



TWELFTH CONSULTATIVE MEETING OF
CONTRACTING PARTIES TO THE
CONVENTION ON THE PREVENTION
OF MARINE POLLUTION BY DUMPING
OF WASTES AND OTHER MATTER
30 October - 3 November 1989
Agenda item 16

IMO

REPORT OF THE TWELFTH CONSULTATIVE MEETING

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1 INTRODUCTION

1.1 The Twelfth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Dumping Convention) was held at IMO Headquarters, London, from 30 October to 3 November 1989 under the chairmanship of Mr. G. L. Holland (Canada). Vice-Admiral H. A. da Silva Horta (Portugal) was Vice-Chairman. Apologies for absence were received from Ms. S. Nurmi (Finland), first Vice-Chairman of the Consultative Meeting.

1.2 The Meeting was attended by delegations from the following Contracting Parties to the Convention:

ARGENTINA	MOROCCO
AUSTRALIA	NAURU
BELGIUM	NETHERLANDS
BRAZIL	NEW ZEALAND
CANADA	NORWAY
CHILE	PAPUA NEW GUINEA
CHINA	PHILIPPINES
COTE D'IVOIRE	POLAND
CUBA	PORTUGAL
DENMARK	SOLOMON ISLANDS
FINLAND	SOUTH AFRICA
FRANCE	SPAIN
GERMANY, FEDERAL REPUBLIC OF	SWEDEN
GREECE	SWITZERLAND
ICELAND	USSR
IRELAND	UNITED KINGDOM
ITALY	UNITED STATES
JAPAN	ZAIRE
MEXICO	

1.3 Observers from the following States which are not Contracting Parties to the Convention attended the Meeting:

BARBADOS	EGYPT
CYPRUS	LIBERIA

1.4 Representatives from the INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) and the following United Nations organizations attended the Meeting:

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC)

1.5 Observers from the following intergovernmental organizations attended the Meeting:

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT/NUCLEAR ENERGY
AGENCY (OECD/NEA)
COMMISSION OF THE EUROPEAN COMMUNITIES (CEC)
INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES)
OSLO COMMISSION AND PARIS COMMISSION
PERMANENT COMMISSION FOR THE SOUTH PACIFIC (CPPS)

1.6 Observers from the following international non-governmental organizations also attended the Meeting:

INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)
EUROPEAN COUNCIL OF CHEMICAL MANUFACTURERS' FEDERATIONS (CEFIC)
FRIENDS OF THE EARTH INTERNATIONAL (FOEI)
GREENPEACE INTERNATIONAL
INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES
(IUCN)
PERMANENT INTERNATIONAL ASSOCIATION OF NAVIGATION CONGRESSES (PIANC)
ASSOCIATION OF MARITIME INCINERATORS (AMI)
EUROPEAN ATOMIC FORUM (FORATOM)
OIL INDUSTRY INTERNATIONAL EXPLORATION AND PRODUCTION FORUM (E & P FORUM)
ADVISORY COMMITTEE ON POLLUTION OF THE SEA (ACOPS)

Opening of the Meeting

1.7 In opening the proceedings the Chairman welcomed all participants to the Twelfth Consultative Meeting. In doing so, he explained that the first Vice-Chairman (Ms. S. Nurmi) was unable to attend because of other pressing commitments.

1.8 On behalf of the Meeting the Chairman thanked the Secretary-General of the International Maritime Organization (IMO) and through him the IMO staff concerned, both for their preparations for the present Consultative Meeting and for their performance of secretariat functions called for by the Convention. The Chairman expressed the hope that IMO would continue to fulfil the demanding secretariat requirements of the London Dumping Convention in the positive way that it had done in the past and would, if necessary, enhance this support if the Consultative Meeting was to initiate actions requiring the provision of additional resources.

1.9 The Chairman also noted that 1989 had marked the thirtieth anniversary of the Organization and that during these thirty years the Organization had made great strides towards the prevention and control of marine pollution. The Chairman further mentioned that the Secretary-General would retire from IMO at the end of this year and, on behalf of the Consultative Meeting, wished him every success in his continuing duties as Chancellor of the World Maritime University.

