA in 1988	Dec. 1989
9. Assessment of the state of pollution in the Mediterranean Sea by substances proven carcinogenic, teratogenic or mutagenic and proposed measures	Article 5; Annex I	UNEP/MEDU, WHO 1 Consultant by WHO in 1988	Dec. 1989
10. Assessment of the present state of pollution in the Mediterranean Sea by pathogenic microorganisms and proposed measures	Article 6; Annex II	UNEP/MEDU, WHO 1 Consultant by WHO in 1988	Dec. 1989

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
<p>11. Compilation and evaluation of already existing international experience of use of alternative products and processes. In this regard, experiences on recycling and re-use of solid and liquid wastes will be taken into account</p>	<p>Article 7, para 1(d)</p>	<p>UNEP/MEDU, WHO, UNIDO 1 Consultant by WHO in 1988</p>	<p>Dec. 1989</p>
<p>12. Assessment of the state of pollution by crude oils and hydrocarbons of any origin and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU</p>	<p>Dec. 1990</p>
<p>13. Assessment of the state of pollution in the Mediterranean Sea by zinc, copper and lead with proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1990</p>
<p>14. Assessment of the present state of pollution in the Mediterranean Sea by nickel, chromium, selenium and arsenic with proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1990</p>
<p>15. Identification and categorisation of alternative products, installations and other processes capable of reducing pollution of the Mediterranean marine environment</p>	<p>Article 7, para 1(d)</p>	<p>UNEP/MEDU, WHO, UNIDO</p>	<p>Dec. 1990</p>

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
16. Assessment of the present state of pollution in the Mediterranean Sea by inorganic compounds of phosphorous and elemental phosphorous and proposed measures	Article 6; Annex II	UNEP/MEDU, IOC	Dec. 1991
17. Assessment of the present state of pollution in the Mediterranean Sea by non-biodegradable detergents and other surface-active substances and proposed measures	Article 6; Annex II	UNEP/MEDU, WHO	Dec. 1991
18. Assessment of the present state of pollution in the Mediterranean Sea by thermal discharges and proposed measures	Article 6; Annex II	UNEP/MEDU, FAO	Dec. 1991
19. Common guidelines for the determination of the length, depth and position of pipelines for coastal outfalls, taking into account, in particular, the methods used for pre-treatment of effluents	Article 7, para 1(a)	UNEP/MEDU, WHO	Dec. 1991
20. Compilation of a Mediterranean inventory of effluents requiring special and/or separate treatment including type, category, amount, locality and existing treatment, if any, together with, wherever possible, those local characteristics influencing the effects of such effluents on the marine environment, and the feasibility of separate and/or special treatment	Article 7, para 1(b)	UNEP/MEDU, WHO, UNIDO	Dec. 1991

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
21. Formulation of draft common guidelines, standards and criteria for special requirements for effluents necessitating separate treatment	Article 7, para 1(b)	UNEP/MEDU, WHO, UNIDO	Dec. 1991
22. Survey on the yield and the cost/benefit of the application of alternative products and processes	Article 7, para 1(d)	UNEP/MEDU, WHO UNIDO	Dec. 1991
23. Assessment of the present state of pollution in the Mediterranean Sea by acid or alkaline compounds of such composition and in such quantity that they may impair the quality of seawater and proposed measures	Article 6; Annex II	UNEP/MEDU, IOC	Dec. 1992
24. Assessment of the present state of pollution in the Mediterranean Sea by substances which have, directly or indirectly, an adverse effect on the oxygen content of the marine environment, especially those which may cause eutrophication and proposed measures	Article 6; Annex II	UNEP/MEDU, IOC	Dec. 1992
25. Assessment of the present state of pollution in the Mediterranean Sea by barium, uranium and cobalt with proposed measures	Article 6; Annex II	UNEP/MEDU, FAO	Dec. 1992

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
<p>26. Assessment of the present state of pollution in the Mediterranean Sea by cyanides and fluorides and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, WHO</p>	<p>Dec. 1993</p>
<p>27. Assessment of the present state of pollution in the Mediterranean Sea by substances which, though of a non-toxic nature, may become harmful to the marine environment or may interfere with any legitimate use of the sea owing to the quantities in which they are discharged and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, IOC</p>	<p>Dec. 1993</p>
<p>28. Assessment of the present state of pollution in the Mediterranean Sea by organosilicon compounds and substances which may form such compounds in the marine environment, excluding those which are biologically harmless or are rapidly converted into biologically harmless substances and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1993</p>
<p>29. Assessment of the present state of pollution in the Mediterranean Sea by antimony, tin and vanadium with proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1994</p>

ACTIONS	RELEVANCE TO THE PROTOCOL	RESPONSIBLE AGENCIES	TARGET DATE
<p>30 Assessment of the present state of pollution in the Mediterranean Sea by substances which have a deleterious effect on the taste and/or smell of products for human consumption derived from the aquatic environment, and compounds liable to give rise to such substances in the marine environment and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, WHO</p>	<p>Dec. 1994</p>
<p>31. Assessment of the present state of pollution in the Mediterranean Sea by biocides and their derivatives not covered in Annex I and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1994</p>
<p>32. Assessment of the present state of pollution in the Mediterranean Sea by titanium, boron and silver and proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1995</p>
<p>33. Assessment of the present state of pollution in the Mediterranean Sea by molybdenum, beryllium, thallium and tellurium with proposed measures</p>	<p>Article 6; Annex II</p>	<p>UNEP/MEDU, FAO</p>	<p>Dec. 1995</p>

Annex IX

Status of preparation of Reference methods,
service visits during 1985 and 1986,
list of spare parts and accessories supplied to research institutes
and a summary of intercalibration exercises of 1985 and 1986

New reference methods printed during 1986

- UNEP/FAO/IOC
IAEA : Determination of DDTs and PCBs in selected marine organisms by packed column gas chromatography. Reference Methods for Marine Pollution Studies No. 14, Rev. 1, UNEP 1986.
- UNEP/IAEA : Determination of total iron in marine sediments by flame atomic absorption spectrophotometry. (Draft) Reference Methods for Marine Pollution Studies No. 37.
- UNEP/IAEA : Determination of total manganese in marine sediments by flame atomic absorption spectrophotometry. (Draft) Reference Methods for Marine Studies No. 38.
- UNEP/IAEA : Determination of total zinc in marine sediments by flame atomic absorption spectrophotometry. (Draft) Reference Methods for Marine Pollution Studies No. 39.
- IAEA Catalogue of Reference Methods for Marine Pollution Studies.

Reference methods currently being prepared

- UNEP/IAEA Guidelines for the use of Reference Methods in Marine Pollution Studies. In preparation. Reference Method "Zero" (In W.P. on 13/10/86).
- UNEP/WHO Guidelines for monitoring the quality of coastal recreational and shellfish-growing areas. Reference Method No. 1. (First substantive revised versions, English and French, arrived from Saliba)
- UNEP : Sampling and identification of common Mediterranean Scyphomedusae and evaluation of their occurrence. In preparation. Reference Method "A" (in W.P. - to be checked).
- UNEP/IOC/IAEA : Monitoring of petroleum hydrocarbons in sea water. In preparation. Reference Method "B" (Tikhonov, Moscow).
- UNEP/IAEA : Guidelines for monitoring of estuarine waters and suspended matter. In preparation. Reference Method "C" (in W.P. - Morris).
- UNEP/WHO/IAEA : Determination of faecal coliforms in estuarine waters, suspended matter and sediments. In preparation. Reference Method "D" (Saliba, The French version is ready to issue as a draft).
- UNEP/WHO/IAEA : Determination of phosphorus in suspended matter and sediments. In preparation. Reference Method "E" (Tikhonov, Moscow?)

