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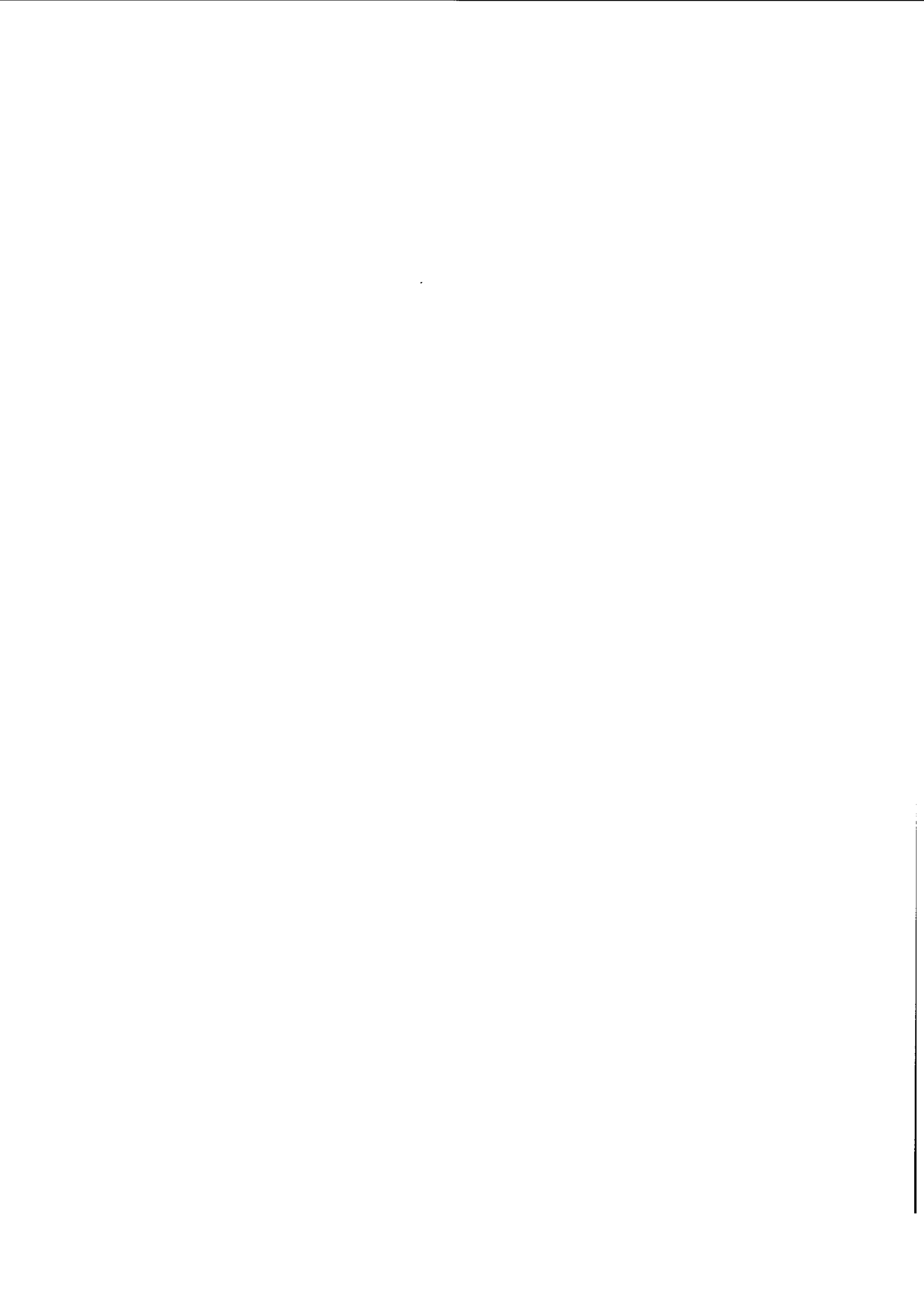
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PREVENTION AND CONTROL OF MARINE POLLUTION
FROM SHIPS IN THE MEDITERRANEAN

