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REGIONAL
SEAS

UNITED NATIONS ENVIRONMENT PROGRAMME

*Contingency plan for the
combating of oil pollution
in the South-East Pacific
in cases of emergency*

UNEP Regional Seas Reports and Studies No. 43

Prepared in co-operation with



COMISION PERMANENTE DEL PACIFICO SUR



UNEP 1984

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PREFACE

The United Nations Conference on the Human Environment (Stockholm 1972) adopted, inter alia, the principle that "the marine environment and all the living organisms which it supports are of vital importance to humanity" and recognized that "proper management is required and measures to prevent and control marine pollution must be regarded as an essential element in this management." Furthermore, the Conference recommended that Governments take early action to adopt "effective national measures for the control of all significant sources of marine pollution, including land-based sources, and concert and co-ordinate their actions regionally and where appropriate on a wider international basis." ^{1/}

The subsequent meetings of the Governing Council of the United Nations Environment Programme (UNEP) repeatedly endorsed the regional approach to the control of marine pollution and requested the development of comprehensive regional marine environmental programmes for areas of the ocean where such programmes do not yet exist. Consequently, in 1974 the Regional Seas Programme of UNEP was initiated.

The Regional Seas Programme at present includes eleven ^{2/} regions and has over 120 coastal States participating in it. ^{3/ 4/} It was conceived as an action-oriented programme encompassing a comprehensive, transsectoral approach to marine and coastal areas and to environmental problems concerning not only the consequences but also the causes of environmental degradation. Each regional action plan is shaped according to the needs of the region concerned. All of the regional action plans contain elements related to environmental assessment and environmental management. Decisions on management must ideally be based on the assessment of an environmental situation so as to determine what kind of action may best be taken, either to correct the situation or to forestall its deterioration. The assessment component of UNEP is code-named Earthwatch, and one of its elements is the Global Environment Monitoring System (GEMS) which is a set of internationally co-ordinated activities for the collection and evaluation of data, the comparability of which should be assured as a basic requirement for global assessment. ^{5/} Data generated through the regional monitoring and research activities carried out in the framework of regional action plans contribute to GEMS. The regional action plans promote the parallel development of regional legal agreements and of action-oriented programme activities as embodied in the action plans.

^{1/} United Nations: Report of the United Nations Conference on the Human Environment (Stockholm, June 1972). A/CONF.48/14/Rev.1. United Nations, 1972.

^{2/} Mediterranean, Kuwait Action Plan, West and Central Africa, Wider Caribbean, East Asian Seas, South-East Pacific, South Pacific, Red Sea and Gulf of Aden, East Africa, South-West Atlantic and South Asian Seas.

^{3/} UNEP: Achievements and planned development of UNEP's Regional Seas Programme and comparable programmes sponsored by other bodies. UNEP Regional Seas Reports and Studies No. 1. UNEP, 1982.

^{4/} UNEP: Regional Seas Programme: Workplan. UNEP Regional Seas Reports and Studies No. 18. UNEP, 1982.

^{5/} UNEP: Environmental assessment under Earthwatch. UNEP/WG.30/3. UNEP, 1979.

The over-all strategy to be followed in the Regional Seas Programme was defined by UNEP's Governing Council ^{6/} as:

- promotion of international and regional conventions, guidelines and actions for the control of marine pollution and for the protection and management of aquatic resources;
- assessment of the state of marine pollution, of the sources and trends of this pollution, and of the impact of the pollution on human health, marine ecosystems and amenities;
- co-ordination of the efforts with regard to the environmental aspects of the protection, development and management of marine and coastal resources;
- support for education and training efforts to make possible the full participation of developing countries in the protection, development and management of marine and coastal resources.

Since each regional action plan is aimed at benefitting the States of a particular region, Governments are involved from the very beginning in its formulation. Once the action plan has been accepted by the Governments, it is implemented under the over-all authority of the Governments concerned or by national institutions nominated by the Governments.

The South-East Pacific Region was recognized by the UNEP Governing Council as one of the "concentration areas" in which UNEP, in close collaboration with other United Nations bodies, should play its catalytic role by assisting the developing States of the South-East Pacific Region in co-ordinated preparation and implementation of a mutually agreed action plan.

A Conference of Plenipotentiaries was held in Lima in November 1981 at which Chile, Colombia, Ecuador, Peru, the four Member-States of CPPS, and Panama approved an Action Plan and a Regional Convention and Agreement on cases of emergency and established the financial arrangements necessary to support the activities called for in the Action Plan. The Conference was in favour of the establishment of a Trust Fund. CPPS was designated the secretariat of the Action Plan and the Convention and was entrusted with the management of the Fund. A consultative group was established to assist and guide CPPS in the implementation of the Action Plan. The over-all authority for the Action Plan would continue to be the annual Conference of CPPS.

Since the adoption of the Action Plan for the South-East Pacific, CPPS, with the support and assistance of UNEP and of the relevant international organizations, has undertaken the following activities:

- Preparation of a contingency plan to combat oil pollution;
- Preparation of a programme for monitoring and control of marine pollution from oil and domestic, industrial and agricultural sources;
- Preparation of a programme for ecological baseline studies to assess the effects of major pollutants on marine and coastal ecosystems.

^{6/} UNEP: Report of the Governing Council of UNEP. UNEP/GC.6/19. Decision 6/2. UNEP, 1978 (see also UNEP/GC.6/7, paras. 396 - 397).

A workshop of technical and legal experts (Quito, September 1982) reviewed and revised a protocol to control marine pollution from land-based sources ^{7/}, prepared by CPPS in co-operation with UNEP.

The Protocols and programmes referred to in paragraphs 8 and 9 were presented for adoption at the First Intergovernmental Meeting on the South-East Pacific Action Plan (Quito, July 1983) which was convened at plenipotentiary level. The Protocols and documents adopted at the meeting were:

- Protocol for the Protection of the South-East Pacific against Land-Based Sources of Pollution;
- Complementary Protocol to the Agreement on Regional Co-operation to Combat Pollution of the South-Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency;
- Regional Contingency Plan to Control Oil Pollution in the South-East Pacific in Cases of Emergency;
- Regional Pilot Programme to Monitor, Research and Control Oil Pollution in the South-East Pacific;
- Regional Pilot Programme to Monitor the Effect of Pollution on the Marine Environment in Selected Areas of Colombia, Chile, Ecuador, Panama and Peru, and
- Regional Pilot Programme to Monitor Marine Pollution from Domestic, Agricultural, Industrial and Mining Sources in Areas Ecologically Sensitive.

On the basis of the recommendations made at the First Meeting of the Over-all Authority of the Action Plan, the document UNEP-CPPS/IG.45/7 "Contingency Plan for the Combating of Oil Pollution in South-East Pacific in Cases of Emergency", as revised by the Regional Co-ordinating Unit, is reproduced below.

^{7/} CPPS/UNEP: Informe del seminario taller sobre la "Legislación referente a la protección y preservación del Pacífico Sudeste contra la contaminación proveniente de fuentes terrestres". (Quito, Ecuador, September 1982). Document SL/13. CPPS/UNEP, 1982.