- UNEP/WHO/IAEA : Determination of nitrogen in suspended matter and sediments. In preparation. Reference Method "F" (Tikhonov, Moscow - interested).
- UNEP/WHO/IAEA : Determination of BOD₅ and COD in estuarine waters. In preparation. Reference Method "G".
- UNEP/FAO/IAEA : Acute toxicity tests. Reference Method Nos. 43, 44 & 45. (In W.P. on 11/86).
- UNEP/IOC/IAEA : Determination of total cadmium in estuarine waters and suspended matter. In preparation. Reference Method "I" (ILMR).
- UNEP/FAO/IAEA : Biological non-acute toxicity tests. In preparation. Reference Method "J". (5 methods - discussed by S.R. Aston with G. Gabrielides on 10/86).
- UNEP/IOC/IAEA : Determination of basic oceanographic and meteorological conditions. In preparation. Reference Method "K" (Duinker - 31/5/86).
- UNEP/IOC/IAEA : Determination of standard physical and chemical parameters. In preparation. Reference Method "L" (Duinker - 31/5/86).
- UNEP/WHO/IAEA : Statistical methods for the evaluation of results from monitoring the quality of coastal recreational and shellfish-growing waters. (In W.P. under Reference Method "M" - French and English versions received from Saliba-WHO).
- UNEP/FAO/IOC/IAEA : Determination of DDTs and PCBs in selected marine organisms by capillary column gas chromatography. Reference Method No. 40 (In W.P. on 11/86).
- UNEP/IAEA : Determination of selected trace metals in aerosols and in wet precipitation. Reference Method No. 42. (In W.P. on 11/86)
- UNEP/IAEA : Determination of halogenated hydrocarbons in aerosols and in wet precipitation. Reference Method "P" - in preparation (Knap - sent reminder on 4/7/86).
- UNEP/WMO/IAEA : Sampling of dry deposition. In preparation. Reference Method "Q". (No contract as yet - 2 letters sent)
- UNEP/WHO/IAEA : Determination of methylmercury, total mercury and selenium in human hair. In preparation. Reference Method "AD".
- UNEP/IOC/IAEA : Guidelines for the determination of riverine inputs of contaminants to estuaries. Reference Method No. 41. (In W.P. on 21/7/86).
- UNEP/FAO/IAEA : Guidelines for monitoring chemical contaminants in marine organisms. Reference Methods for Marine Pollution Studies No. 6, UNEP (In preparation).

- UNEP/WHO/IAEA : Determination of Staphylococcus aureus in sea-water and sewage by the membrane filtration culture method. Reference Methods for Marine Pollution Studies No. 28, UNEP. (In W.P. as "S" - taken to printer on 24/9/86).
- UNEP/WHO/IAEA : Determination of Pseudomonas aeruginosa in sea water and sewage by the membrane filtration culture method. Reference Methods for Marine Pollution Studies No. 29, UNEP. (In W.P. as "T" - sent to OCA/PAC on Oct. 86).
- UNEP/WHO/IAEA : Isolation, enumeration of salmonella from sea-water and sewage. Reference Methods for Marine Pollution studies No. 30, UNEP. (In W.P. as "U" - sent to OCA/PAC).
- UNEP/IOC : Monitoring of Petroleum Hydrocarbons in sediments. Reference Methods for Marine Pollution Studies No. 20, UNEP. (In W.P. - Gems Workshop - Barcelona - final document)

Reference Methods for 1987

- IOC : Guidelines on the sampling and preparation of sediments for marine pollution monitoring (No. R)
- IOC : Guidelines for the control and management of analytical quality assurance for marine organism monitoring (No. S)
- IOC : Guidelines for the control and management of analytical quality assurance for marine sediment monitoring (No. T).
- FAO/IOC : Determination of total chromium in selected marine organisms by atomic absorption spectrophotometry (No. U).
- FAO/IOC : Determination of total cobalt in selected marine organisms by atomic absorption spectrophotometry (No. V).
- FAO/IOC : Determination of total nickel in selected marine organisms by atomic absorption spectrophotometry (No. W).
- FAO/IOC : Determination of total vanadium in selected marine organisms by atomic absorption spectrophotometry (No. X).
- FAO/IOC : Determination of total iron in selected marine organisms by atomic absorption spectrophotometry (No. Y).
- FAO/IOC : Determination of total manganese in selected marine organisms by atomic absorption spectrophotometry (No. Z).
- IOC : Determination of organotin compounds in selected marine organisms (No. AZ).

- IOC : Determination of organotin compounds in marine sediments (No. BZ).
- IOC : Determination of organophosphorus compounds in selected marine organisms (No. CZ)
- IOC : Determination of organophosphorus compounds in marine sediments (No. DZ)
- IAEA : Development of Reference Methods for selected radionuclide measurements in marine matrices (to be drafted at ILMR).

MAINTENANCE SERVICE

MEDPOL

SERVICE VISITS TO THE NATIONAL INSTITUTIONS AND REGIONAL ACTIVITY
CENTERS : JANUARY - DECEMBER 1986

<u>INSTITUTION</u>	<u>DATE</u>	<u>PURPOSE</u>
SPA/RAC, Salambo, Tunis	3 - 8 Feb.	Installation of WANG Data/Word Processing System
INSTOP, La Goulette Tunis	6 - 7 Feb	Service of: -VARIAN Recorder Mod 9176 -VARIAN Automatis Sample Dispenser
FISHERIES DEP/ NICOSIA, CYPRUS	15-16 March	Service of: -Aanderaa Current Meters -Aanderaa Tape Reader Link to Apple IIe computer
MARINE RESEARCH CENTER, BEIRUT *	16-23 March	Service of: -VARIAN GC 3700 -VARIAN Recorder 9176 -VARIAN Carbon Rod Atomizer Mod CRA-90
PAP/RAC, SPLIT	2 - 5 Apr	Installation of WANG Data/Word Processing System (new OIS-50 as a replacement of the initially installed one in Sep. 1985)
ISMAL, ALGER	11-15 May	Service of: -VARIAN GC 3700 -VARIAN AAS 1250 -Serial Interface for Perkin-Elmer AAS
RESEARCH AND TRAINING CENTER, PIRAN, YUGOSLAVIA	21-24 July	Service of: -VARIAN AAS 1250 -VARIAN GC 2400
CENTER FOR MARINE RESEARCH, ROVINJ, YUGOSLAVIA	25-27 July	Service of: -VARIAN AAS 1250 -Aanderaa Current Meters
PAP/RAC, SPLIT, YUGOSLAVIA	28-31 July	To complete the installation of the WANG System (OIS-50 and DW/OS-55)
OCEANOGRAPHIC INST SPLIT, YUGOSLAVIA	31 Jul-2 Aug	Installation of the VARIAN GC 3400
CENTER FOR SUBTR. CULTURES AND ENV. PROTECTION, BAR, YUGOSLAVIA	3 -4 Aug	Installation of Digital Readout Accessory to their PYE-Unicam AAS SP9-800, Service of: -Olivetti minicomputer P6040 -VARIAN Recorders 9176
SPA/RAC, SALAMBO, TUNIS	13-14 Oct	Service of the WANG OIS-50, PC, and DW/OS-55
INSTOP, La GOULETTE, TUNIS	15-16 Oct	Service of: -VARIAN AAS 1250 -VARIAN BC-6

* For the service purpose the instruments from Beirut were transported to the Laboratory in Nicosia, Cyprus

MAINTENANCE SERVICE
MEDPOLLIST OF OTHER VISITS AND ACTIVITIES FROM JANUARY TO DECEMBER 1986

<u>INSTITUTION</u>	<u>DATE</u>	<u>PURPOSE</u>
WANG FRANCE, Paris	10-12 March	OIS-50/1 System Training Course
Ministry of Hydraulics, Alger	14 May	Meeting with Mr.Benaji and Mr.Hamza
University of Alger	14 May	Assessment of the present situation, and state of the instruments
ANPE, Alger	14 May	Assessment of the present situation, and state of the instruments
WANG FRANCE,	21-22 May	WANG PC System/Supervisor training cours
VARIAN, ZUG, Swiss	9 -10 July	GC 3400 Service Training Course
VARIAN, ZUG Swiss	15-19 Dec	AAS 1275/ABD Service Training Course

MAINTENANCE SERVICE
MEDPOL

SUPPLY OF THE VARIOUS PARTS TO THE NATIONAL INSTITUTIONS

TURKEY

1. METU, Erdemli-Icel
(February 1986) Supply of:-H2 short lamp for background correction
-XENON Arc lamp for Turner Fluorometer
-Ceramic Injector Heater for VARIAN GC
-Metering valve for VARIAN M-80 automatic Gas-box unit

2. METU, Erdemli-Icel
(October 1986) Supply of:-Anode probe (VARIAN GC)
-Cathode probe "
-Oven temperature probe for VARIAN GC
-Cartridge heater (oven) for VARIAN GC
-Detector temperature probe for VARIAN GC
-Two Heat-sinks with SCR for VARIAN GC
-Three Transistors 2N3643 for VARIAN GC
-Three Transistors 2N2646 for VARIAN GC

ALGER

1. ISMAL, Alger
(May 1986) Supply of 14 books concerning Radioactive contaminations of the Marine Environment

2. ISMAL, Alger
(May 1986) Supply of:-Hamilton Siringe cleaner
-Hamilton needle cleaning kit
-GC PCB standards
-Pen Red Medium Dry for VARIAN Recorder
-Pesticide glass column

Yugoslavia

1. Center for Marine Research, Rovinj
Supply of:-"O" ring for Aanderaa RCM
-"C" clamp "
-Ten split pins pn 2462
-Five split pins pn 2062
-Spiral wire for lower spool holder
-Rotor tester (synchr.)
-Conductivity tester
-Set of screws for Aandera
-Five magnetic tapes "

- 2. Oceanographic Institut, Split
-Bubble flow meter (GC)

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Supply, cont.