Document submitted by the
Inter-Governmental Maritime Consultative Organization
Secretariat
London, January 1975

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INTERGOVERNMENTAL MEETING ON THE PROTECTION
OF THE MEDITERRANEAN

Barcelona, 28 January - 4 February 1975

Document submitted by the IMCO Secretariat

London, January 1975

PREVENTION AND CONTROL OF MARINE POLLUTION
FROM SHIPS IN THE MEDITERRANEAN

Note submitted by the IMCO Secretariat
to the Intergovernmental Meeting on the
Protection of the Mediterranean

- I. INTRODUCTION
- II. IMCO's ACTIVITIES RELATING TO THE PREVENTION AND CONTROL
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Errata:

- 1. Page 12: "IV. PROPOSED PLAN OF ACTION" should read:
"III. PROPOSED PLAN OF ACTION"
- 2. Page 16: Paragraph 44. "Sacvicos Island" should read
"Saronicos Island"
- 3. Page 17: "V. CONCLUSION" should read "IV. CONCLUSION"

I. INTRODUCTION

1. The Inter-Governmental Maritime Consultative Organization, being a Specialized Agency of the United Nations whose activities are entirely in the maritime field, has a vital interest in the prevention and control of marine pollution from ships. IMCO therefore fully supports the objectives of the Barcelona Meeting and is ready to co-operate with its work.
2. The present document summarizes the activities of the Organization relating to the prevention and control of marine pollution from ships, and presents certain suggestions for action which the Mediterranean States might wish to pursue for furtherance of the aims and purposes of the Barcelona Meeting.
3. It is hoped that the information provided in this document will be of interest and use to the Meeting.

II. IMCO'S ACTIVITIES RELATING TO THE PREVENTION AND CONTROL OF MARINE POLLUTION FROM SHIPS

4. The Inter-Governmental Maritime Consultative Organization (IMCO) was established in pursuance of the Convention on the Inter-Governmental Maritime Consultative Organization adopted by the United Nations Maritime Conference held in Geneva in 1948. The Organization came into being in January 1959, following the entry into force of the Convention in March 1958.
5. The Organization's objectives, as provided for in Article 1 of its Convention, are, inter alia, to provide machinery for co-operation among governments in the field of governmental regulations and practices relating to technical matters of all kinds affecting shipping engaged in international trade, to encourage the general adoption of the highest practical standards in matters concerning maritime safety and efficiency of navigation.
6. The extensive range of activities undertaken by IMCO may be grouped under three broad category headings, namely:
 - (a) activities relating to the promotion of maritime safety and efficiency of navigation;
 - (b) work relating to the prevention and control of marine pollution from ships and other craft and related questions; and
 - (c) other work relating to shipping and related maritime activities, including in particular technical assistance to developing countries.

7. The work relating to maritime safety and prevention and control of marine pollution normally culminates in the formulation of conventions and similar multilateral instruments, codes of practice, recommendations to Governments and other guidelines or manuals.

8. The IMCO Secretariat presented to the Third United Nations Conference on the Law of the Sea (Caracas, 20 June - 29 August 1974) a document entitled "The Activities of the Inter-Governmental Maritime Consultative Organization in Relation to Shipping and Related Maritime Matters". This document contains a summary of activities of IMCO in the field of maritime safety, prevention and control of pollution and technical assistance to developing countries as well as origins, purposes and structure of IMCO, co-ordination of IMCO's work with related work in the United Nations system, etc. For information, a copy of this document will be made available to representatives attending the Barcelona Meeting.

9. The present document, therefore, is confined to a brief description of the work of IMCO relating to the prevention and control of marine pollution from ships, which has led to the convening of an International Conference on Marine Pollution, 1973 and the continuing work by the Marine Environment Protection Committee in this field.