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1. INTRODUCTION

The Contingency Plan set forth below is one of the developments under the Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific, signed in Lima on 12 November 1981 by Colombia, Chile, Ecuador, Panama and Peru, and specifically under annex II: "Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or other Harmful Substances in Cases of Emergency", and its 1983 protocol.

In formulating the Contingency Plan, account has been taken of the following documents:

Permanent Commission of the South Pacific/ United Nations Environment Programme
1981 (UNEP/CPPS) "Sources, levels and effects of marine pollution in the South-East Pacific (Colombia, Chile, Ecuador, Panama and Peru)", CPPS Seminar and Study Series No. 2, Lima, Peru.

Permanent Commission of the South Pacific/United Nations Environment Programme
1981 (UNEP/CPPS) "Directory of Marine Research Centres in the South-East Pacific", UNEP, Geneva.

I. Vergara and F. Pizarro: "Diagnosis of Marine Pollution by Petroleum in the
1981 South-East Pacific. Report of IMCO" - UNEP document CPPS/WG.57/Inf.5, 30 June 1981; included in "Sources, Levels and Effects of Marine Pollution in the South-East Pacific (Colombia, Chile, Ecuador, Panama and Peru)", CPPS Seminar and Study Series, No. 2, Lima, Peru, 1981.

Permanent Commission of the South Pacific/United Nations Environment Programme
1981 (UNEP/CPPS) "Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency - UNEP document CPPS/IG.32/4, in the Final Act of the Conference of Plenipotentiaries on the Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific, Lima, Peru, 9-12 November, document UNEP-CPPS/IG.32/4, and Additional Protocol to the Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency, in the Final Act of the sixteenth Ordinary Meeting of the Permanent Commission of the South Pacific, Res. 3, General Secretariat of the Commission, Lima, Peru, 7-11 December 1981.

Chilean Navy - Directorate-General of Maritime and Merchant Navy Affairs, Directiva
1982 31-S, Valparaíso, 10 December 1982; 27 pp, two annexes (in preparation).

National Defence Ministry - Under-Secretary for Naval Affairs: National Contingency
Undated Plan for Combating Hydrocarbon Spills and Action Plan annexed to the National Contingency Plan for Combating Hydrocarbon Spills 12 pp, (in course of printing).

F. Pizarro: Manual for the Supervision of Activities to Combat Hydrocarbon Spills -
Undated Directorate-General of Maritime and Merchant Naval Affairs, Republic of Chile, 30 pp. (in course of printing).

Anon: Emergency Plan for Offshore Areas - National Petroleum Company,
Magallanes, 7 pp. 6 annexes, undated.

Ecuadorian Navy - Directorate-General of Merchant and Coastal Affairs: Fundamental Undated Aspects of the National Contingency Plan - Control of Oil Spills. Annexes: Guide for Emergencies; Essential Information Concerning Incidents; 17 pp. (in process of printing).

Ecuadorian Navy - Coastguard Command, Action for the Control of Pollution by Undated Hydrocarbons in the Area of the Gulf of Guayaquil; 10 pp., annexes.

Ecuadorian Navy - Directorate of Merchant Navy and Coastal Affairs; Plan of Action Undated for the Prevention, Surveillance and Control of Contamination by Hydrocarbons in the Gulf of Guayaquil - DIMERSCOGUAR document, 6 pp., annexes (in process of printing).

Ecuadorian State Petroleum Corporation: Functions and Organization, Environmental Undated Advisory Services, and annex, 10 pp. (in process of printing).

Republic of Colombia: National Code for Renewable Natural Resources and 1974 Environmental Protection; Section VI - Protection of the Marine Environment and Reduction of Marine Pollution, Chapter I: Environmental Emergencies, National Contingency Plan, Labour Force - Decontamination of Coasts, pp. 68-83.

C.J. Garrido and F. Othon: Contingency Plan for dealing with Spills of Hydrocarbons, Undated By-products and Other Pollutants in Ports; Republic of Panama Maintenance Department, Pollution Control Section, Port of Balboa, 11 pp., annexes (in process of printing).

Anon: Contingency Plan for Dealing with Spills of Hydrocarbons, By-products and 1983 other Pollutants in Ports; Cristobal, Republic of Panama, 8 pp., annexes (in process of printing).

2. OBJECTIVES

To establish and develop the means of promoting regional co-operation and mutual assistance among Governments for the prevention and control of marine pollution caused by hydrocarbon spills in cases of emergency, and to provide basic information called for in the Agreement.

3. SPHERE OF APPLICATION OF THE REGIONAL CONTINGENCY PLAN (RCP)

The sphere of application of the RCP shall be the belt of sea and the coastal area of the South-East Pacific within the 200 mile maritime area of sovereignty and jurisdiction of the High Contracting Parties and, beyond that area, the high seas up to a distance within which pollution of the high seas may affect that area.

4. DEFINITIONS

Governing Body means the body or institution designated by each country to deal with a marine pollution emergency; it shall be represented by its highest official (see annex I).

Executing Centre means the unit responsible, within the Governing Body, for co-ordinating the operations for dealing with the emergency. It shall be represented by its most senior official or by the official specifically appointed for the purpose in each country (see annex II).

Chief of Operations means the person responsible for directing emergency operations, and appointed by the Governing Body or the Executing Centre for that purpose.

Executive Secretariat. As agreed by the High Contracting Parties in the Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency, the Executive Secretariat means the Permanent Commission of the South Pacific. For the purpose of this Regional Contingency Plan, it shall be represented by its Secretary-General (see annex III).

Regional Contingency Plan (RCP). This plan relates to co-operation extended by two or more countries to another country with a view to solving a pollution problem caused by, or likely to be caused by, a hydrocarbon spill affecting the interests of one or more signatories to the Agreement.

Bilateral Contingency Plan (BCP). This plan relates to co-operation extended by one country to another with a view to solving a pollution problem caused by, or likely to be caused by, a hydrocarbon spill affecting the interests of a signatory of the Agreement.

National Contingency Plan (NCP). This plan is the instrument determining a country's organizational mechanisms, resources and strategies for dealing with a pollution emergency, including the necessary basic information.

Related Interests means:

- (a) The quality of life and health of coastal populations;
- (b) The conservation of living resources;
- (c) Activities in coastal waters, islands, ports and estuaries, including those concerned with fisheries; and
- (d) The historical and touristic heritage of the area concerned, including sports and recreational activities.

Co-operating Country means country which provides experts, equipment or fungible materials to a requesting country.

Requesting Country means country which receives the co-operation of experts or the loan of equipment and or fungible materials.

5. FUNCTIONS WITH RESPECT TO THE RCP OR BCP

5.1 Governing Body

The Governing Body, represented by its Director, shall be responsible for channelling the country's co-operation under the Regional Plan when it participates as a co-operating country. The Governing Body shall also act as the national representative when its country participates in the Plan as a requesting country.