3. PAP/RAC, Split

Supply of World Language Word
Processing Software Package for
WANG PC.

- <u>Summary:</u>	Number of countries visited	7
	Number of Institutions visited	15
	Number of Instruments serviced	27
	Number of visits	20
	Number of systems installed	6

VISITS TO THE NATIONAL INSTITUTIONS, REGIONAL ACTIVITY CENTERS, AND
OTHER VISITS IN 1985 AND 1986

<u>Duty period</u>	<u>Destination</u>	<u>Purpose</u>
1. 28-30 March 1985	Marine Research and Training Center, Piran, Yugoslavia	Service of VARIAN AAS Mod. 1250
2. 20-23 May 1985	WANG-France, Paris	OIS-50 Service Training Course
3. 24 May 1985	WANG-France, Paris	PTR-20 Service Training Course
4. 11-12 Jun 1985	WANG-France, Lyon	DW/OS-55 Service Training Course
5. 08-12 Jul 1985	MEDU Athens, Greece	To familiarize with MAP's Data Processing facilities
6. 09-15 Aug 1985	Fisheries Department Alexandria, Egypt	Service of: - VARIAN AAS Mod 1250 - VARIAN GC Mod 2450
7. 15-16 Aug 1985	University, Alexandria Egypt	Service of: - VARIAN AAS Mod 175
8. 06-11 Sep 1985	Genova, Italy	Installation of two WANG WP systems
9. 15-16 Sep 1985	Institute of Civil Engineering, Zagreb, Yugoslavia	Discussion with Dr. Sipos concerning Mod 511 Mercury Anal.
10. 17-18 Sep 1985	Center for Marine Research, Rovinj, Yugoslavia	Service of: - Aandera Current Met. - VARIAN AAS Mod 1250 - Hewlett-Packard GC
11. 19-20 Sep 1985	Marine Research and Training Center, Piran, Yugoslavia	Service of: - VARIAN AAS Mod 1250 - VARIAN GC Mod 2450
12. 29 Sep-2 Oct 85	PAP/RAC, Split, Yugoslavia	Installation of WANG Data/Word Processing System
13. 09-12 Dec 1985	ROCC, Malta	Installation of WANG Data/Word Processing System

- | | | | |
|---------------------------------------------------------------------------------------|----------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 14. | 03-08 Feb 1986 | SPA/RAC, Salambo,
Tunis | Installation of WANG
Data/Word Processing
System |
| 15. | 06-07 Feb 1986 | INSTOP, La Goulette,
Tunis | Service of:
- Recorder Mod 9176
- VARIAN Automatic
Sample Dispenser |
| 16. | 10-12 Mar 1986 | WANG-France, Paris | OIS-50/1 System
Training Course |
| 17. | 15-16 Mar 1986 | Fisheries Department,
Nicosia, Cyprus | Service of:
- Aanderaa Current Met
- Aanderaa Tape Reader
Link to Apple II
Computer |
| 18. | 16-23 Mar 1986 | Marine Research Center,
Beirut | Service of:
- VARIAN GC Mod 3700
- VARIAN Recorder 9176
- VARIAN Carbon Rod
Atomize, CRA-90 |
| NOTE: These instruments were transported to the
Nicosia Laboratory to be serviced. | | | |
| 19. | 02-05 Apr 1986 | PAP/RAC, Split,
Yugoslavia | Installation of WANG
Data/WP Sys. (new
OIS-50 as a replacement
for the initially
installed one in
Sep 1985 |
| 20. | 11-15 May 1986 | ISMAL, Alger | Service of:
- VARIAN GC Mod 3700
- VARIAN AAS Mod 1250
- Serial Interface for
Perkin-Elmer AAS |
| 21. | 14 May 1986 | Ministry of Hydraulics | Meeting with Mr. Benaji
and Mr. Hamza |
| 22. | 14 May 1986 | ANPE, Alger | Assessment of the
present situation, and
state of the instrum. |
| 23. | 14 May 1986 | University of Alger
Chromatography Lab. | Assessment of the
present situation, and
state of the instrument |
| 24. | 21-22 May 1986 | WANG-France, Paris | WANG PC System/Supervis
Training Course |

- | | | | |
|-----|-----------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25. | 09-10 Jul 1986 | VARIAN, Zug,
Switzerland | GC 3400 Service
Training course |
| 26. | 21-24 Jul 1986 | Research and Training
Center, Piran, Yugoslavia | Service of:
- VARIAN AAS Mod 1250
- VARIAN GC Mod 2450 |
| 27. | 25-27 Jul 1986 | Center for Marine Research
Rovinj, Yugoslavia | Service of:
- VARIAN AAS Mod 1250
- Aanderaa Current Met |
| 28. | 28-31 Jul 1986 | PAP/RAC, Split, Yugoslavia | To complete the
installation of the
WANG System (OIS-50
and DW/OS-55) |
| 29. | 31 Jul-2 Aug 86 | Oceanographic Institut,
Split, Yugoslavia | Installation of the
VARIAN GC 3400 |
| 30. | 03-04 Aug 1986 | Center for Subtropic
Cultures and Environmental
Protection, Bar,
Yugoslavia | Installation of Digital
Readout Accessory to
Their PYE-UNICAM AAS
Mod SP9-800, and
Service of:
-Olivetti minicomputer
-VARIAN Recorder 9176 |
| 31. | 13-14 Oct 1986 | SPA/RAC, Salambo, Tunis | Service of:
- WANG OIS-50,
- WANG PC
- WANG DW/OS-55 |
| 32. | 15-16 Oct 1986 | INSTOP, La Goulette, Tunis | Service of:
- VARIAN AAS Mod 1250
- VARIAN BC-6 |
| 33. | 15-19 Dec 1986 | VARIAN, Zug, Switzerland | AAS 1275ABD/1475ABD
Service Training Course |

SUMMARY

1. Number of countries visited:	11
2. Number of Institutions visited:	22
3. Number of visits:	33
4. Number of Instruments serviced	31
5. Number of the Installed Instruments (6 WANG computers, 1 VARIAN GC, 1 Digital Readout unit)	8

SUPPLY OF THE VARIOUS PARTS TO THE NATIONAL INSTITUTION, 1985 AND 1986

- | | | |
|------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 1. February 1985 | Institute of Public Health,
Split, Yugoslavia | Lamp Mirror for Perkin-
Elmer UV/VIS Spectropho-
tometer Mod 550 |
| 2. March 1985 | ISMAL, Alger | -Pesticide Glass Column
-IC 558, Operational Ampl
-Integrated Precision
Resistance Network for
ALTP, GC 3700 (VARIAN) |
| 3. July 1985 | Biological Institut, | -Anthrone
-Vanilline
-Cholesterol
-Coomassie Blue |
| 4. October 1985 | Marine Research and Training
Center, Piran, Yugoslavia | Two wrenches for GC
carrier gas cylinder |
| 5. November 1985 | ISMAL, Alger | Standards:
-Copepode: MA-A-1/OC
MA-A-1/TM
-Fish: MA-A-2/OC
-Sediment: SD-M-1/OC
-Oyster: MA-M-1/OC
-Plants: SP-M-1/OC |
| 6. December 1985 | Marine Research and Training
Center, Piran, Yugoslavia | Literature and technical
information for G26339
and G26340 Homogenizers |
| 7. December 1985 | ISMAL, Alger | - two cylinders of Helium
- two cylinders of Argon |
| 8. February 1986 | METU, Erdemli-Icel, Turkey | - H2 short lamp
- Xenon arc lamp
- Ceramic Injector Heater
- Metering valve |
| 9. April 1986 | ISMAL, Alger | - 14 books concerning
Radioactive contamin.
of the Marine Environm. |
| 10. May 1986 | ISMAL, Alger | - Hamilton Siringe clean.
- Hamilton needle
cleaning kit
- GC PCB Standards
- Pen, Red, Medium dry
- Pesticide glass column |

- | | | |
|------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11. July 1986 | Center for Marine Research
Split, Yugoslavia | - Aanderaa Current meters parts:
- "O" ring
- "C" clamp
- Ten split pins 2462
- Five split pins 2062
- Spiral wire for lower spool holder
- Rotor tester (synchro)
- Conductivity tester
- Set of screws
- Five magnetic tapes |
| 12. July 1986 | Oceanographic Institut,
Split, Yugoslavia | - Bubble Flow Meter (GC) |
| 13. August 1986 | PAP/RAC, Split, Yugoslavia | -World Language Word Processing Software Package for WANG PC |
| 14. October 1986 | METU, Erdemli-Icel, Turkey | - VARIAN GC parts:
- Anode probe
- Cathode probe
- Oven temp.probe
- Oven cartridge heater
- Det. Temp. probe
- Two heat sinks with SCR
- 3 Transistors 2N3643
- 3 Transistors 2N646 |

Summary sheet on intercalibration exercises1986 Exercises

1. Med-Pol: Petroleum Hydrocarbon Intercalibration
 Samples distributed: SD-K-1 (sediment) and MA-K-1 (oyster homogenate).
 Initial distribution date: 23 October 1985
 Reply date: 31 January 1986
 Replies received by 5 January 1987: 9
 Participant Laboratories: 21 - Cyprus (1), Egypt (3), France (1), Greece (3), Lebanon (1), Libya (1), Malta (1), Spain (5), Tunisia (1), Turkey (2), Yugoslavia (2).