1.10 The Chairman then highlighted that it was difficult to envisage IMO without the steady and experienced leadership of Mr. Srivastava, who had created the "IMO spirit", which had enabled the Contracting Parties to debate issues fully, explore their differences, and eventually agree to an acceptable compromise.

Address of welcome

1.11 In his welcoming address Mr. C. P. Srivastava, the Secretary-General of IMO, drew attention to the increasing role of the London Dumping Convention in the protection of the marine environment. He emphasized that IMO would continue in the future to provide every possible assistance for the further development of that Convention.

1.12 In recognizing the increasing importance of the London Dumping Convention as a mechanism for the effective control of waste disposal at sea, and the increasing responsibility of the section of the IMO Secretariat dealing with the London Dumping Convention, the Secretary-General informed the Meeting of his decision to create a new unit within the Organization designated as "Office for the London Dumping Convention".

1.13 In commenting upon the financial problems of IMO owing to the non-payment of contributions by a number of Member States, the Secretary-General pointed out that the plans to hold two meetings in 1989 with full interpretation (IGPRAD and the Consultative Meeting) had unfortunately not been fulfilled. However, he was happy to inform the Meeting that the IMO Assembly had recognized the importance of the Convention and had approved four meetings for the 1990/91 biennium, i.e. two meetings per calendar year.

1.14 In mentioning the continuously increasing activities of the Secretariat relating to the implementation of the London Dumping Convention, the Secretary-General expressed his gratitude to the Canadian Government for the secondment of a senior technical officer to the IMO Secretariat to deal with matters concerning the London Dumping Convention. In view of the fact that this secondment would end in June 1990, the Secretary-General made a plea to all Contracting Parties to consider supporting similar arrangements.

1.15 In referring to his retirement from IMO at the end of the year, the Secretary-General stated that he had very mixed feelings at having given his last welcoming address to a Consultative Meeting. He underlined that he had been very privileged in having participated in all the constructive and far-reaching accomplishments of the Consultative Meetings, but he knew that the work of the London Dumping Convention would be further enhanced under the leadership of the Secretary-General designate, Mr. William O'Neil, who had held the position of Chairman of IMO's Council for the past decade. In concluding his statement, the Secretary-General expressed his sincere appreciation to the Chairman of the Consultative Meeting and wished him continued success in his important responsibilities.

Adoption of the Agenda

1.16 The agenda for the Meeting (LDC 12/1), as adopted, is shown at annex 1. This includes, under each agenda item, a list of documents prepared for consideration under the respective items. The Meeting also agreed on a timetable and work schedule for the Meeting (LDC 12/1/2, annex 2).

Report on credentials

1.17 The credentials of representatives and alternates participating at the Twelfth Consultative Meeting of Contracting Parties to the London Dumping Convention were examined by the Secretary-General to ensure conformity with the provisions of Rule 7 of the Rules of Procedure (LDC 12/1/1). The Secretary-General reported that all credentials were found to be in order.

Participation of intergovernmental organizations (IGO's) and international non-governmental organizations (NGO's)

1.18 The Chairman informed the Meeting that those organizations that had been agreed to by the Eleventh Consultative Meeting had been invited to the Twelfth Meeting.

1.19 The Consultative Meeting noted that the International Chamber of Commerce had requested that one of its sub-bodies, the International Maritime Bureau (IMB) be granted observership status. In this connection, the Meeting recalled that the Secretariat had been requested by the Eleventh Consultative Meeting to maintain close contact with the IMB and to report any information received by that organization on transfrontier movements of wastes resulting in dumping at sea to future Consultative Meetings (LDC 11/14, paragraph 10.4.13). Accordingly the Secretariat, in consultation with the Chairman, had invited the International Maritime Bureau on a provisional basis subject to confirmation by this Consultative Meeting. The Meeting agreed to this decision and expressed its view that the Bureau might also attend future meetings held within the framework of the London Dumping Convention.

1.20 The Chairman stated that no further applications for observership status had been received but that the World Bank had been invited to participate in this Meeting. Although experts from the World Bank concerned with marine environmental issues had not been able to attend due to other pressing commitments, the Meeting confirmed that the World Bank should be invited to participate in its future meetings.