International Convention for the Prevention of Pollution of the Sea by Oil, 1954 as amended in 1962

10. The first major step towards the international control of marine pollution was taken in 1954 when a conference held in London adopted the International Convention for the Prevention of Pollution of the Sea by Oil. The Convention was provisionally deposited with the United Kingdom Government until IMCO was established in 1959 when the depositary functions were taken over by the Organization. The principal object of the 1954 Convention was the protection of the seas from oil pollution. The Convention prescribed certain "prohibited zones" extending to at least 50 miles from the nearest land, within which the discharge of oil or oily mixtures was prohibited.

11. In 1962 IMCO convened a Conference which adopted amendments to the 1954 Convention, particularly by extending its application to include ships of lesser gross tonnage and by extending zones in which the discharge of oil was prohibited. The 1954 Convention, as amended in 1962, has been in force since May 1967.

12. In 1969, the IMCO Assembly adopted further extensive amendments to the Convention which, in effect, require tankers to be operated in accordance with "load-on-top" procedures.

13. In 1971, the IMCO Assembly adopted two further amendments. The first of these was aimed at minimizing the amount of oil which could escape as a result of maritime accidents, particularly those involving very large tankers, and the second was for the protection of the Great Barrier Reef.

International Convention for the Prevention of Pollution from Ships, 1973

14. In October 1973, IMCO convened an International Conference on Marine Pollution, with the main objective of achieving the complete elimination of wilful and intentional pollution by oil and other noxious substances and the minimization of accidental spills. The Conference adopted a new International Convention for the Prevention of Pollution from Ships, 1973 to replace the 1954/62 Oil Pollution Convention.

15. The 1973 Convention broadens earlier regulations dealing with oil and, in addition, provides complementary regulations dealing with other forms of marine pollution from ships, such as noxious chemical substances, sewage and garbage. It is expected that the 1973 Convention, when implemented, would substantially achieve the above objective.

16. The Conference also adopted a number of Resolutions inviting IMCO to pursue further work on the implementation of the 1973 Convention and other related matters on the prevention and control of marine pollution from ships.

Work Programme of the Marine Environment Protection Committee

17. Within its terms of reference and with a view to implementing the decisions and recommendations of the 1973 Marine Pollution Conference, the Marine Environment Protection Committee, at its first session (4-8 March 1974), agreed on an Action Plan which includes an indication of appropriate priorities for conducting its work. The current progress and future plans for dealing with some of the principal items of interest are described in the following paragraphs.

Reception Facilities for Residues

18. Under the respective annexes to the 1973 Convention, Parties accept a general obligation to ensure the provision and maintenance of adequate facilities in ports for the reception of residues from oil, noxious chemical substances, sewage and

garbage. Certain additional obligations apply to Parties in respect to special areas as designated in the Convention. With regard to oil pollution for example, Annex I of the Convention requires that the Governments of Parties, the coastlines of which border on the Mediterranean Sea, the Black Sea or the Baltic Sea areas, shall ensure that not later than 1 January 1977 reception facilities are provided in all oil loading terminals and repair ports in the area. These must be adequate for the reception and treatment of all the dirty ballast and tank washing water from oil tankers as well as other oily mixtures or residues from all ships. Similar requirements will also be applied in other special areas, such as the Red Sea and the Gulfs area, as from a date to be established by the Organization at the appropriate time.

19. With a view to preparing guidelines to assist the Governments concerned in meeting this obligation, the Organization is collecting information on the current availability of reception facilities and on studies being carried out in several countries on the technological, economic and other implications of the Convention requirements in this respect.

Oil Discharge Monitoring and Control System

20. Annex I of the 1973 Convention requires that tankers and other vessels shall be fitted with oil discharge monitoring and control systems approved by the Administration concerned. To facilitate compliance with this requirement the Organization is collecting information on the availability of such equipment not only with respect to persistent oils but also for use with a wide range of light refined oils which fall within the definition of "oil" as set out in the new Convention.

21. In 1971 the Organization developed a Recommendation on International Performance Specification for Oily Water Separating Equipment and Oil Content Meters (Resolution A.233 (VII)). On the basis of proposals and information submitted to Governments this specification is now being revised in the light of experience gained since its adoption and to provide for the new requirements contained in the 1973 Convention.