2. Med-Pol participants in IAEA Intercalibration
 Samples distributed: MA-A-3/TM (shrimp, trace metals)
 MA-B-3/TM (fish, trace metals)
 MA-A-3/OC (shrimp, organochlorines)
 MA-B-3/OC (fish, organochlorines)
 Initial distribution date: 23 September 1985
 Reply date: 31 May 1986
 Replies received by 5 January 1987:
 MA-A-3/TM: 1
 MA-B-3/TM: 2
 MA-A-3/OC: 7
 MA-B-3/OC: 11
 Participant states from Med-Pol: 7 - Egypt, France, Italy, Libya, Spain, Turkey, Yugoslavia.

3. Med-Pol: Intercalibration of trace metals and organochlorines
 Samples distributed:
 MA(S)-MED-86/TM (shrimp, trace metals)
 MA(S)-MED-86/OC (shrimp, organochlorines)
 MA(F)-MED-86/TM (fish, trace metals)
 MA(F)-MED-86/OC (fish, organochlorines)
 Initial distribution date: 14 August 1986
 Reply date: 1 December 1986
 Replies received by 5 January 1987:
 MA(S)-MED-86/TM: 4
 MA(S)-MED-86/OC: 2
 MA(F)-MED-86/TM: 3
 MA(F)-MED-86/OC: 2
 Participant laboratories: 34 - Algeria (3), Cyprus (2), Egypt (3), Israel (1), Italy (1), Lebanon (2), Malta (1), Morocco (4), Yugoslavia (16), Spain (1) - of which 21 laboratories participate in trace metal intercalibration only and 6 laboratories for organochlorines only.

Reports published in 1986 from previous exercises

1. Final report on the IAEA/UNEP (Med-Pol) Intercalibration of the Analysis of Marine Environmental samples of Organochlorine Compounds (SD-M-1/OC and MA-M-2/OC). Distributed to participants February 1986.

 Participant laboratories: 13 - Cyprus (1), France (1), Italy (2), Spain (8), Yugoslavia (1).

2. IAEA Report No. 29 (in print) - Results of Med-Pol II Exercise for the Intercalibration of Chlorinated Hydrocarbon Measurements on Mussel Homogenate (MA-M-2/OC), December 1986. Participant laboratories: 16 - Cyprus (1), France (2), Italy (3), Spain (8), Yugoslavia (2).

3. IAEA Report No. 30 (in print) - Results of Med-Pol II Exercise for the Intercomparison of Trace Element Measurements on Mussel Tissue Homogenate and Marine Sediment (MA-M-2/TM and SD-N-1/2/TM). December 1986. Participant laboratories: 18 - France (1), Greece (2), Israel (1), Italy (3), Morocco (1), Spain (6), Tunisia (1), Yugoslavia (3).

Available (limited) stocks of reference material

Trace Metals

AD-N-1/2 - Sediment

MA-A-1 - Copepods

Chlorinated Hydrocarbons

MA-M-2/OC - Mussels

MA-A-1/OC - Copepods

MA-A-2/OC - Fish

SD-M-1 - Sediment

Petroleum Hydrocarbons

MA-K-1 - Oyster homogenate

Annex X

List of MAP Technical Series

Published in 1986

		No. of pages
No. 1	UNEP/IOC/WMO: Baseline studies and monitoring of oil and petroleum hydrocarbons in marine waters (MED POL I). MAP Technical Reports Series No. 1. UNEP, Athens 1986.	103
No. 2	UNEP/FAO: Baseline studies and monitoring of metals, particularly mercury and cadmium, in marine organisms (MED POL II). MAP Technical Reports Series No. 2. UNEP, Athens 1986.	227
No. 3	UNEP/FAO: Baseline studies and monitoring of DDT, PCBs and other chlorinated hydrocarbons in marine organisms (MED POL III). MAP Technical Reports Series No. 3. UNEP, Athens 1986.	135
No. 4	UNEP/FAO: Research on the effects of pollutants on marine organisms and their populations (MED POL IV). MAP Technical Reports Series No. 4. UNEP, Athens 1986.	125
No. 5	UNEP/FAO: Research on the effects of pollutants on marine communities and ecosystems (MED POL V). MAP Technical Reports Series No. 5. UNEP, Athens 1986.	153
No. 6	UNEP/IOC: Problems of coastal transport of pollutants (MED POL VI). MAP Technical Reports Series No. 6. UNEP, Athens 1986.	107
No. 7	UNEP/WHO: Coastal water quality control (MED POL VII). MAP Technical Reports Series No. 7. UNEP, Athens 1986.	433
No. 8	UNEP/IAEA/IOC: Biogeochemical studies of selected pollutants in the open waters of the Mediterranean (MED POL VIII). MAP Technical Reports Series No. 8. UNEP, Athens 1986.	49
No. 8 Add.	UNEP: Biogeochemical studies of selected pollutants in the open waters of the Mediterranean (MED POL VIII). Addendum, Greek Oceanographic Cruise 1980. MAP Technical Reports Series No. 8, Addendum. UNEP, Athens 1986.	75
No. 9	UNEP/FAO/UNESCO/WHO/WMO/IAEA/IOC: Co-ordinated Mediterranean pollution monitoring and research programme (MED POL - PHASE I). Final Report. February 1975 - March 1981. MAP Technical Reports Series No. 9. UNEP, Athens 1986. (in print)	280

List of MAP Technical Reports Series

To be published in the first half of 1987

		Approximate No. of pages	Date of issue
No. 10	UNEP/FAO: Research on the toxicity, persistence, bioaccumulation, carcinogenicity and mutagenicity of selected substances (Activity G). MAP Technical Reports Series No. 10.	104	Jan.'87
No. 11	UNEP: Rehabilitation and reconstruction of Mediterranean historic settlements. MAP Technical Reports Series No. 11.	160	Jan.'87
No. 12	UNEP/WHO: Epidemiological studies related to environmental quality criteria (Activity D). MAP Technical Reports Series No. 12.	150	Jan.'87
No. 13	UNEP/FAO: Pollution-induced ecosystems modifications (Activity I). MAP Technical Reports Series No. 13.	122	Jan.'87
No. 14	UNEP: A simplified method of environmental impact assessment to be applied in Mediterranean coastal areas. MAP Technical Reports Series No. 14.		Jan.'87
No. 15	UNEP/WHO: Biogeochemical cycles of specific pollutants (Activity K). MAP Technical Reports Series No. 15.	132	Jan.'87
No. 16	UNEP/FAO: Research on the toxicity, persistence, bioaccumulation, carcinogenicity and mutagenicity of selected substances (Activity G). MAP Technical Reports Series No. 16.	132	Jan.'87
No. 17	UNEP/WHO: Review of intercalibration exercises on microbiological methods for coastal water quality monitoring. MAP Technical Reports Series No. 17.	36	Jan.'87
No. 18	UNEP: Water resources development and management in Mediterranean islands. MAP Technical Reports Series No. 18.		March'87
No. 19	UNEP: National Monitoring Programme of Yugoslavia (1983-1986). MAP Technical Reports Series No. 19.		March'87
No. 20	UNEP: Integrated planning and management of Mediterranean coastal areas - first phase of action (1985-1986). MAP Technical Reports Series No. 20.		March'87

List of MAP Technical Reports Series

To be published in the first half of 1987

	Approximate No. of pages	Date of issue
No. 21 UNEP/WHO: Research on the toxicity, persistence, bioaccumulation, carcinogenicity and mutagenicity of selected substances (Activity G). MAP Technical Reports Series No. 21.		March'87
No. 22 UNEP/FAO: Pollution-induced ecosystems modifications. (Activity I). MAP Technical Reports Series No. 22.		March'87
No. 23 UNEP: National Monitoring Programme of Israel (1982-1986). MAP Technical Reports Series No. 23.		March'87
No. 24 UNEP/FAO: Biogeochemical cycles of specific pollutants (Activity K). MAP Technical Reports Series No. 24.		March'87
No. 25 UNEP: Land use planning in Mediterranean earthquake zones and minigation of seismic risk in the region. MAP Technical Reports Series No. 25.		June'87
No. 26 UNEP/FAO: Eutrophication and concomittant plankton blooms (Activity H). MAP Technical Reports Series No. 26.		June'87
No. 27 UNEP/WHO: Development and testing of sampling and analytical techniques for monitoring of marine pollutants (Activity A). MAP Technical Reports Series No. 27.		June'87
No. 28 UNEP/IOC: Research on oceanographic processes (Activity F). MAP Technical Reports Series No. 28.		June'87
No. 29 UNEP: Contribution to the development and management of Mediterranean aquaculture: (A) selection and protection of sites suitable for aquaculture, (B) proposal for a co-operative projection on environmentally sound management of Mediterranean aquaculture. MAP Technical Reports Series No. 29.		June'87
No. 30 UNEP/FAO: Effects of thermal discharges on coastal organisms and ecosystems. MAP Technical Reports Series No. 30.		June'87
No. 31 UNEP: The MED POL jellyfish programme (1984-1986). Final Report. MAP Technical Reports Series No. 31.		June'87