1.21 The Consultative Meeting decided that the following international non-governmental organizations should be invited to attend, in an observer capacity, the Thirteenth Consultative Meeting and the thirteenth meeting of the Scientific Group on Dumping:

INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)
EUROPEAN COUNCIL OF CHEMICAL MANUFACTURERS' FEDERATION (CEFIC)
FRIENDS OF THE EARTH INTERNATIONAL (FOEI)
GREENPEACE INTERNATIONAL
INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES (IUCN)

PERMANENT INTERNATIONAL ASSOCIATION OF NAVIGATION CONGRESSES (PIANC)
ASSOCIATION OF MARITIME INCINERATORS (AMI)
EUROPEAN ATOMIC FORUM (FORATOM)
OIL INDUSTRY INTERNATIONAL EXPLORATION AND PRODUCTION FORUM (E & P FORUM)
ADVISORY COMMITTEE ON POLLUTION OF THE SEA (ACOPS)
INTERNATIONAL MARITIME BUREAU (IMB)

2 STATUS OF THE LONDON DUMPING CONVENTION

2.1 The Consultative Meeting was informed of the report of the Secretary-General prepared on 4 July 1989 (LDC/12/2) concerning the current status of the London Dumping Convention, and of the 1978 and 1980 amendments thereto. It noted that as of that date 63 Governments had ratified or acceded to the Convention.

2.2 In noting that only 13 Contracting Parties had accepted the 1978 amendments to the Convention concerning procedures for the settlement of disputes, compared with the 42 acceptances (i.e. two-thirds of Contracting Parties) currently required to bring the amendments into force, the Consultative Meeting again urged Contracting Parties to give priority to the acceptance of these amendments.

2.3 The Meeting noted statements by the delegations of Brazil, Mexico and Poland on recent developments within their countries with respect to the development of legislation on protection of the environment.

2.4 In recalling the measures proposed by the Eleventh Consultative Meeting to raise the awareness of the London Dumping Convention and of the various activities taking place within its framework (LDC 11/14, paragraph 10.1.2), the Meeting gave further consideration to ways and means by which the awareness of and support for the London Dumping Convention might be increased. In this connection, the Meeting expressed appreciation for the efforts made by the Secretariat (LDC 12/2/1) with a view to increasing the membership of the Convention and to improving the co-operation of Contracting Parties. The Meeting also noted that a number of questions raised by the Secretariat under this issue should be addressed again in broad terms under item 12 of its agenda (long-term strategy for the Convention).

2.5 In emphasizing again that the effectiveness of the Convention would be enhanced by widening its level of acceptance, the Meeting requested the Secretary-General to write to Governments that had not yet ratified or acceded to the Convention, inviting them to do so as soon as possible and to indicate any specific problems they may have in implementing the provisions of the London Dumping Convention, including difficulties resulting from the amendments to the Annexes, and also to indicate any assistance they might require in implementing the provisions of the Convention.

2.6 The Chairman under this agenda item introduced his document on the long-term strategy for the Convention (LDC 12/2/2). The Meeting agreed to set up a working group to prepare, on the basis of that document, recommendations for consideration by the Meeting under item 12 of the agenda (see paragraphs 12.9 to 12.11).

3 CONSIDERATION OF THE REPORT OF THE SCIENTIFIC GROUP ON DUMPING

3.1 The Chairman of the Scientific Group on Dumping, Mr. R. Engler (United States), provided a comprehensive review of activities carried out by the Scientific Group since the Eleventh Consultative Meeting, highlighting the major discussions and recommendations emanating from that Group (LDC/SG 12/13). These are reflected in the following paragraphs, together with actions taken thereon by the Consultative Meeting. The Chairman of the Scientific Group further noted that actions related to the ad hoc Expert Group on the Annexes and those referring to incineration at sea would be discussed under agenda items 4 and 7 respectively.

3.2 The Meeting considered and adopted the report of the Scientific Group in general, taking into account the necessary actions recommended by that Group (LDC 12/3).