Enforcement of Convention Provisions

22. The Organization is considering ways and means of assisting Governments in detecting infringements of Convention requirements and improving their enforcement. These include the development of:

- (a) improved arrangements for the inspection of tankers at oil loading terminals and repair ports in order to ascertain whether residues have been discharged at sea in breach of the Convention; and
- (b) a standard method of identification of the source of discharged oil by such means as "tagging" cargoes with certain identifiable materials, and improved methods of sampling and analysis of oily water mixtures.

Evaluation of the Hazards of Harmful Substances

23. In accordance with Resolution 14 of the 1973 Conference the Organization will continue to evaluate the environmental hazards of harmful substances carried by ships on the basis of a rationale developed by a panel of IMO and GESAMP experts in 1972/73. A special Working Group of GESAMP consisting of chemists, biologists and toxicologists etc. has been established in order to assess the information and data received from various sources especially governments and to provide IMO with advice as to what particular scientific data would be appropriate for evaluating each of the substances concerned. As a first step, this Group will consider a list of some 500 substances additional to those listed in Annex II to the 1973 Convention, which are known to be currently carried in ships. In the course of this work it is expected that many substances will be identified for which insufficient data is presently available particularly with respect to aquatic toxicity effects. Noting this difficulty the Marine Environment Protection Committee stressed the need for Governments to co-operate in the collection of the necessary data and in making research facilities available for tests where required so that duplication of effort can be avoided.

24. Arrangements will be made within the Organization for all data received and assessed relative to each of the substances together with details of its origin, to be recorded for future reference so that a reassessment can be made if and when more complete data becomes available.

Procedures and Arrangements for the Discharge of Noxious Liquid Substances

25. At its second session the Marine Environment Protection Committee received reports on studies being carried out concerning the tank washing procedures for tanks containing noxious substances and on possible methods for calculating the dilution capacity in the ship's wake. This information will be taken into account in the implementation of Resolution 13 of the Conference concerning the preparation of a uniform basis for the guidance of Parties to the Convention in approving procedures and arrangements under Regulations 5 and 8 of Annex II thereof.

Development of Standards and Test Methods for Sewage Treatment Plants

26. By means of an appropriate questionnaire, information is being collected from Governments concerning effluent standards, the design, construction and testing of shipboard sewage treatment equipment and vessel sewage treatment technology. This information will be collated by the Government of Canada, in co-operation with the United States and submitted to the next session of MEPC as a basis for the development of appropriate standards and test methods as required by Resolution 20 of the 1973 Conference.

Preparation of a Comprehensive Manual on Oil Pollution

27. In 1972, the Organization published a manual, on methods of dealing with spillages of oil, which contained practical information useful to Governments, particularly those of developing countries, on such aspects as:

- (a) Types of oil and their behaviour when spilt at sea;
- (b) Methods of containment of oil spills at sea;
- (c) Techniques for the removal or treatment of oil on the sea or on the shore.

This manual will now be supplemented by further volumes for the guidance of Governments on the following subjects:

- (a) Methods of avoiding or preventing oil pollution from ships. This section is expected to be finalized during 1975 and covers all the principal aspects of operation of oil tankers and other ships including
 - Loading, unloading and bunkering operations.
 - Transferring of cargo or bunkers aboard the vessel
 - Ballasting, deballasting and tank washing operations
 - Bilge pumping and machinery space precautions
 - Oil Terminal operation
- (b) Preparation of national, local and international contingency plans for combatting spills. A draft being prepared, covers such matters as:
 - the possible command structure for controlling major clean up operations

- washing and reporting procedures
- operational communications
- public relations
- funding and cost recovery etc.

(c) Methods of salvage. A draft volume is now in the course of preparation and is expected to be available for consideration early in 1975. It is envisaged that this will cover all the principal methods of salvaging oil from ships, particularly tankers, with a view to preventing or limiting pollution of the sea as the result of maritime accidents.