The specific functions of the Governing Body shall be:

- (a) At the request of the Governing Body of another country, to arrange for the implementation of the Contingency Plan in accordance with the procedures provided for in such cases;
- (b) To establish continuous communication with the Governing Body of the other country with a view to initiating the co-operation requested;
- (c) To inform the Executive Secretariat of the implementation of the RCP and BCP and of all measures taken and request its co-operation, if required;
- (d) To order the implementation of the Regional or Bilateral Contingency Plans, a copy of the implementation order being sent to the Executing Centre of the requesting country;
- (e) To inform the Executive Secretariat of exchanges of personnel, equipment and communications and of the implementation of the RCP and BCP, and to request its co-operation, if required;
- (f) To inform the Governing Bodies of other countries of the possibility of pollution in their areas where such pollution appears likely;
- (g) To take the necessary preliminary action to ensure the free entry and departure of equipment and experts of contracting countries, and their employment in the national territory in combating a spill;
- (h) To ensure the availability of funds to cover the costs incurred in controlling a spill pending the receipt of payments from insurance or other sources of financing;
- (i) To order the payment of fees and payment for the hire of equipment and replacement of equipment, where necessary;
- (j) To produce the accounts for the payment of fees, hire of equipment or replacement of plant and equipment sent to the Governing Bodies of requesting countries;
- (k) To transmit to the Executive Secretariat a report on the pollution problem, the solutions applied and an evaluation of such solutions.

5.2 Executing Centre

The functions of the Executing Centre shall be:

- (a) To request the Executing Centres of other countries to provide the experts, equipment and materials required by the Chief of Operations once the RCP and BCP has been put into operation;
- (b) To ensure that the necessary arrangements have been made at the place of arrival for the entry of the equipment into the country and its transfer to the site of the spill for prompt action;
- (c) To produce for its country's Governing Body and account of the time employed by experts and equipment, and of the materials used, in dealing with an emergency;

- (d) To transmit to its country's Governing Body a report on the pollution problem, the solutions applied and an evaluation of such solutions, with recommendations.

5.3 Chief of Operations

The functions of the Chief of Operations or of the person designated by him shall be:

- (a) To request his country's Executing Centre to provide the experts, equipment and materials required to deal effectively with the emergency situation;
- (b) To receive the plant and equipment and sign the certificate attesting to their condition;
- (c) To obtain board and lodging for experts from other countries, as far as possible;
- (d) To arrange for the use of the plant and equipment and to assign functions to experts. These functions shall in no case involve the taking of decisions, which shall be the responsibility of the Chief of Operations;
- (e) To arrange for and proceed with the return of plant and equipment and material not in use and produce a certificate attesting to their final condition, and, if applicable, to the need for their replacement. The certificate shall also show the length of time the equipment has been in use and the time worked by experts. It shall be countersigned by an expert from the country to which the equipment belongs (country of origin), if one is available. The certificate shall be transmitted to the Executing Centres of countries of origin and requesting countries.

5.4 Executive Secretariat

The functions of the Executive Secretariat shall be:

- (a) To inform the Governing Bodies about organizational, personnel or communications changes in any country which is a signatory of the Agreement;
- (b) To distribute the information received from the various countries and international bodies and inform the Executing Centres of the various countries concerning up-to-date literature on spill control;
- (c) To co-ordinate loans of plant and equipment and expert assistance if so requested by one of the High Contracting Parties concerned;
- (d) To co-ordinate assistance from international bodies when so requested by the Contracting Parties;
- (e) To co-ordinate theoretical and practical courses on the control of oil spills or promote the holding of such courses in member countries;
- (f) To co-ordinate the carrying out of simulation exercises designed to ensure the effective operation of the RCP and BCP and to procure funds for these purposes;
- (g) To advise governments on the implementation of National Contingency Plans or of the RCP and BCP;

- (h) To establish co-ordination of activities in the case of a spill within the limits of two countries;
- (i) To settle, in regular or extraordinary meetings, problems that may arise in the event of pollution in neighbouring areas.

6. OPERATIONAL PROCEDURES

In the event of an accidental spill of hydrocarbons, the country concerned shall assess the need for putting the RCP or BCP into operation and may request co-operation from one country (BCP) or several countries (RCP) according to its requirements. It is recommended, however, that the RCP or BCP should be put into operation only in cases of sustained spills of hydrocarbons in amounts exceeding 10,000 barrels or when its effects are likely to be of a scale that would make such action advisable.

The procedure in both cases shall be:

- (a) The Governing Body of the requesting country shall put the RCP or BCP into operation by sending a telex to the Governing Body or Bodies of the country or countries of origin, with a copy to the Executive Secretariat and the Executing Centre in its own country (see section V and annex IV).

It shall be stipulated in the telex that the country concerned shall cover all the costs entailed by the implementation of the RCP or BCP and that the transport system, experts, plant and equipment dispatched will be received in the national territory. The telex shall also contain basic information concerning the spill;

- (b) The Governing Body or Bodies of the country or countries of origin shall reply to the telex, giving approval for the operation with copies to:
 - The Executing Centre in their own country, which shall be expected to interpret the approval as an order for immediate assistance;
 - The Executing Centre of the requesting country, which shall be expected to interpret it as an authorization to request whatever may be required;
 - The Executive Secretariat for information and co-ordination;
- (c) The Executing Centre in the requesting country shall submit a request, by telex, to the Executing Centre or Centres in the country or countries of origin, for:
 - Experts appearing in the list of experts, by country, contained in annex V, giving their names. Where, as in some countries, an expert is not employed by the Executing Centre, a copy of the telex shall be sent to the expert or to the body by which he is employed, as shown in annex V. The anticipated length of stay shall also be specified;
 - Plant and equipment, which should be listed, with their specifications, the quantity required and the anticipated period of use. It shall also be stated whether such ancillary equipment as hoses, brackets and nozzles is required, (see annexes VI and VII);

- Conveyance of the experts and/or plant and material, to a precise point in the national territory, which should be shown together with the means of transport preferred;
- (d) The Executing Centre of the country of origin:
- Shall co-ordinate with the regional centres or bodies the procurement, dispatch and insurance of the plant and equipment and send a delivery certificate (annex VIII) for signature by the Chief of Operations of the requesting country;
 - Shall issue the necessary orders, or co-ordinate with the bodies concerned, as appropriate, to secure the co-operation of the experts requested. The Centre shall also be responsible for providing the experts with return tickets and appropriate travel allowances and with life and disability insurance;
- (e) The Chief of Operations of the requesting country or the person designated by him shall take delivery of the plant and equipment and sign the relevant certificate. Within the limitations of the area concerned, he shall provide board and lodging facilities to arriving experts and inform them about sickness or accident insurance, which shall be the responsibility of the requesting country. While remaining in the requesting country, the experts, plant and equipment shall be assigned to the Chief of Operations, who shall decide on the activities to be carried out by the experts and on the points to which the equipment is to be sent during the emergency;
- (f) When the emergency is over, the Chief of Operations shall draw up a certificate for the return of the plant and equipment and for which purpose the same form may be used as for the certificate of receipt, showing the mechanical condition and state of cleanliness of the equipment on handing over the quantity of materials returned, the quantity used and a detailed explanation of the need for any replacement of equipment, (annex VIII).

The time worked by the experts shall also be shown.

The Chief of Operations shall send the certificate to the Executing Centres of the requesting country and of the country or countries of origin.