Review of list of substances in the Annexes

3.3 The Scientific Group had been directed to keep under continuing review any new information in regard to substances in the Annexes to the Convention

making special note of organotin compounds, especially tributyltin (TBT); copper-based anti-fouling paints; and organosilicon compounds.

3.4 While TBT compounds were recognized for their toxicity, the Scientific Group felt that these were not considered candidates for inclusion in Annex I to the Convention because they were not dumped at sea. It was noted that TBT compounds from anti-fouling paints may accumulate in harbour sediments and that this potential source for marine contamination would be kept under careful review by the Scientific Group. Contracting Parties were urged to submit relevant information on TBTs to the thirteenth meeting of the Scientific Group as part of its continuing review of these compounds.

3.5 The Meeting was informed by the Secretariat of the Third International Organotin Symposium (Monaco, 17-20 April 1990), to be conducted under the auspices of the Commission Internationale pour l'Exploration Scientifique de la Mer Méditerranée (CIESM) and co-sponsored inter alia by IMO. Leaflets of the first announcement and call for papers were made available to the participants of the Consultative Meeting.

3.6 The Meeting was informed of decisions made at the Sixth Ordinary Meeting of Contracting Parties to the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention) and its related protocols, concerning the prohibition of the use of TBT anti-fouling paints on vessels of less than 25 metres in length and on all structures, equipment or apparatus used in mariculture (LDC 12/INF.9).

3.7 Copper-based anti-fouling paints may replace TBT based paints and as a consequence it had been agreed that these should be kept under review by the Scientific Group. The Meeting was informed that a growing number of copper-based anti-fouling paints were being used on vessels and in mariculture and Contracting Parties were urged to submit relevant technical information to the thirteenth meeting of the Scientific Group for its review. The Meeting noted that GESAMP is carrying out an evaluation of the potential hazards of copper compounds.

3.8 The Scientific Group had been requested by the Eleventh Consultative Meeting and by resolution LDC.25(10), to continue a review of results of studies on the impact of organosilicon compounds on the marine environment and human health. A review of recent studies considered by the Scientific Group gave no new evidence that would change the earlier recommendations made by the Scientific Group to the Consultative Meeting to remove organosilicon compounds from the Annexes to the Convention. This item is further discussed under section 5, Amendments to the Annexes to the Convention, of this report.

Field verification of laboratory tests

3.9 The Chairman of the Scientific Group noted the importance of the discussions on the field verification of laboratory test data. He pointed out that laboratory tests carried out on waste materials proposed for disposal at sea under the Convention must be reliable and accurate, reflect conditions expected to occur in the field, and be conservative in ensuring protection of the marine environment. Field verification of predictive tests, through monitoring of actual disposal activities, ensures proper development and application of these tests. Contracting Parties were urged to submit to the thirteenth meeting of the Scientific Group results of physical, chemical and biological tests in relation to effects measured in the field.

Notification and reporting

3.10 The Meeting was advised that the Scientific Group reviewed a draft report prepared by the Secretariat on permits issued for dumping and incineration at sea during 1986. The Scientific Group expressed its deep concern that only half the number of Contracting Parties had submitted information to the Secretariat, with the remainder not fulfilling their obligations under Article VI of the Convention. The Meeting was further advised by the Chairman of the Scientific Group of the importance of this information to their deliberations and as a basis for preparing relevant and technically sound advice to the Consultative Meeting. Recommendations were

also made by the Scientific Group on how to improve the current situation on reporting activities. These included:

- .1 countries which meet problems in summarizing their data concerning dumping and incineration at sea in accordance with the approved formats, might instead send photocopies of their permits (if these are in the official languages) to the Secretariat;
- .2 countries not fulfilling their obligations under Article VI of the Convention should be reported to the Consultative Meeting, requesting it to take the strongest possible action; and
- .3 the Secretariat should use every opportunity to identify and/or contact national administrations that are responsible for waste disposal at sea, with a view to reminding them of the necessity of reporting to the Secretariat all dumping and incineration activities carried out at sea.

The Meeting agreed in principle to these recommendations and asked the Secretariat to develop a process for implementing them.