28. In the longer term, the Marine Environment Protection Committee will consider the extension of the Manual to cover pollution caused by substances other than oil. However it will be recognized that this is a much more complex subject in view of the wide variety of substances encountered and the particular nature of the hazards they may create in the environment.

Harmful substances carried in packaged forms

29. In implementation of Resolution 19 of the 1973 Conference the Sub-Committee on the Carriage of Dangerous Goods of the Maritime Safety Committee is conducting studies with a view to:

- (a) revising the International Maritime Dangerous Goods Code to include measures for the prevention of pollution by harmful substances carried in packaged forms, or in freight containers, portable tanks, or road and rail tank wagons; and
- (b) the further development of Annex III of the 1973 Convention bearing in mind the need to ensure compatibility between safety requirements on the one hand and pollution abatement measures on the other.

30. In dealing with this problem the Sub-Committee has requested scientific advice from GESAMP concerning the feasibility of identifying certain quantities of individual pollutants, below which it might be regarded as unnecessary to apply pollution prevention measures, and the basic criteria which should be considered in making such decisions. This request will be considered by GESAMP at its seventh session (24-30 April 1975).

Other Technical Matters

31. Other technical problems with respect to which the 1973 Conference recommended further action are being considered within the Organization by the Maritime Safety Committee and its appropriate Sub-Committees and include:

- (a) the Draught Requirements for Segregated Ballast Tankers which are being examined in the light of further experience in the operation of ships of various sizes with a view to determining whether any improvement is required in the provisions of Regulation 13 of Annex I of the 1973 Convention (Resolution 8);
- (b) the Tonnage Measurement of Segregated Ballast Tankers which is being studied particularly with respect to the equitable determination of either gross or net registered tonnage for such tankers in comparison with existing oil tankers of equivalent productive cargo weight (Resolution 9);
- (c) the requirements of the Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk which are being reviewed so as to ensure that marine pollution aspects are fully covered and are consistent with the provisions of the 1973 Convention (Resolution 15);
- (d) the development of a Code for the Construction and Equipment of Ships Carrying Dangerous Liquefied or Compressed Gases in Bulk is being pursued with priority in order to provide a basis for use by national Governments in formulating measures necessary to minimize any harmful effects which the transport of such cargoes may have upon the environment (Resolution 16);
- (e) further development of safe navigational procedures and traffic separation schemes for the prevention of collisions and groundings;
- (f) the formulation of recommendations on safe watchkeeping practices in port and at sea and the training and certification of officers and seamen;
- (g) the provision of modern navigational and communication equipment;
- (h) the manoeuvrability and controllability of ships.

32. Certain additional questions which require scientific study are also being considered by the MEPC with advice from GESAMP. These include:

- (a) the environmental problems created by the discharge of all petroleum-derived oils into the marine environment with particular reference to the discharge of light refined oils (Resolution 6). A specialised working group of GESAMP expects to prepare by 1976 a Report on the impact of such oils on the marine environment with particular emphasis on their biological effects;
- (b) the development of scientific information on Water Quality Criteria (Resolution 12) with respect to which the Committee is awaiting the outcome of a GESAMP Working Group which is considering the desirability and feasibility of developing coastal water quality criteria for living marine resources, fishing activities, human health and amenities.

33. In view of implications of measures aimed at pollution prevention and their interrelationship with those directed towards safety at sea, the Organization is reviewing its Work Programme with a view to formulating a comprehensive outline plan which will enable its future work to be co-ordinated and to contribute most effectively towards safety at sea and the reduction of pollution from ships. It is expected that a first draft of such an outline will be available for consideration during 1975.

Technical Co-operation Matters

34. In the light of Resolution 22 of the 1973 Conference, the Organization is taking steps with a view to assisting Governments in the promotion of technical co-operation and assistance for States which may request it particularly with respect to:

- (a) the training of scientific and technical personnel
- (b) the supply of necessary equipment and facilities
- (c) the encouragement of research; and
- (d) the facilitation of other measures and arrangements to prevent or mitigate pollution from ships.