Annex XI

A. MED POL Meetings convened or co-convened by the
MAP Co-ordinating Unit
(October 1985 - December 1986)

	Agency	Document
1. International Conference on pollution of the Mediterranean , Split, 2-5 October 1985.	IAWPR/WHO/ UNEP	In preparation
2. Effects of pollution on marine ecosystems, Blanes, 7-11 October 1985.	FAO/UNEP	Issued FAO Fisheries Report No. 352
3. Consultation Meeting on the correlation between coastal water quality and health effects, Follonica, 21-25 October 1985.	WHO/UNEP	Issued ICP/CEH 001m06
4. Fifth International Exercise and Consultation Meeting on microbiological methods for coastal water quality monitoring, Marseille, 18-23 November 1985.	WHO/UNEP	Issued ICP/CEH 001m07
5. Meeting of Experts of the technical implementation of the Protocol for the protection of the Mediterranean Sea against pollution from land-based sources, Athens, 9-13 December 1985.	UNEP/ all Agencies	Issued UNEP/WG.125/10
6. Review Meeting of MED POL Jellyfish programme, Trieste, 27-29 January 1986.	UNEP	Issued UNEP/WG.145/3
7. Fourth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL, Athens, 16-20 June 1986.	UNEP/ all	Issued UNEP/WG.144/13
8. Consultation Meeting on health effects of methylmercury in the Mediterranean, Athens, 15-19 September 1986.	WHO/FAO/ UNEP	In preparation
9. Second IOC/CSIC/UNEP intercalibration exercise for oil and petroleum hydrocarbons, 9-18 October 1986.	IOC/UNEP	In preparation IOC-CSIC-UNEP/ MED CAL - 2/2

	Agency	Document
10. VIII ICSEM/IOC/UNEP Workshop on Marine Pollution of the Mediterranean Sea Palma de Mallorca, 20-22 October 1986	ICSEM/IOC UNEP	Issued ICSEM
11. Workshop on the determination of mercury, lead and cadmium in marine sediments and organisms, Monaco, 3-6 November 1986.	IAEA/FAO/ UNEP	In preparation
12. Consultation Meeting of principal investigators of oceanographic processes, Nicosia, 13-18 November 1986.	IOC/UNEP	In preparation

B. Meetings relevant to MED POL, planned for 1987,
to be convened or co-convened by the MAP Co-ordinating Unit

	Relevant decision	Budgetary amount	Allocation document	Resp. Officer	Leading Agency/ Coop. Ag	Date	Place
1. <u>Ad hoc</u> Meetings of scientist/experts from collaborating research centres to discuss specific problems of particular importance for the implementation of the monitoring programme	Genoa p. 28, para 1 j	30,000		Gabrielides/ ? Gabrielides/ Jeftic	FAO/IAEA/ UNEP FAO/IAEA/ UNEP UNEP	Meeting on organotin May/June Meeting on organosphosphorus October Meeting on data processing, June or November Meeting on floating/sinking litter November	
2. Consultation Meeting on measures to propose for prevention of pollution by mercury and cadmium				Kullenberg/ Gabrielides	IOC/FAO/ UNEP	7 Jan. 87	Athens
3. Consultation Meeting on the assessment of the MED POL monitoring programme				Jeftic	UNEP	8-9 Jan. 87	Athens
4. Interagency Advisory Committee				Jeftic Civili	UNEP	12-16 Jan. 87	Athens

	Relevant decision	Budgetary amount	Allocation document	Resp. Officer	Leading Agency (Coop.Ag)	Date	Place	
5. Consultation Meeting to assess the results of monitoring the pollutants from Land-based sources, including the effectiveness of presently used methodology and sampling strategies	Genoa, p. 28, para 1 j	15,000	Genoa VIII p. 8, para 4	Saliba	WHO	Oct./Nov. 87	Athens	
6. Scientific workshops and experts' meetings on topics which used a common methodology for sampling and analysis and co-ordination in work between research centres	Genoa, p. 28, para 2 c	The meetings will be budgeted through regular research agreements						
7. Meeting on appropriate methods for eutrophication assessment and identification of markedly eutrophied area	Genoa, p. 31, para H 1	12,000	Genoa, Annex VIII p. 10	Morcos Gabrielides Jeftic	UNESCO/ FAO/ UNEP	Mar. 2-6 '87	Bologna	
8. Meeting of the Working Group on Scientific and Technical Co-operation 1987	Genoa, Annex VIII p. 8, para 4	45,000	Genoa, Annex VIII p. 8, para 4	Jeftic	UNEP	Apr. 6-10 '87	Athens	
9. Training Course on modelling of dispersion from coastal outfalls				Kulleberg Jeftic	IOC/ UNEP	Oct. 87	Athens	

	Relevant decision	Budgetary amount	Allocation document	Resp. Officer	Leading Agency (Coop. Ag)	Date	Place
10. Consultation Meeting on the preparation of Annex IV of the LBS Protocol relative to the transport of pollution to the Mediterranean Sea through the atmosphere				Soudine/ Jeftic	WMO/ UNEP		
11. Consultation Meeting on correlation between coastal water quality (Recreational and shellfish growing waters) and health effects	Genoa, p. 30 para D 1	12,500	Genoa, Annex VIII, p. 10	Saliba	WHO	June-July '87	Italy
12. Workshop to review preliminary results of a pilot project and relevant research on airborne pollution in the Mediterranean region	Genoa, p. 32, para L 2	12,000	Genoa, Annex VIII, p. 10	Soudine	WMO	Nov. '87	Yugosl.
13. Expert Meeting to review results of ongoing research projects on work of transport of pollutants by sedimentation	Genoa, p. 32, para L 3	12,000	Genoa, Annex VIII	?/ Kullenberg	IAEA/ IOC	Dec. '87	Ville-franche

Annex XII

Relevant Decisions from Genoa Meeting and follow-up actions

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
1.	5	35	Greece/Turkey	Letters	MEDU		
2.	6	50	Training	Programme	MEDU	Agencies to propose a programme/end of Jan.	
3.	6	50	Equip./Mater.	Programme	MEDU		
4.	12 29	99 E1	Res. B	Prog./Proj.	MEDU/IAAC		
5.	12 29	99 E1	Res. C	Prog./Proj.	MEDU/IAAC	WHO to solicit proposals from countries/end of January	Being implemented
6.	12 29	99 E1	Res. E	prog./proj.	MEDU/IAAC		
7.	12	100	EAMTEX	Letter/Report	WMO	Draft letter to Spain/End of February	Report being prepared
8.	13 32	103 3f	MED POL X Bis	Programme	MEDU/WHO	In progress	In progress
9.	27 29 29 29 30	1f A1 A3 A4 G2	Ref. Meth.	prog./documents	IAEA/ all Agencies	In progress, see Annex VII	In progress

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
10.	27	1f	Ref. Mater.	Prog./documents	IAEA/ all Agencies	In progress, see Annex VIII	In progress
11.	28	1g	Air-monit.	Letters/project	WMO	Draft letter to countries/end of January	Incorporated in all activities, when- ever applicable
12.	28	1e	Natr. proc.	Letters/project		No action	
13.	28	1j	Monit. meet.	Meetings	MEDU/IAAC	See Annex XIII	Athens, Oct/Nov. '87
14.	28	1j	IBS monit.	Meeting	WHO/MEDU	See Annex XIII, Athens, February '87	
15.	28	2c	Sampl. Anal.	Meeting	All Agencies	Research funds to be used as appropriate, see Annex XIII	
16.	29	A2	Intercalib.	Letters/Exerc.	MEDU/IAAC	Letter/reminder sent to countries	
17.	29	A5	Interca. petr.	Meeting	IOC	See Annex XIII, Barcelona, October '86	Report in prepa- ration
18.	29	A5	Ref. Met. chem. Com.	Meeting	IAEA	See Annex XIII, Monaco, November '86	Report in prepa- ration
19.	30	D1	Epidem.	Project	WHO	In progress	
20.	30	D1	Wat. qual./Health	Meeting	WHO	See Annex XIII, Italy, November '87	June/July '87