3.11 The Meeting noted the recommendation of the Scientific Group that a regular summary report on the activities carried out within the framework of the London Dumping Convention, including dumping and incineration at sea statistics, be issued by the Secretariat (LDC 12/3, paragraph 2.7). The Meeting approved this recommendation in principle, whilst recognizing that this would add to the already heavy workload of the Secretariat staff concerned. The Secretariat was requested to make every effort in complying with the above request, taking into account its available resources.

3.12 Several States expressed concern with regard to the complex nature of the reporting requirements and formats and suggested that the Scientific Group review the reporting process with a view to simplifying submissions. The Meeting also noted that the International Association of Ports and Harbors (IAPH), in co-operation with the Secretariat, was compiling global data on

dredging activities and the disposal of dredged material on land and at sea through a survey of IAPH member countries.

3.13 The Chairman of the Scientific Group reported to the Meeting that his Group had reviewed a number of reports defining aims and techniques of monitoring, as well as activities related to the monitoring of dumpsites. The reports covered titanium dioxide, drilling wastes, sewage sludge, dredged material, and monitoring strategies in general.

Monitoring for the purposes of the Convention

3.14 The Meeting recalled that the Eleventh Consultative Meeting had considered the question of monitoring dumping operations and the necessity for such activities to be reported on a regular basis. The Scientific Group, at the request of the Eleventh Consultative Meeting, had prepared a draft resolution on monitoring (LDC/SG.12/13, annex 2). This included a revision of the definition of monitoring which had been adopted by the Fifth Consultative Meeting. After considerable discussion, the Consultative Meeting adopted a revised definition of monitoring for the purpose of the London Dumping Convention as follows:

"Monitoring '... the condition of the seas for the purposes of this Convention' (as required in article VI(1)(d)) refers to those measurements performed by Contracting Parties, alone or in collaboration, to demonstrate the compliance of their permitted at-sea dumping and incineration practices with the overall intent of the Convention and the requirements of the Annexes."

3.15 The delegations of China, Finland and Sweden proposed that the Scientific Group as a future task should develop specific monitoring guidelines for Contracting Parties. The Chairman of the Scientific Group noted that an excellent example of general guidance on monitoring was contained in the ICES paper on "Monitoring Strategies" referenced in the draft resolution. It was also noted that with regard to the development of monitoring guidelines for the purposes of the London Dumping Convention,

several countries at the meeting of the Scientific Group had agreed to compile the relevant background information (the Federal Republic of Germany, Ireland, the Netherlands and the United States) for submission to the Scientific Group (LDC/SG 12/3, paragraph 5.3.7).

3.16 The Consultative Meeting adopted the draft resolution prepared by the Scientific Group with the amendments referred to above. Resolution LDC.36(12) by which the definition of monitoring and the respective notification procedures were adopted is shown in annex 2.

Sea disposal of offshore installations and structures

3.17 The Scientific Group had been asked to consider the need to prepare draft guidelines for the disposal at sea of decommissioned offshore platforms and structures.

3.18 The Scientific Group advised the Meeting that the existing provisions of Annex III and the implementation guidelines thereto were sufficient to address the environmental aspects of the disposal of offshore platforms and installations at sea, and that at this stage specific guidelines were not necessary.

3.19 The delegation of the Federal Republic of Germany stated that this recommendation was regretted and it was pointed out that the Federal Republic of Germany, together with the Netherlands, is preparing for the purpose of the Oslo Convention a list of substantive items to be included in guidelines for the sea-disposal of decommissioned offshore platforms and structures.

3.20 The Meeting recalled that a number of legal questions raised at the Eleventh Consultative Meeting would still have to be resolved, i.e. as to whether the abandonment of offshore platforms or the toppling of platforms at site, or their placement at sea bottom as artificial reefs, should be considered as "dumping". The Secretariat had issued a circular in this respect (LDC 2/Circ.228 of 1 February 1989), but only two responses had so far been received.

3.21 The delegation of Spain expressed its view that the abandonment, toppling at site or the placement of platforms at any site should be considered as "dumping" (LDC 12/3/1, annex). The Netherlands delegation raised a number of questions concerning the responsibility of coastal States in areas under their jurisdiction and of their rights with respect to dumping offshore installations on the continental shelf (LDC 12/3/4).