35. As part of the Organization's expanding programme in this field the Marine Environment Protection Committee has initiated an enquiry to Governments with a view to preparing:

- (a) a roster of appropriate experts and institutions (complete with names, addresses, telephone or telex numbers etc.) who might be called upon in providing assistance and advice to developing countries in implementing measures for the prevention of marine pollution particularly those related to the 1973 Convention;
- (b) a list of available experts, institutions and administrations in various regions who could be called upon in an emergency to provide advice in dealing with a major incidence or threat of pollution; and
- (c) a collection of information concerning equipment which could be made available for dealing with spillages including transportation facilities.

Technical Symposium on Prevention of Marine Pollution from Ships

36. With a view to assisting countries in accepting and implementing the 1973 Marine Pollution Convention, the Organization had decided to sponsor a technical symposium for the purpose of discussing various scientific, technical and economic matters arising from the new provisions. The symposium will be held in Mexico in the first quarter of 1976 and will be of approximately 7 to 10 days' duration. The following range of topics related to the 1973 Convention requirements for oil and other harmful substances, is expected to be considered.

- ship construction and arrangements
- machinery and equipment required
- operation of ships
- reception facilities in ports
- methods of detecting violations
- methods and techniques for combatting spillages etc.

37. An Organizing Committee, composed of representatives from France, Federal Republic of Germany, Mexico, United Kingdom, United States of America and an Observer from the International Chamber of Shipping, was established to carry out the preparatory work for the symposium.

IV. PROPOSED PLAN OF ACTION

38. As mentioned in the foregoing Chapter, the work programme of IMCO in the field of marine pollution covers a variety of activities, which, although a major effort is directed towards resolving problems on a global basis, would also encompass specific problems which the Mediterranean States face. It is

therefore considered that the pursuance of this programme with a high priority would in itself be a major contribution to the implementation of the Plan of Action to be adopted by the Barcelona Meeting insofar as the prevention and control of marine pollution from ships is concerned.

39. There are, however, certain problems which would warrant special consideration on a regional basis, and these are outlined in the following paragraphs.

A. Regional arrangements for combatting spillages resulting from maritime accidents

40. The Barcelona Meeting is expected to receive a draft instrument relating to the regional co-operation for combatting spillages, which would no doubt form a legal basis for providing effective regional arrangements for combatting spillages of oil and other noxious substances resulting from accidents to ships. There appears to be a need for developing practical arrangements to give effect to the instrument and, in doing so, the following factors might be taken into account.

(1) Characteristics of the region

In order to prepare appropriate measures for combatting pollution, it would be necessary to consider in some detail particular characteristics of the region, such as the following:

- (a) Definition of the region or sub-region concerned, i.e. fixing boundaries, etc.;
- (b) traffic flow within the region including location of export and import ports, repair ports, available equipment and facilities for dealing with spillages;
- (c) important marine resources and coastal amenities in the area and their location and relationship to the pollutant under consideration;
- (d) identification of any significant hazards to shipping as an indication of possible accident-prone areas in the region;
- (e) size of the region as an indication of transport requirements, etc. to deal with any pollution incident.

(2) Equipment and facilities to combat pollution

Taking account of existing equipment and facilities and their location, it would be appropriate to decide on a suitable contingency plan for the region, including:

- (a) The types and quantities of equipment and facilities required and where they should be located;
- (b) the arrangements for bringing such equipment and facilities into action when required. These would include:
 - (i) the possible establishment of a surveillance system in the region as a means of detecting spillages and observing their behaviour;
 - (ii) the establishment of a suitable system of reporting incidents and a suitable channel through which immediate remedial action could be taken;
 - (iii) the designation or establishment of a focal point or centre to decide what equipment is needed, where it should come from, how it should be transported and other matters pertinent to the particular situation.