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
21.	30	D2	Methyl Hg	Project	WHO	In progress	Report in progress
22.	30	D2	Methyl Hg	Meeting	WHO	See Annex XIII, Athens or Rome, Sept. '86	
23.	30	F1	Ocean.proc.	Review	IOC	In preparation: draft June '86, final Oct. '86	June '87 Oct. '87
24.	30	F1	Bibl.	Document	IOC	In preparation: draft June '86, final Oct. '86	June '87 Oct. '87
25.	30	G1	Carcin.	Prog.	WHO	In progress-letter for consult./end of May 86	
26.	30	G1	Toxic.	Prog.	FAO	In progress	
27.	30	G2	Acute Toxic.	Ref. meth.	FAO/IAEA	In preparation/April	Ready for printing
28.	30	G2	Sub-let. tox.	Ref. meth.	FAO/IAEA	In preparation/April	In preparation
29.	31	H1	Eutroph.	Meeting	UNESCO/FAO	See Annex XIII, Bologna, November 86	March '87
30.	31	H1	Eutroph.	Pilot project	UNESCO	Follow-up to No 29	
31.	31	H2	Jelly-fish	Meeting	MEDU	See Annex XIII, Trieste, 27-29 January 1986	

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
32.	31	H2	Jelly-fish	Report	MEDU	Follow-up to No 31	
33.	31	I1	Ecos. modif.	Programme	FAO/IOC	Explore training course	During '88
34.	31	J1	Thermal	Report	FAO	Report by Nov. 86 to be transmitted to WGSTC 87	Report in preparation
35.	31	K1	Mercury cycle	Projects	FAO	In progress	
36.	31	K2	Pathogens	Projects	WHO	In progress	
37.	31	L1	Transp/straits	Review	IOC	In progress	In progress through research
38.	31	L1	Exchange	Project	IOC	Second half of 86	In progress through research
39.	31	L1	Microlayer	Project	IOC	Solicit information on reliability and feasibility of existing techniques	In progress
40.	32	L2	Air	Project	WMO	Letter/reminder by March	
41.	32	L2	Air	Meeting	WMO	End of 87/Bapmon report by March 86, see Annex XIII	Nov. '87, Yugoslavia
42.	32	L2	Air	Report	WMO	March 1986	Information to be sent to MEDU

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
43.	32	L3	Sedimentation	Meeting	IAEA/IOC	See Annex XIII, second half of 1987	Dec. '87, Villefranche
44.	32	3e	LBS-Annex IV	Programme	MEDU/WMO	Letter to EEC, WMO Hire a consultant	WMO to contact EEC and ECE and propose a workplan for '88
45.	32	4a	Dump. auth.	Letter	MEDU		
46.	32	4b	Dump. exp.	Letter	MEDU		
47.	33	2a	Dump. Rep.	Letter	MEDU		
48.	33	2a	Dump. Rep.	Report	MEDU		
49.	33	3c	De-minimis	Letter	MEDU	by end of February	Reminder to be sent
50.	34	4a	Dump.monit.	Letter	MEDU		
51.	34	4b	Dump.res.	Letter	MEDU		
52.	34	5	Dump.	Letter	MEDU		
53.	37	3d	Hg monit.	Letter	FAO/MEDU		
54.	37	3e	Hg disch.	Letter	FAO/MEDU	Mid-February	
55.	37	3f	Hg inform.	Letter	FAO/MEDU		
56.	37	3g	Hg Survey	Project	WHO		
57.	37	3g	Hg Epidem.	Project	WHO		

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
58.	37	3g	Hg Relat.	Project	FAO	Ongoing	
59.	37	3g	Hg Cycle	Project	FAO		
60.	37	3g	Selenium	Project	FAO		
61.	38	3a	Bath. wat.	Letter	WHO/MEDU	End of January	
62.	38	3e	B.W. monit.	Letter	WHO/MEDU	End of January	
63.	38	3d	B.W. inform.	Letter	WHO/MEDU	End of January	
64.	39	3e	B.W. res.	Project	WHO		
65.	39	3e	B.W. Studies	Project	WHO		
66.	39	3e	B.W. Sampl.	Project	WHO	Ongoing	
67.	39	3e	B.W. Bath. Surv.	Project	WHO		
68.	39	3e	B.W. epid.	Project	WHO		
69.	39	7	Shell-fish	Programme	WHO/MEDU	Letter to ROS End of January	Letter to ROS, Vaccarezza, Jan. '87
70.	40		Floating	Letter	MEDU	End of February	
71.	41		COST	Letter	MEDU	End of February	
72.	An.VIII p.8		Intercal.	Meeting	IOC	See Annex XIII, Barcelona, October 86	

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
73.	An.VIII	p.8	ICSEM	Proceedings	MEDU/IOC		
74.	An.VIII	p.8	Assistance	Agreements	MEDU/IAAC		
75.	An.VIII	p.8	WGSTC 1986	Meeting	MEDU/IAAC	See Annex XIII, Athens, 16-21 June 1986	
76.	An.VIII	p.8	WGSTC 1987	Meeting	MEDU/IAAC	See Annex XIII, Athens, May 1987	Athens, April '87
77.	An.VIII	p.8	On-job training	Programme	MEDU	Proposals from Agencies by end of February	
78.	An.VIII	p.8	ICSEM	Meeting	MEDU/IOC	See Annex XIII, Palma de Majorca, 20-25 Oct. 86	
79.	An.VIII	p.8	Monitoring	Document.	MEDU/IAAC		
80.	An.VIII	p.8	Monitoring	Meetings	MEDU/IAAC	See Annex XIII	8-9 Jan. '87 <u>Ad hoc</u> meeting June or Nov. '87
81.	An.VIII	p.8	LBS	Meeting	WHO/MEDU	See Annex XIII, Athens, February 87	Oct/Nov '87
82.	An.VIII	p.8	Other	Meetings	MEDU		Ongoing

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
83.	An.VIII	p.9	Spares	Programme	IAEA		
84.	An.VIII	p.9	Equip.	Programme	IAEA		
85.	An.VIII	p.10	Res. A	Prog./Proj.	All Agencies		
86.	An.VIII	p.10	Res. B	Prog./Proj.	WHO		
87.	An.VIII	p.10	Res. C	Prog./Proj.	WHO		
88.	An.VIII	p.10	Res. D	Prog./Proj.	WHO, FAO		
89.	An.VIII	p.10	Res. E	Prog./Proj.	WHO		
90.	An.VIII	p.10	Res. F	Prog./Proj.	IOC		Ongoing
91.	An.VIII	p.10	Res. G	Prog./Proj.	FAO, WHO		
92.	An.VIII	p.10	Res. H	Prog./Proj.	FAO		
93.	An.VIII	p.10	Res. I	Prog./Proj.	FAO		
94.	An.VIII	p.10	Res. J	Prog./Proj.	FAO		
95.	An.VIII	p.10	Res. K	Prog./Proj.	FAO, WHO, IAEA		
96.	An.VIII	p.10	Res. L	Prog./Proj.	WMO, IAEA, IOC		
97.	An.VIII	p.10	Meet. A	Meeting	IAEA	See Annex XIII, Monaco, November 86	

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
98.	An.VIII	p.10	Meet. D	Meeting	WHO	See Annex XIII, Italy, November 87	Athens, Sept. '87
99.	An.VIII	p.10	Meet. D	Meeting	WHO	See Annex XIII, Italy, November 87	June/July '87
100.	An.VIII	p.10	Meet. H	Meeting	UNESCO/FAO	See Annex XIII, Bologna, November 86	March '87
101.	An.VIII	p.10	Meet. L	Meeting	WMO	See Annex XIII, End 87	Nov. '87 Yugoslavia
102.	An.VIII	p.10	Meet. L	Meeting	IAEA/IOC	See Annex XIII	Dec. '87 Villefranche
103.	An.VIII	p.12	MEDWAVES	Texts	MEDU		Ongoing

Annex XIII

Relevant decisions from LBS Meeting and follow-up actions

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
1.	5	28a	Draft forms	Letter	WHO/MEDU	End of January	
2.	5	28b	Draft forms	Document	WHO/MEDU	End of March	
3.	5	28c	Detail Comm.	Letter	WHO/MEDU	End of April	
4.	5	28c	Rev. version	Document	WHO/MEDU	End of '86	End of '87
5.	5	32	Outfall	Letter	WHO/MEDU	End of January	
6.	5	32	Outfall	Document	WHO/MEDU	Follow-up to No 5	Reminder
7.	6	36	B,C,E	Letter/Proj.	WHO/MEDU	Letter/reminder to be sent by end of January	
8.	An.IV,i		LBS-Air Annex	Programme	MEDU	See Annex X No 44	
9.	An.V,a		MED POL X Bis	Programme	WHO/MEDU	In progress	
10.	An.V,c		Information	Letter	WHO/MEDU	End of February	
11.	An.VI,c		Information	Letter	WHO/MEDU	End of February	See annex X of UNEP/IAAC-XX/19
12.	A.VII,1 86		Glossary	Letter	WHO/MEDU	Contact IRPTC/end of February	
13.	A.VII,2 86		List of Subst(I)	Letter	WHO/MEDU	Contact IRPTC/end of February	
14.	A.VII,3 86		List of Subs(II)	Letter	WHO/MEDU	Contact IRPTC/end of February	