The Chief of Operations shall be responsible for the packaging and prepaid dispatch of the plant and equipment to the country of origin;

- (g) The Executing Centre in the country of origin shall draw up the account for payment which shall be sent by the Governing Body to the Governing Body of the requesting country, and the latter shall pay the amount involved to the Governing Body of the country of origin, in United States dollars, against a receipt (annex XIII);
- (h) In the case of replacement of equipment, the country of origin shall include the amount concerned in the account or, if it so desires, shall ask the requesting country to make arrangements for the purchase and dispatch of replacement equipment within the shortest possible time.

7. OTHER ASPECTS

To enable the RCP or BCP to function properly, each country must have:

- (a) A National Contingency Plan (NCP) covering, as a minimum, the items listed in annexes IX and X;
- (b) Sufficient readily available funds to deal with a spill pending the availability of insurance funds or funds from those responsible for the spill;
- (c) Basic equipment for controlling a spill of up to 10,000 barrels;
- (d) Personnel trained in handling hydrocarbon spills;
- (e) Personnel trained in legal aspects of marine pollution.

8. EXPERTS

Visiting experts shall:

- (a) In no case be responsible for decision-making; responsibility for which shall devolve on the Chief of Operations.
- (b) Enjoy the same treatment as equivalent experts of international organizations;
- (c) Not impart any information concerning the spill;
- (d) Be provided by their Governments or by the body for which they work with life insurance and disability insurance;
- (e) Be provided by the requesting countries with sickness and accident insurance.

9. UPDATING AND SIMULATION OF THE RCP AND BCP

For a contingency plan to be of any value, it is essential to show that everything functions as planned. It is recommended, therefore, that the Executive Secretariat should co-ordinate the carrying out of at least one regional simulation exercise every two years - depending on the number of accidents that have occurred in the Region and on the financing available - to be determined by the Over-all Authority together with one theoretical exercise each year. The financing shall be provided for in the NCPs.

A contingency plan cannot be static; to it must be added the acquisition of equipment in individual countries, new experts, changes of personnel in fields of responsibility related to the plan, and new procedures. It is recommended, therefore, that those responsible for the execution of the Plan in each country should meet every two years, at the same time as the Over-all Authority, which shall immediately inform the Governing Body and Executing Centre of each country of any change in the key personnel of the RCP or BCP.

10. TRAINING OF PERSONNEL

It is stressed that the training of personnel in the control of oil spills is of fundamental importance for the success of NCPs, RCP and BCPs. It is proposed, therefore, that each country shall hold theoretical and practical course on the subject twice a year. For this purpose, the courses provided by the Chilean Navy and the Colombian Petroleum Enterprise - ECOPETROL (annex XI) may be taken as a model.

Until all countries have the necessary personnel and equipment for doing so, it would be desirable for the Executive Secretariat, making use of the resources already available in the South-East Pacific countries, to co-ordinate and promote assistance to personnel of countries requiring the training of experts.

In view of the vast turnover of staff in our countries, such courses should be offered on a continuous basis.

It is further recommended that, in the event of a spill, experts from other countries should be invited to attend as observers, to enable them to gain experience.

11. DETECTION AND REPORTING OF SPILLS

Each country, according to the means of communication it uses, shall obtain the co-operation of captains of ships or aircraft regarding the reporting of the occurrence and location of a hydrocarbon spill.

Each report shall, if possible:

- (a) Identify the source of pollution giving the name of the vessel, where applicable;
- (b) Specify the geographical position, time and date of the incident or sighting;
- (c) Indicate the wind and sea conditions in the area;
- (d) If the pollution originated from a vessel, give relevant details of the condition of the vessel;
- (e) As far as possible, specify the type of hydrocarbon concerned;
- (f) Indicate the exact or estimated amounts discharged or liable to be discharged into the sea;
- (g) State the name of the consignor, consignee or manufacturer;
- (h) Provide any other information which the reporting officer considers to be relevant.

It is the duty of the Governing Body to inform the Governing Bodies of other countries immediately where there is a possibility of pollution of their coasts.

12. SPILLS IN NEIGHBOURING AREAS

In the event of a spill affecting a neighbouring area, each country shall deal with its national area, while ensuring that mutual co-operation, which is ideal in such cases, is provided.

The Executive Secretariat may act as a co-ordinating body, at its discretion, whenever necessary.

13. SPILL CONTROL SYSTEMS

It is impossible to generalize about systems for the control of oil spills since each case has its own particular characteristics.

It is, moreover, beyond the scope of this document to enumerate all the methods used. It is considered useful, however, to list briefly the basic factors involved in a case of pollution, the systems for dealing with spills (annex XII) and protection priorities (annex X).

Annex I

Governing Bodies in the Region

- Colombia: Dirección General Marítima y Portuaria
Director de DIMAR
Telex 44421
- Chile: Dirección General del Territorio Marítimo y de Marina Mercante
Telex DGTMM 230602 (Valparaíso)
- Ecuador: Dirección General de la Marina Mercante y del Litoral
Telex 3325 (Guayaquil)
- Panama: Autoridad Portuaria Nacional
Director de la Autoridad Portuaria Nacional
Telex 2765 (Panama)
- Peru: Dirección General de Intereses Marítimos
Telex 26071 (Lima)

Annex II

Executing Centres in the Region

- Colombia: División de Capitanías
Dirección General Marítima y Portuaria - DIMAR
Telex 44421
- Chile: Centro Nacional
Departamento III - Operaciones Marítimas
Dirección General Territorio Marítimo y Marina Mercante
Telex DGTMM 230602 (Valparaíso)
- Ecuador: Oficina Control de Contaminación
Dirección General de Marine Mercante y del Litoral
Telex 3325 (Guayaquil)
- Panama: Director de Operaciones
Telex 2765
- Peru: Dirección General de Capitanías y Guardacostas
Telex 26071

Annex III

Executive secretariat: Permanent Commission of the South Pacific (CPPS)

Secretary-General:

Under-Secretary-General for Legal Affairs:

Under-Secretary-General for Scientific Affairs:

Under-Secretary-General for Programming:

Address: Páez 370 y Robles, 6to. piso
Quito (Ecuador)

Telephone: 522375 and 522269

Cable: PACIFICOSUR

Annex IV

Telex subject matter for putting the RCP and BCP into operation

Governing Body of the country or countries of origin

Ref.: Brief description of the incident, including origin or potential origin, location and time of the incident.

1. Situation: Estimate of the amount (spill or potential spill), (type of hydrocarbon), weather conditions.

2. Anticipated direction of spill if contamination of other countries is possible.

3. The Government of (country) puts the RCP (or BCP) into operation with an undertaking to cover all the costs incurred, in accordance with the Regional (or Bilateral) Contingency Plan.