(3) Provision of suitable personnel

To enable such a contingency plan to operate effectively, it would appear essential for appropriate experts to be available for immediate action in the event of a pollution incident. This might involve the following:

- (a) The preparation and maintenance of a list of available experts and trained personnel within or near to the region, who could be called upon in an emergency;
- (b) arrangements for communicating with appropriate experts so that their services can be obtained without delay; and
- (c) arrangements, where necessary, for the training of experts and other essential personnel within the region.

(4) Financial aspects

It would be necessary to consider the financial arrangements for implementing any contingency plan with respect to:

- (a) the provision of necessary equipment;
- (b) the transport requirements for employing the equipment in dealing with any particular incident;
- (c) the operation, maintenance and repair of the particular equipment concerned;
- (d) the training of experts and other personnel required.

B. Provision of reception facilities

41. The International Convention for the Prevention of Pollution from Ships, 1973, lays down obligations of Governments of Parties to the Convention to ensure the provision of adequate facilities at ports and terminals for the reception of oil, noxious substances, sewage and garbage from ships. This is a particularly important and urgent problem for the Mediterranean, since under Annex I (Oil) and Annex V (garbage) of the Convention the Mediterranean Sea Area is designated as a special area for which total prohibition or stringent control of discharge of harmful substances from ships is imposed.

42. In order to implement effectively the provisions of the 1973 Convention, it would be necessary to make a concerted effort among the Mediterranean States to resolve this problem. In studying the problem of reception facilities the following approach might be adopted:

- (a) Identification of adequate reception facilities, which would include:
 - (i) development of effluent limitation guidelines and standards of performance designed to achieve the best practical control and waste treatment methods;
 - (ii) determination of the volume of wastes being generated by ships at terminals and shipyards and the capacity of reception facilities required to handle these volumes;
 - (iii) preparation of an inventory of existing reception facilities;
 - (iv) assessment of additional reception facilities needed.

- (b) study on the design and construction of different types of facilities for oil, noxious chemicals, sewage and garbage;
- (c) economic implications of the provision of reception facilities.

C. Training of personnel

43. In Section A above, a brief mention has been made of the need for training personnel for combatting marine pollution as a result of maritime accidents. It would appear necessary to consider the general problem of training personnel for dealing with various aspects of marine pollution from ships and to take appropriate measures in order to ensure that adequately trained personnel is available in the countries of the region. Such consideration might include:

- (a) formulation of syllabi for experts on marine pollution from ships;
- (b) compilation of a list of existing training facilities which would be available for training personnel from the countries of the Mediterranean region;
- (c) possible establishment of a training centre on marine pollution within the region or expansion of an existing training establishment in the region to cover marine pollution from ships.

D. Routeing of ships in the Mediterranean

44. With the re-opening of the Suez Canal in the near future, it is expected that there will be a considerable increase in the density of traffic in the Mediterranean, particularly in the approaches to the Suez Canal, thus increasing the risk of maritime accidents which could result in significant damage to the marine environment. IMCO has developed some 100 traffic separation schemes in narrow channels and congested areas, including the Strait of Gibraltar, off Cani Island, off Cape Bon and Sacvicos Gulf (in the approaches of Piraeus Harbour), but so far no schemes have been developed for the approaches to the Suez Canal.

45. It would appear desirable for coastal States to initiate studies on appropriate routeing schemes for the approaches to the Suez Canal or any other areas in the Mediterranean where the opening of the Suez Canal would cause traffic congestion and to submit proposals to IMCO so that the schemes can be adopted and implemented internationally.

V. CONCLUSION

46. As mentioned at the outset, IMCO is ready to co-operate with the Mediterranean States to pursue any work which would contribute to the prevention and control of marine pollution from ships in the Mediterranean. During the second session of the Marine Environment Protection Committee, representatives from the Mediterranean States stressed that IMCO should play an active role in implementing the Plan of Action which would be adopted by the Barcelona Meeting, insofar as pollution from ships is concerned. It is hoped that this document will assist the States represented at the Barcelona Meeting in formulating and implementing the Plan of Action.