	Page Para	Subject	Type of action	Leading organization	Action	
					1986	1987
15.	A.VII,4 86	Ass. lub. oils	Document	UNIDO/MEDU	In progress	
16.	A.VII,5 86	Survey LBS	Project	WHO/MEDU	In progress/ consultant	
17.	A.VII,6 86	Ass. microb.	Document	WHO/MEDU	Letter to Ros (Villa, Balland)	
18.	A.VII,7 86	Sub. pipelines	Document	WHO/MEDU	Consultant	
19.	A.VII,8 86	Coll. inf.	Document	WHO/MEDU	To be prepared	
20.	A.VII,9 86	Guid. authoriz.	Document	WHO/MEDU	See No 3	
21.	A.VII,1 87	Ass. Cadmium	Document	FAO/MEDU	Consultant	See annex X of UNEP/IAAC-XX/19
22.	A.VII,2 87	Ass. organohal.	Document	FAO/MEDU	Consultant	
23.	A.VII,3 87	Ass. Mercury	Document	FAO/MEDU	Consultant	
24.	A.VII,4 87	Treatments	Review	WHO/MEDU	Consultant	
25.	A.VII,5 87	Sub-outfalls	Review	WHO/MEDU	Consultant	
26.	A.VII,6,87	Effluents	Document	WHO/MEDU	Consultant	
27.	A.VIII,1 88	Ass. Pers. mat.	Document	UNIDO/MEDU		
28.	A.VIII,2 88	Ass.organ.phosph.	Document	FAO/MEDU		
29.	A.VIII,3 88	Ass. Organotin	Document	FAO/MEDU		

	Page Para	Subject	Type of action	Leading organization	Action	
					1986	1987
30.	A.VIII,4 88	List sub. (I-II)	Document	IRPTC/MEDU		
31.	A.VIII,5 88	Sub.outfalls	Document	WHO/MEDU		
32.	A.VIII,6 88	Products, instal.	Document	UNIDO/MEDU	Agencies to prepare development programme proposals	
33.	A.VIII,7 88	Draft Annex IV	Document	MEDU		See annex X of UNEP/IAAC-XX/19
34.	A.VIII,8 89	Ass.radioact.sub.	Document	IAEA/MEDU		
35.	A.VIII,9 89	Ass. carcinog.	Document	WHO/MEDU		
36.	A.VIII,10, 89	Ass.path.org.	Document	WHO/MEDU		
37.	A.VIII,11, 89	Altern. products	Document	UNIDO/MEDU		

Annex XIV

Relevant decisions from 1986 WGSTC Meeting and follow-up actions

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
1.	3	22	Reporting Forms	Proposal	MEDU		Ongoing (Vth WGSTC)
2.	3	22	Dissem. of monit. inform.	Proposal	MEDU		Ongoing (Vth WGSTC)
3.	4	27	Research	Proposal	MEDU		Ongoing (Vth WGSTC)
4.	5	32	Intercalibration	Report	IAEA/MEDU		Report at Vth WGSTC
5.	5	34	Submarine outfalls Monitoring	Proposal	WHO/MEDU		Ongoing
6.	5	36	Dumping, reports	Reminder	MEDU	Reminder	
7.	5	36	Dumping, nil reports	Reminder	MEDU	Reminder	
8.	5	36	Dumping, provisional procedure	Consolidate	MEDU		Report at Vth WGSTC
9.	6	42a	Authorization for discharge	Report	WHO/MEDU		Report at Vth WGSTC
10.	6	42b	Computation of outfalls	Report, action	WHO/MEDU		Report of Vth WGSTC
11.	6	43	LBS National legislation	Reminder	WHO/MEDU		Report at Vth WGSTC
12.	6	44	Competent national authorities	Reminder	WHO/MEDU		Report at Vth WGSTC

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
13.	7	46a	LBS questionnaire	Action	WHO/MEDU		Ongoing
14.	7	46b	LBS questionnaire	Action	WHO/MEDU		Ongoing
15.	8	50b	PH Assessment	Action	IOC/MEDU		Ongoing
16.	8	50e	PH Assessment	Report	IOC/MEDU		Ongoing
17.	8	51	Shellfish assessment	Action	WHO/MEDU		Ongoing
18.	8	52	Shellfish - Spain	Action	WHO/MEDU		Ongoing
19.	8	53	Shellfish assessment	Action	WHO/MEDU		Ongoing
20.	9	54	Shellfish assessment	Action	WHO/MEDU		Ongoing
21.	9	55	Shellfish assessment	Remainder	WHO/MEDU		Ongoing
22.	9	56	Shellfish assessment	Action	WHO/MEDU		Ongoing
23.	9	57a	Shellfish assessment	Reminder	WHO/MEDU		Ongoing
24.	9	57b	Shellfish assessment	Reminder	WHO/MEDU		Ongoing
25.	9	57c	Shellfish assessment	Reminder	WHO/MEDU		Ongoing
26.	9	57d	Shellfish assessment	Reminder	WHO/MEDU		Ongoing
27.	9	57e	Shellfish assessment	Reminder	WHO/MEDU		Ongoing
28.	9	57f	Shellfish assessment	Reminder	WHO/MEDU		Ongoing

Annex XV

Relevant decisions from IAAC Meetings and follow-up actions

	Page	Para	Subject	Type of action	Leading organization	Action	
						1986	1987
1.	1	4	Quality of monitor data	To continue	MEDU	Ongoing	
2.	1	5	Equipment, transfer of property	Action	Agencies		Agencies to inform UNEP
3.	2	6	List of research projects	Action	MEDU	Ongoing	
4.	2	7	Submission date of research		MEDU	Ongoing	
5.	2	8	Future of research components	Proposals	MEDU/Agencies	Ongoing	
6.	2	10	Reference methods		Agencies		List to be updated
7.	2	11	Intercalibration		IAAC/MEDU	Ongoing	
8.	3	14	Group training	Action	Agencies		Proposals from Agencies
9.	3	15	Procedure for monitoring	Action	MEDU/Agencies	To be followed	To be followed
10.	3	15	Procedure for research	Action	MEDU/Agencies	To be followed	To be followed
11.	3	17	Exchange of Information	Action	Agencies	Ongoing	
12.	4	18	Research Vessels	Action	MEDU/FAO		
13.	4	19	ICSEM, Palma de Mallorca		MEDU		
14.	4	20	MAP Technical Series		MEDU		
15.	4	21	Length of IAAC Meetings		MEDU	Ongoing	

Annex XVI

Distr.
RESTRICTED

UNEP/WG. /1
15 January 1987

Original: English

Fifth Meeting of the Working Group for
Scientific and Technical Co-operation for MED POL

Athens, 6-10 April 1987

Draft provisional agenda

1. Opening of the Meeting
2. Rules of procedure
3. Election of Officers
4. Adoption of Agenda
5. Organization of work
6. Progress report on the implementation of MED POL and proposed activities and budgetary requirements for biennium 1988-1989
7. Progress in the implementation of the LBS Protocol
8. Progress in the implementation of the Dumping and Emergency Protocols
9. Assessment of the state of pollution in the Mediterranean Sea by used lubricating oils and proposed measures
10. Assessment of the state of pollution in the Mediterranean Sea by mercury and mercury compounds and proposed measures
11. Assessment of the state of pollution in the Mediterranean Sea by cadmium and cadmium compounds and proposed measures
12. Assessment of the state of microbial pollution in the Mediterranean Sea and proposed measures for shellfish and shellfish growing waters
13. Assessment of the state of pollution by petroleum hydrocarbons in the Mediterranean Sea
14. Organosilicons, assessment of effects and risk to marine life and human health
15. Other business
16. Adoption of Report
17. Closure of the Meeting

Distr.
RESTRICTED

UNEP/WG. /Inf.1
15 January 1987

Original: English

Fifth Meeting of the Working Group for
Scientific and Technical Co-operation for MED POL