4. A vessel will be permitted to dock and unload equipment and materials at (reception point) and to return them at the end of the emergency. The entry and co-operation of experts is authorized.

cc: Executing Centre of the country of origin
Executing Centre of the co-operating country
CPPS

Governing Body
Co-operating Country

Annex V

List of experts in the control of hydrocarbon spills,
by country

COLOMBIA - EXPERTS IN THE CONTROL OF SPILLS

COLOMBIA PETROLEUM ENTERPRISE - ECOPETROL

CARTAGENA - Area Code 959 - Telephones 47460, 85400 - Telex 37726

VICTOR ARELLANO, Tel., Res.: 47867

EDGARD PERDOMO, Tel., Res.: 44010

ORLANDO RODRIGUEZ, Tel., Res.: 47845

JOSE MARIA CASTAÑEDA, Tel., Res.: 46670

BARRANCABERMEJA - Area Code 9710 - Telephone lines for home contacts - 4360
4574 - 3090

JAIRO LOAIZA, Tel., Off.: 5748; Tel., Res.: Ext. 5243, Telex 7445

REYNALDO NAVAS, Tel., Off.: 5431; Tel., Res.: Ext. 5295

JOSE MARIA GOMEZ, Tel., Off.: 5491; Tel., Res.: Ext. 5858

BOGOTA

Dr. JAIME F. GEORGE, Tel., Off.: 2323035, Tel., Res.: 2140250, Telex: 44787

TUMACO - Area Code 93059 - Radio Telephone 2725567 Bogota

OMAR CASTILLO, Tel., 404

TIBU - Area Code 970 - Telephones 63142, 63149

CIRO SAAVEDRA

NATIONAL NAVY

Captain EFRAIN ANGEL, Tel., Microwave - Tumaco Naval Base, Tel., 832226

INDERENA

JAIRO ESCOBAR (Biologist) Tel., Off.: 2456144; Tel., Res.: 2321175 Bogota

ARMANDO DEVIA, Tel., Off.: 2456144; Tel., Res.: 2628496

COLOMBIAN MERCHANT MARINE

JULIO CIFUENTES PINZON, Tel., Off.: 2836600 Ext. 240; Tel., Res.: 2554630; Telex -
044857 ABC

CHILE - EXPERTS IN THE CONTROL OF SPILLS

Requests for the services of the experts should be made to Rear - Admiral VICTOR LARENAS QUIJADA, Director-General of Maritime and Merchant Navy Affairs, Tel., 58091 - Telex: DGTMM 230602

CF. IL. Francisco Pizarro Aragonés

CF. IT. Ramón Velásquez Díaz

CF. IT. Horacio Balmelli Urrutia

CC. LT. Emilio León Hoffman

CC. LT. Elopoldo Vásquez Quiroz

CC. LT. César Radic Guazzini

CC. LT. Luis Paz Arias

TTE 1 LT. Dagoberto Castro Nuñez

Mauricio Rallier (Civilian Expert)

ECUADOR - EXPERTS IN THE CONTROL OF SPILLS

MERCHANT NAVY DIRECTORATE

Services should be requested from:

Rear-Admiral JORGE QUEIROLO GOMEZ, Director-General of Merchant Navy and Coastal Affairs, or

Commander NAPOLEON FERNANDEZ, Under-Director-General, Merchant Navy and Coastal Affairs

Telephone: 526760 - Telex DMERCG-ED 3325 Guayaquil

GUILLERMO PINCOY (Chemist), Jefe Control de Contaminación DIGNER

JAVIER BERNAL (Chemist), Jefe Contaminación SUINBA

MIGUEL ARMAS (Chemist), Jefe Contaminación SUINLI

CEPE

RAUL PAREDES (Oceanographer), Tel., 351500 - 352845 - 352846, Telex 04-3472, Guayaquil

PANAMA - EXPERTS IN THE CONTROL OF SPILLS

NATIONAL PORTS AUTHORITY

JESUS ANTONIO CORREA, Director of Operations, Tel., 695444, Ext. 107 - Telex: 2765

LUCIANO RAMIREZ, Tel., Off.: 524844 Ext. 141 Tel., Res.: 616396,
Telex - 2765 AUT POR PG

JUAN E. MEDINA, Tel., Off.: 523267 - Tel., Res.: 219197

JULIO C. GARRIDO, Tel., 213453 - 611516

FRANKLIN OTHON, Tel., 621353

CESAR WONG CHONG, Tel., 566678 - 568146 Tel., Res.: 249121

ROGER GRAHAM, Tel., 467636 - 467431, Tel., Res.: 466416

PANAMA PETROTERMINAL

Captain JEOFREY MOSS, Tel., 696377 - 696277

PERU - EXPERTS IN THE CONTROL OF SPILLS

PERUVIAN NAVY

Captain CARLOS COBOS VARGAS, Tel., Off.: 297278 - 294692, Tel., Res.: 290284

Captain EDUARDO GOMEZ MONCADA, Tel., Off.: 297278, Tel., Res.: 511132

Captain RICARDO FORSYTH RIVAROLA, Tel., Off.: 314208

PETROLERA TRANSOCEANICA S.A.

MARIO ARIZOLA ARNEZ, Tel., Off.: 404320 - 412141 - 411919, Tel., Res.: 715279

Annex VI

Equipment and materials available,
by country

Account should be taken of the following points in this annex:

1. The equipment and materials listed are those existing in February 1983 in each country, and not those available for loan in an emergency. Decisions regarding loans will be taken by individual countries depending on their own needs for equipment and materials for controlling internal spills.
2. The list does not include equipment which is difficult to transport, such as trailer boats, vacuum trucks or other vehicles possessed by the various countries concerned.
3. The information received from Peru indicates that, although none is at present available, equipment will be procured in the near future.

COLOMBIA - EQUIPMENT AND MATERIALS AVAILABLE

Contacts for loans: Cartagena: Tel., Office: 959-47460; Res: 47867; Telex: 37726
 Barrancabermeja: Tel., Office: 9710-5748; Res: 3090; Telex: 7445
 El Centro: Tel., Office: 9710-4777 Ext. 409
 Santa Marta: Tel., Office: 9501-7499/7095/7092
 Tumaco: Tel., 93056-404

Equipment and materials	Specifications	Quantity	Location	Responsible body
Boom	ACME 48"	2,000 feet	Cartagena	ECOPETROL
Boom	BE NET 24"	500 feet	Cartagena	ECOPETROL
Boom	ACME 18"	1,000 feet	Cartagena	ECOPETROL
Boom	ACME 18"	1,200 feet	Barrancabermeja	ECOPETROL
Boom	ACME 24"	1,200 feet	El Centro	ECOPETROL
Boom	ACME 24"	500 feet	Tibú	ECOPETROL
Boom	ACME 48"	1,000 feet	Tumaco	ECOPETROL
Skimmers	ACME gasoline 4HP, 340 rpm	2	Cartagena	ECOPETROL
Skimmers	ACME gasoline 4HP, 340 rpm	2	El Centro	ECOPETROL
Skimmers	ACME gasoline 4HP, 340 rpm	2	Barrancabermeja	ECOPETROL
Skimmers	ACME gasoline 4HP, 340 rpm	1	Santa Marta	ECOPETROL
Skimmers	ACME gasoline 4HP, 340 rpm	1	Tumaco	ECOPETROL
Skimmers	ACME electric 2HP, 340 rpm	1	Cartagena	ECOPETROL
Fire engine	Mantarrayas	6	Cartagena/Barrancab.	ECOPETROL
Fire engine	Diesel 60 rpm	1	Cartagena	ECOPETROL
Skimmers	OIL MOP	1	Cartagena	ECOPETROL
	- Mark 1 4EE	2	Barrancabermeja	ECOPETROL
	- Mark 1 4EE	1	El Centro	ECOPETROL
	- Mark 1-4	1	El Centro	ECOPETROL
Skimmers	Sea Hawk	1	Cartagena	ECOPETROL
Skimmers	Sea Hawk w/auxil. pump	1	Barrancabermeja	ECOPETROL

Equipment and materials	Specifications	Quantity	Location	Responsible body
Dispersants	COREXIT 9527	20 drums	Cartagena	ECOPETROL
Dispersants	COREXIT 9527	20 drums	Tumaco	ECOPETROL
Dispersants	COREXIT 9527	10 drums	Santa Marta	ECOPETROL
Dispersants	COREXIT 7664	20 drums	Cartagena	ECOPETROL
Dispersants	COREXIT 7664	10 drums	Barrancabermeja	ECOPETROL
Dispersants	COREXIT 7664	10 drums	Tumaco	ECOPETROL
Dispersants	COREXIT 8667	20 drums	Cartagena	ECOPETROL
Collector	OC-5	6 drums	Cartagena	ECOPETROL
Collector	OC-5	2 drums	Cartagena	ECOPETROL
Absorbents	95 x 46 mts.	5 rolls	Barrancabermeja	ECOPETROL
Dispersant sprayers	Maxi	2	Cartagena	ECOPETROL
Dispersant sprayers	Mini	1	Cartagena	ECOPETROL
Dispersant sprayers	Maxi	1	Tumaco	ECOPETROL
Dispersant sprayers	Mini	1	Tumaco	ECOPETROL

CHILE - EQUIPMENT AND MATERIALS AVAILABLE

Contact for loans: Comandante, Jefe División Asuntos Internacionales - Dirección General del Territorio Marítimo y Marina Mercante.
 Tel., Off.: 58091; Res.: 972268; Telex: DGTMM 230602 Valparaíso

Equipment and materials	Specifications	Quantity	Location	Responsible body
Boom	Kepner 30"	2,000 feet	Iquique	The Directorate
Boom	Kepner 30"	1,500 feet	Talcahuano	General of
Boom	Kepner 30"	500 feet	Punta Arenas	Maritime and
Boom	Kepner 30"	5,500 feet	Centro Nacional	Merchant Marine
Skimmers	Slickskim 60	2	Iquique	Affairs is
Skimmers	Slickskim 60	1	Talcahuano	responsible for
Skimmers	Slickskim 60	1	Punta Arenas	all equipment.
Skimmers	Slickskim 60	4	Centro Nacional	
Skimmers	Slickskim 160	1	Centro Nacional	
Skimmers	Slickskim 160	1	Talcahuano	
Skimmers	CSI Model 26-DP-C-2		Iquique	
Skimmers	CSI Model 26-DP-C-2	1	Valparaíso	
Skimmers	CSI Slikbar Centrifuge	1	Talcahuano	
Skimmers	CSI Slikbar Large	3	Centro Nacional	
Skimmers	CSI Slikbar Small	3	Centro Nacional	
Skimmers	CSI Slikbar Small	1	Valparaíso	
Skimmers	Mantarrayas	10	Various points	
Dispersant sprayers	WSL Maxi	1	Iquique	
Dispersant sprayers	WSL Mini	1	Iquique	
Dispersant sprayers	WSL Maxi	3	Valparaíso	
Dispersant sprayers	WSL Mini	3	Valparaíso	

Equipment and materials	Specifications	Quantity	Location	Responsible body
Dispersant sprayers	WSL Maxi	2	Talcahuano	
Dispersant sprayers	WSL Mini	2	Talcahuano	
Dispersant sprayers	WSL Maxi	3	Punta Arenas	
Dispersant sprayers	WSL Mini	3	Punta Arenas	
Dispersant sprayers	WSL Maxi	2	Centro Nacional	
Dispersant sprayers	WSL Mini	2	Centro Nacional	
Dispersants	Slickgone	100 drums	Centro Nacional	
Dispersants	Slickgone	90 drums	Punta Arenas	
Dispersants	Slickgone	50 drums	Talcahuano	
Dispersants	Slickgone	100 drums	Valparaiso	
Dispersants	Slickgone	30 drums	Iquique	

ECUADOR - EQUIPMENT AND MATERIALS AVAILABLE

Contacts for loans: Marina Mercante: Tel., 526760 - Guayaquil, Telex: DMERCG-ED3325
 CEPE: Tel., 351500, 352846, Telex: 04-3472 Guayaquil

Equipment and materials	Specifications	Quantity	Location	Responsible body
<u>Hydrocarbon Suction Pumps</u>				
Duccatti	Diesel, 3", 200 rpm, weight: 650 lbs.	1	Balao	Balao Superintendent's Office
Duccatti	Gasoline, 3", 400 rpm, weight: 500 lbs.	1	Balao	Balao Superintendent's Office
Lister-Vikin	Diesel, 4", 200 rpm, 11HP weight: 850 lbs.	1	Guayaquil	Merchant Marine Tel: 514604
<u>Dispersant Pumps</u>				
FMC	Gasoline, 0.5", 100 l/sec., 4HP, weight: 150 lbs.	1	Balao	Balao Superintendent's Office
Techoma	Gasoline, 1/4", 100 l/sec., 4HP, weight: 150 lbs.	1	Libertad	Libertad Superintendent's Office

Equipment and materials	Specifications	Quantity	Location	Responsible body
Techoma	Gasoline, 1/4", 100 l/sec., 4HP, weight: 150 lbs.	1	Manta	Manta Harbour- master's Office Tel., 611611
Techoma	Gasoline, 1/4", 100 l/sec., 4HP, weight: 150 lbs.	1	Puerto Bolivar	Bolivar Harbour- master's Office Tel., 920308
Techoma	Gasoline, 1/4", 100 l/sec., 4HP, weight: 150 lbs.	1	Guayaquil	Merchant Marine Tel., 514604
IHM	Gasoline, 2", 200 rpm, 3HP, weight: 135 lbs.	1	Guayaquil	Merchant Marine Tel., 514604
Lister	Diesel, 3", 400 rpm, 6HP, weight: 350 lbs.	1	Guayaquil	Merchant Marine Tel., 514604
Spate		1	Guayaquil	CEPE
Dispersants	Dispersol	85 drums	Balao	Balao Superintendent's Office
Dispersants	Dispersol	60 drums	Libertad	Libertad Superintendent's Office
Dispersants	Dispersol	40 drums	Manta	Manta Harbour- master's Office Tel., 611611

Equipment and materials	Specifications	Quantity	Location	Responsible body
Dispersants	Dispersol	35 drums	Cabot	Cabot Harbour-master's Office
Dispersants	Dispersol	30 drums	Guayaquil	Merchant Marine Tel., 514604-606
Dispersants	Corexit 9527	125 drums	Guayaquil	CEPE
Dispersants	BP 1100	100 drums	Guayaquil	CEPE
Boom	Oil Fence	3,000 feet	Guayaquil	CEPE
Skimmer	Morris M1-30	2	Guayaquil	CEPE
Skimmer	Oil MopoMkII-9D	1	Guayaquil	CEPE
<u>Storage</u>				
Flexible tank	DLODON 10	4	Guayaquil	CEPE
Floating tanks	DUNLOP - 15,000 gal.	1	Guayaquil	CEPE
	DUNLOP - 60,000 gal.	2	Guayaquil	CEPE
	DUNLOP - 80,000 gal.	1	Guayaquil	CEPE
	DUNLOP - 120,000 gal.	2	Guayaquil	CEPE
	UNIRROYAL-50,000 gal.	6	Guayaquil	CEPE