Athens, 6-10 April 1987

Provisional list of documents

- | | | |
|----------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UNEP/WG. | /1 | Provisional agenda |
| UNEP/WG. | /2 | Provisional annotated agenda |
| UNEP/WG. | /3 | Progress report on the implementation of MED POL during 1986 and 1987 and proposed activities and budget for the biennium 1988-1989 |
| UNEP/WG. | /4 | Progress report on the implementation of Land-based sources Protocol |
| UNEP/WG. | /5 | Revised Draft Glossary of terms appearing in the Protocol for the Protection of the Mediterranean Sea against pollution from Land-based Sources and in annexes I, II and III thereto |
| UNEP/WG. | /6 | List of substances for used lubricating oils, mercury and mercury compounds, cadmium and cadmium compounds and organochlorine compounds |
| UNEP/WG. | /7 | Progress report on the implementation of the Dumping Protocol |
| UNEP/WG. | /8 | Assessment of the state of pollution in the Mediterranean Sea by used lubricating oils and proposed measures |
| UNEP/WG. | /9 | Assessment of the state of pollution in the Mediterranean Sea by mercury and mercury compounds and proposed measures |
| UNEP/WG. | /10 | Assessment of the state of pollution in the Mediterranean Sea by cadmium and cadmium compounds and proposed measures |
| UNEP/WG. | /11 | Assessment of the state of microbial pollution in the Mediterranean Sea and proposed measures for shellfish and shellfish-growing waters |
| UNEP/WG. | /12 | Assessment of the state of pollution by crude oils and hydrocarbons of any origin and proposed measures |
| UNEP/WG. | /13 | Assessment of effects and risks of organosilicon compounds to marine life and human health |
| UNEP/WG. | /14 | Report of the Fifth Meeting of the Working Group for Scientific and Technical Co-operation for MED POL |

Annex XVII

Budget for the 1988/1989 activities
to be proposed to the Fifth Working Group for
Scientific and Technical Co-operation for MED POL

CHAPTER 3 - MED POL - MONITORING

	1988	1989
1. PERSONNEL <u>A/</u>		
(a) <u>Experts/Staff</u>		
- FAO Fishery Expert, P-5	12mm 67,000	12mm 68,000
- WHO Senior Scientist, P-5	12mm 75,000	12mm 76,000
- IAEA Maintenance Engineer, P-3	12mm 62,000	12mm 63,000
Sub-total 1(a)	204,000	207,000
(b) <u>Consultants</u>	15,000	35,000
Sub-total 1(b)	15,000	35,000
(c) <u>Administrative Support</u>		
- FAO Secretary, Athens, Local, G-4	12mm 14,000	12mm 15,000
- WHO Secretary, Athens, Local, G-4	12mm 15,000	12mm 16,000
- WHO Secretary, Copenh. Local, G-4	6mm 9,000	6mm 10,000
- IAEA Lab. Assist., Monaco Local, G-4	12mm 27,000	12mm 28,000
Sub-total 1(c)	65,000	69,000
Component total	284,000	311,000
2. TRAVEL <u>B/</u>		
- FAO	11,000	12,000
- UNESCO/IOC	5,500	6,000
- WHO	11,000	12,000
- WMO	7,500	8,000
- IAEA	22,000	24,000
Component Total	57,000	62,000

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

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

	1988	1989
3. SUBCONTRACTS		
LBS - Pilot project on monitoring of organo-phosphorus compounds, including selection of method and preparation of assessment and proposed measures	35,000	-
LBS - Pilot project on monitoring of organotin compounds, including selection of method and preparation of assessment and proposed measures	35,000	-
LBS - Pilot project on monitoring of persistent synthetic materials, including selection of method and and preparation of assessment and proposed measures	35,000	-
LBS - Pilot project on monitoring of methods for carcinogenic, teratogenic or mutagenic substances, including selection of method and preparation of assessment and proposed measures	5,000	35,000
LBS - Pilot project on monitoring of submarine outfalls and evaluation of their technical efficiency	20,000	-
LBS - Preparation of draft annex IV to LBS Protocol on pollutants transported through the atmosphere	7,500	-
LBS - Compilation of use of alternative products and processes	-	10,000
LBS - Survey of products and installations causing pollution	-	10,000
QA - Intercalibration and training course on determination of microbiological pollution	15,000	15,000
QA - Intercalibration and traning course on determination of chlorinated hydrocarbons	15,000	-
QA - Intercalibration and training course on determination of organic mercury	-	15,000

	1988	1989
QA - Training course on treatment and interpretation of biological effects data	15,000	-
QA - Training course on analysis of physical oceanographic data and time-series	-	15,000
QA - Purchase of standards and reference materials to be distributed to laboratories	20,000	25,000
QA - Joint exercises on monitoring and intercomparison of results including sampling and analysis of split samples and expert assistance to laboratories for sampling, analysis, presentation and evaluation of results	110,000	140,000
MON/ - Printing of IX ICSEM/IOC/UNEP Workshop LBS/ proceedings QA/RES	10,000	-
MON - Assistance through agreements for monitoring programmes	580,000	620,000
LBS - Assistance to countries for the implementation of LBS protocol	45,000	105,000
Component total	947,000	990,000

	1988	1989
<p>4. MEETINGS/TRAINING/WORKSHOPS/FELLOWSHIPS</p> <p><u>Meetings:</u></p> <p>MON/ - Working Group for Scientific and Technical LBS/ Co-operation QA/RES</p> <p>MON - Meeting of responsible investigators of monitoring programmes</p> <p>MON - <u>Ad hoc</u> consultation meeting on data processing</p> <p>MON - <u>Ad hoc</u> consultation meeting on monitoring</p> <p>LBS - <u>Ad hoc</u> meeting for the preparation of annex IV of LBS</p> <p><u>Training:</u></p> <p>MON/ - On-job training (through the secretariat) QA</p> <p><u>Fellowships:</u></p> <p>MON/ - Attendance at IX ICSEM/IOC/UNEP Workshop LBS and other meetings QA/RES</p>	<p>50,000</p> <p>40,000</p> <p>7,500</p> <p>7,500</p> <p>7,500</p> <p>80,000</p> <p>60,000</p>	<p>55,000</p> <p>-</p> <p>7,500</p> <p>7,500</p> <p>-</p> <p>80,000</p> <p>35,000</p>
Component total	252,000	185,000
<p>5. EQUIPMENT</p> <p><u>Expendable:</u></p> <p>MON - Spare parts for common maintenance service (through IAEA)</p> <p><u>Non-expendable:</u></p> <p>QA - Laboratory equipment (to ILMR), purchase and maintenance</p>	<p>30,000</p> <p>20,000</p>	<p>35,000</p> <p>20,000</p>
Component total	50,000	55,000

CHAPTER 4 - MED POL - RESEARCH

	1988	1989
A. SUBCONTRACTS		
RES Activities A-L	320,000	350,000
Component Total	320,000	350,000
B. MEETINGS		
RES Activity C	<u>1/</u>	-
D	-	25,000
E	-	25,000
F	25,000	-
G	25,000	-
L	-	25,000
Component Total	50,000	75,000
GRAND TOTAL	370,000	425,000

1/ Meeting will be funded by WHO/EURO at no cost to MTF.

MED POL - SUMMARY TABLE

	1988	1989
CHAPTER 3 - MONITORING		
1. PERSONNEL	284,000	311,000
2. TRAVEL	57,000	62,000
3. SUBCONTRACTS	947,500	990,000
4. MEETINGS/TRAINING/FELLOWSHIPS	252,500	185,000
5. EQUIPMENT	50,000	55,000
CHAPTER 3 - TOTAL	1,591,000	1,603,000
CHAPTER 4 - RESEARCH		
A. SUBCONTRACTS	320,000	350,000
B. MEETINGS	50,000	75,000
CHAPTER 4 - TOTAL	370,000	425,000
GRAND TOTAL	1,961,000	2,028,000

MED POL - SUMMARY TABLE FOR 1988

	MON	LBS	QA	RESEARCH	TOTALS
CHAPTER 3 - MONITORING					
1. PERSONNEL					
(a) Experts	97,500	35,500	35,500	35,500	204,000
(b) Consultants	-	15,000	-	-	15,000
(c) Admin. Support	9,500	9,500	36,500	9,500	65,000
2. TRAVEL	30,750	8,750	8,750	8,750	57,000
3. SUBCONTRACTS	582,500	185,500	177,500	2,500	947,500
4. MEETINGS/TRAINING/FELL.					
WGSTC	12,500	12,500	12,500	12,500	50,000
MONIT. MEETING	40,000	-	-	-	40,000
DATA PROCESSING	-	-	7,500	-	7,500
MONITORING	7,500	-	-	-	7,500
DRAFT ANNEX IV	-	7,500	-	-	7,500
TRAINING	50,000	-	30,000	-	80,000
FELLOWSHIPS	15,000	15,000	15,000	15,000	60,000
5. EQUIPMENT					
EXPENDABLE	30,000	-	-	-	30,000
NON-EXPENDABLE	-	-	20,000	-	20,000
CHAPTER 4 - RESEARCH					
A. SUBCONTRACTS	-	-	-	320,000	320,000
B. MEETINGS	-	-	-	50,000	50,000
	875,250	288,750	343,250	453,750	1,961,000