PANAMA - EQUIPMENT AND MATERIALS AVAILABLE

For Loans contact: Tel., 695444, Ext. 104; Telex: 2765

Equipment and materials	Specifications	Quantity	Location	Responsible body
Booms	Parker Heavy Duty	2,000 feet	Puerto Balboa	Port Authority
Booms		900 feet	Vacamonte	Port Authority
Booms	36"	5,000 feet	Puerto Balboa	Port Authority
Skimmers	Vikoma-Sohio Sea Skimmer	1	Puerto Balboa	Port Authority
Skimmers	Vikoma-Mini Skimmer	1	Puerto Balboa	Port Authority
Skimmers	Komara 12 K	1	Puerto Balboa	Port Authority
Skimmers	Vikoma-Sla Pak Sohio self-propelled with 1,600 feet barrage	1	Puerto Balboa	Port Authority
Collectors	Skim-Pak	2	Vacamonte	Port Authority
Collectors	Skim-Pak	4	Vacamonte	Port Authority
Absorbents	Foam	1000 lbs.	Vacamonte	Port Authority
Absorbents	Foam	6000 lbs.	Puerto Balboa	Port Authority
Absorbents	Foam	8000 lbs.	San Cristobal	Port Authority

Annex VII

Requests for experts, equipment and materials

Executing Centre

Country of origin

Ref.: Incident

Would appreciate co-operation of (names of experts) for approximately (days). Dispatch the following equipment and materials by (air or sea) to (delivery point) where they will be collected by (name, function, telephone no.). For each piece of equipment, as applicable:

Quantity

Type of equipment and technical specifications

Source of energy for the equipment, if applicable

Whether or not a transport trailer is to be included

Replaceable materials, type and quantity

Accessories required (hoses, brackets, nozzles, etc.)

See annex 3

The approximate period of use will be (days)

Executing Centre
Co-operating country

Annex VIII

Certificate of dispatch and receipt
of plant and equipment

EQUIPMENT	RECEIVED		RETURNED	
	Quantity	Condition	Quantity	Condition
				Mechanical condition
				State of cleanliness
Booms				
Dimensions and make		Feet		
Skimmers				
Type and specifications				
Storage tanks				
Accessories				
Communications equipment				
MATERIALS				
Dispersants				Replacement equipment
Type				
Collectors				
Absorbents				
Prepared	Received	Returned	Received	Observations
Executing	Chief of	Chief of	Country	
Centre	Operations	Operations		
Country of	Co-operating	Co-operating		
Origin	country	country		

RCP AND BCP FLOW CHART

CPPS

Information

IMPLEMENTATION OF THE RCP OR BCP

Requesting country	Account for payment	Co-operating country	Governing Body
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Governing Body	payment	Information account payment	Order of assistance
Information			Executing Centre

Executing Centre	Request for experts, plant or equipment
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Request for experts, plant or equipment	Information	Dispatch of experts, plant or equipment
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Chief of Operations	Return of experts, plant or equipment
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National Contingency Plans

A national contingency plan should include, but should not be restricted to, the following points:

OBJECTIVE

LEGAL FRAMEWORK

DEFINITIONS

GOVERNING BODY

EXECUTING CENTRE

HARBOURMASTER'S OR SUPERINTENDENT'S OFFICE

CHIEF OF OPERATIONS

PERSONNEL OF THE OFFICE OF CHIEF OF OPERATIONS

IDENTIFICATION OF LOCATIONS AT WHICH SPILLS ARE MOST LIKELY TO OCCUR

CLIMATIC CHARACTERISTICS OF SUCH LOCATIONS

Winds

Tides

Currents

Sea conditions

ANTICIPATED SLICK MOVEMENTS AT THESE LOCATIONS

PRIORITY PROTECTION AREAS

Priority chart

REPORTING OF AN ACCIDENT OR SPILL

PROCEDURE IN THE CASE OF TANKER ACCIDENTS

PROCEDURE IN THE CASE OF SPILLS INTO WATER DUE TO OTHER CAUSES

PROCEDURE IN THE CASE OF SPILLS ON LAND

OPERATIONS FOLLOWING A SPILL

PROCEDURE FOR THE HANDLING AND DISPOSAL OF HYDROCARBONS RECOVERED

CLEANING AND RESTORATION OPERATIONS

SAFETY AND ESTABLISHMENT OF PRIORITIES IN CASES OF EMERGENCY

COMMUNICATIONS SYSTEMS

Land - land

Land - water

Land - air

INFORMATION AND PUBLIC RELATIONS

TRAINING

FINANCING

MEASURES PRIOR TO THE PUTTING INTO OPERATION OF THE RCP OR BCP

MACHINERY FOR REQUESTING AND USING OUTSIDE ASSISTANCE

ANNEXES

EQUIPMENT AVAILABLE

Location

Responsible body

Transport system

Financing

Maintenance

PERSONNEL AVAILABLE

BODIES ABLE TO CO-OPERATE

Contact

Communications system

Personnel available and loan system

POLLUTION PREVENTION

Effluents

Storage tanks

Loading, unloading and provisioning operations

Handling of ballast

Training of personnel

Annex X

Vulnerability indices

CLASSIFICATION OF DEGREE OF VULNERABILITY
TO OIL-SPILL DAMAGES

Vulnerability index	Type of Coast	Comments
1	Exposed rocks	The waves keep out most of the oil. Cleaning is unnecessary.
2	Shelves under erosion by waves	The waves sweep the oil away and most of it is removed naturally within a few weeks.
3	Fine-sand beaches	The oil does not penetrate the sediment, and this facilitates any mechanical removal if necessary. If not removed, the oil may remain for many months.
4	Coarse-sand beaches	The oil may soak in rapidly and thus make cleanup difficult. With moderate to strong tides, the oil will be removed naturally from the surface of the beach in a few months.
5	Exposed dense sandbanks	Little of the oil adheres to or penetrates dense exposed sandbanks. Cleanup is generally unnecessary.
6	Mixed sand and gravel beaches	The oil may penetrate very rapidly. In light or moderate surf the oil may remain for several years.
7	Gravel beaches	As above. Cleanup should be intensified at high tide. If there is a great deal of oil it may form asphalt.
8	Sheltered rocky coasts	In light-surf areas, the oil may remain for several years. Cleaning is not recommended unless there is a large quantity of oil.
9	Sheltered sandbanks with tides	Areas of high biological activity and little surf. The oil may remain for several years. Cleanup is recommended at least when there is a large accumulation of oil. These areas should be given priority protection with booms or absorbent material.

10

Marshy areas with
vegetation and
mangrove swamps

These are the most productive aquatic environments. The oil may remain for several years. Cleaning by cutting down or burning vegetation should be done only when there are large quantities of oil. The mangrove swamps should not be touched. The areas should be given priority protection with booms or absorbents

Annex XI

Curricula for theoretical and practical
courses on petroleum hydrocarbon oil spills

(a) Chilean Navy

(b) Colombian Petroleum Enterprise

INTERNATIONAL COURSE ON THE CONTROL OF OIL SPILLS

IMCO/CPPS/UNEP

(Topics in chronological order)

TOPICS

1st day	Arrival of participants
2nd day	Opening of the course
	Statements by representatives (International organizations)
	Introduction - identification of the problems
	Introductory film or video
	Causes and effects of oil spills
	Types of oil and by-products
	Visit to shipping terminals
3rd day	Forecasting behaviour of oil spills at sea
	Techniques and stages in oil-spill control operations
	Containing or concentrating a spill. Theory of the use of booms. The use of booms in practice
4th day	Collection recovery of oil. Theory and application of collection and recovery techniques.
	Use of absorbents
	Introduction to the Contingency Plan
	Elimination/disposal of wastes and residues
	Practical use of skimmers
	Meeting of instructors and participants

5th day Theory and use of dispersants

 Cleaning and restoration of beaches and coasts

 Laboratory tests for dispersal capacity and toxicity of dispersants

 Practice in the use of mini dispersant application equipment, cleaning of beaches, reconnaissance of an area for the preparation of a simulation exercise

 Presentation/explanation of written calculation problems

 Meeting of instructors and participants

6th day Communications, logistics, public relations

 Economic aspects of spills

 New developments in international conferences on the control of spills

 Formulating a contingency plan

 Practice in the use of maxi equipment for the application of dispersants

 Meeting of instructors and participants

7th day Introduction to IMO conventions

 OILPOL 54, MARPOL 73 and TSPP conventions

 Schemes for compensation for damage (CLC, FONDO and TOVALOP-CRISTAL)

8th day Spills on land

 Safety aspects of a spill

 Salvage operations in relation to an oil spill

 Inspections in port

 Discussion of problems

 Visit to laboratories, identification of indications of an oil spill

 Preparation of a simulated oil spill

 Meeting of instructors and participants

9th day Simulated spill and control operations

 Discussion of simulated spill

10th day Departure for the airport

 Return of participants to their respective bases

COLOMBIAN PETROLEUM ENTERPRISE

THEORETICAL AND PRACTICAL COURSE
ON THE HANDLING OF HYDROCARBON SPILLS

VIG-(DET)-CAR

(Topics in chronological order)

TOPICS

- 1st day Object of the course
- Pollution by hydrocarbons
- Recess
- Effects of hydrocarbons
- General aspects of the handling of a spill
- Aspects of prevention of marine pollution caused by tankers
- Toxicity of hydrocarbons and toxicity tests
- 2nd day Forecasting behaviour of an oil spill at sea
- Types of boom
- Containment of a spill, booms - restrictors
- Protection priorities
- Practice in the use of booms and restrictors
- 3rd day Collection of hydrocarbons. Skimmers - vacuum trucks - absorbents -
 their uses
- Handling - re-use - waste disposal
- Cleaning of beaches
- Practice in the use of skimmers and absorbents
- Handling of collected products
- 4th day Dispersants. Handling and application possibilities
- Contingency plans
- Compensation for damage caused by hydrocarbon spills
- Demonstration of the action of various dispersants
- Practice in the use of dispersants

5th day

Simulated spill

Discussion of the simulated spill

Study of specific cases

Evaluation and closure

Annex XII

Pollution Control Manual
(Intergovernmental Maritime Organization, IMO)^{1/}

^{1/} N.B. The manual referred to in this annex is not included in this document.

Annex XIII

Proposed fees and charges for personnel and equipment

PERSONNEL

Operations supervisor	US\$ 25 per hour
Foreman	US\$ 15 per hour
Equipment operator	US\$ 12 per hour
Clean-up staff (experienced)	US\$ 10 per hour

For hours worked between 6.00 p.m. and 7.00 a.m., and on Saturdays, the above rates will be increased by 50 per cent.

For hours worked on Sundays and official holidays, the above rates will be increased by 100 per cent.

In addition, a daily subsistence allowance of US\$ 60 per person will be payable, to cover the costs of board and lodging, laundry, etc.

EQUIPMENT

MAXI equipment for the application of dispersants	US\$ 200 per day
MINI equipment for the application of dispersants	US\$ 120 per day
Dispersants	US\$ 600 per drum
Manta-Ray mechanical recovery equipment	US\$ 80 per day
CSI mechanical recovery equipment (Oleofilica cord)	US\$ 100 per day
Benett recovery equipment	US\$ 100 per day
Vikoma recovery equipment	US\$ 120 per day
Rubber tanks for temporary storage	US\$ 60 per day

Proposed fees and charges for personnel and equipment

Floating equipment	US\$ 100 per day
Booms	US\$ 0.40 per foot per day
Pumps	US\$ 50 per day
Cleaning of booms	US\$ 1.50 per foot
Communication system	US\$ 100 per day

PUBLICATIONS IN THE UNEP REGIONAL SEAS REPORTS AND STUDIES SERIES

- No. 1 UNEP: Achievements and planned development of UNEP's Regional Seas Programme and comparable programmes sponsored by other bodies. (1982)
- No. 2 UNIDO/UNEP: Survey of marine pollutants from industrial sources in the West and Central African region. (1982)
- No. 3 UNESCO/UNEP: River inputs to the West and Central African marine environment. (1982)
- No. 4 IMCO/UNEP: The status of oil pollution and oil pollution control in the West and Central African region. (1982)
- No. 5 IAEA/UNEP: Survey of tar, oil, chlorinated hydrocarbons and trace metal pollution in coastal waters of the Sultanate of Oman. (1982)
- No. 6 UN/UNESCO/UNEP: Marine and coastal area development in the East African region. (1982)
- No. 7 UNIDO/UNEP: Industrial sources of marine and coastal pollution in the East African region. (1982)
- No. 8 FAO/UNEP: Marine pollution in the East African region. (1982)
- No. 9 WHO/UNEP: Public health problems in the coastal zone of the East African region. (1982)
- No. 10 IMO/UNEP: Oil pollution control in the East African region. (1982)
- No. 11 IUCN/UNEP: Conservation of coastal and marine ecosystems and living resources of the East African region. (1982)
- No. 12 UNEP: Environmental problems of the East African region. (1982)
- No. 13 M. PATHMARAJAH: Pollution and the marine environment in the Indian Ocean. (1982)
- No. 14 UNEP/CEPAL: Development and environment in the Wider Caribbean region: A Synthesis. (1982)
- No. 15 UNEP: Guidelines and principles for the preparation and implementation of comprehensive action plans for the protection and development of marine and coastal areas of regional seas. (1982)
- No. 16 GESAMP: The health of the oceans. (1982)
- No. 17 UNEP: Regional Seas Programme: Legislative authority. (in preparation)
- No. 18 UNEP: Regional Seas Programme: Workplan. (1982)
- No. 19 Rev. 1. UNEP: Regional Seas Programme: Compendium of projects. (1984)
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