3.22 The Meeting urged other Contracting Parties to also respond to the questionnaire mentioned in paragraph 3.20 above and it agreed that such legal questions on the the disposal of offshore platforms should be discussed by the ad hoc Group of Legal Experts on Dumping which should be reconvened in 1990.

3.23 The delegation of Nauru requested that the Scientific Group address the potential environmental effects of oil and gas leakages from capped wells. The E & P Forum representative reminded the Meeting that this concern was raised at the last meeting of the Scientific Group (LDC/SG 12/7/1). It was agreed that the Consultative Meeting would decide as to whether this item should be reconsidered by the Scientific Group at a future meeting in the light of the outcome of discussion by the legal experts group.

3.24 The Secretariat was requested to contact all Contracting Parties with a view to initiating additional responses on the legal questions raised in connection with the disposal at sea of de-commissioned offshore installations and platforms.

Processes and procedures for the management of waste dumped at sea

3.25 The Chairman of the Scientific Group summarized the discussions held on various aspects of waste management with special emphasis on comparative assessments of waste disposal on land and at sea. Contracting Parties were urged to submit information on experiences in waste management, especially in regard to cases where comparative assessments had been carried out.

3.26 The Meeting noted that a comprehensive bibliography on the environmental effects of dredged material disposal has been prepared by the Secretariat and

is being continuously revised and updated in the light of information made available to the Secretariat. Contracting Parties were urged to contribute to this document and to suggest modifications or improvements. It was pointed out by the French delegation that a seminar on the environmental aspects of dredging will be held in Nantes, France from 27 November to 1 December 1989.

Co-operation and information exchange

3.27 The Meeting noted the significant number of activities relevant to the work of the Scientific Group which were carried out or organized by other organizations, including symposia and seminars, workshops, training courses, preparation of activity and status reports, etc. In this connection the Chairman mentioned, as an example, the input of the Scientific Group to the Secretariat's response to a request made by the Secretary-General of the United Nations for a contribution to a special report on "recent developments related to the protection and preservation of the marine environment in light of the relevant provisions of the United Nations Conventions on the Law of the Sea".

3.28 The Meeting was informed of the activities of the IOC/IMO/UNEP Group of Experts on the Effects of Pollutants (GEEP) (LDC 12/11/4). That Group undertook to consider a number of issues raised by the Scientific Group as well as matters of importance to other IMO bodies, e.g. on the quality of sediments and the bioavailability of the contaminants they contain, the effects of contaminants from incineration at sea on the microlayer, and pollution gradients surrounding oil platforms. GEEP is organizing an ICES/IOC seagoing workshop on biological effects monitoring techniques (March 1990) involving eight research vessels from the Federal Republic of Germany and the Netherlands. The Organization has been requested to support two of the 48 scientists participating in the workshop who will be testing the "Sediment Quality Triad" approach (chemistry, bioassay and community analysis) in the North Sea.

3.29 The Meeting strongly recommended that IMO should support the workshop by sponsoring experts who could contribute to issues related to the environmental effects of contaminated dredged material dumped at sea.

Future work programme

3.30 In discussing the future work programme of the Scientific Group, the delegation of Ireland suggested that in future each agenda item should be briefly described by annotations annexed to the agenda. This would aid the Consultative Meeting to better understand the proposed work of the Scientific Group.

3.31 At the request of the Eleventh Consultative Meeting, the Scientific Group developed a three year programme identifying priorities and reporting data. The list of substantive items proposed for inclusion in the agendas for the thirteenth, fourteenth and fifteenth meetings of the Scientific Group was reviewed by the Consultative Meeting under agenda item 13.

Other Matters

3.32 The Chairman of the Scientific Group described difficulties which had been met during certain discussions held during recent meetings of the Scientific Group. These difficulties were largely associated with interventions dealing with policy issues rather than technical and scientific issues as determined by the agenda of the Scientific Group. In the opinion of the Chairman of the Scientific Group, such interventions used valuable time that would have been better used to resolve scientific issues rather than matters of policy which were more appropriately addressed by the Consultative Meeting. It was felt that this lost time could only be detrimental to accomplishing the work of the Scientific Group.

3.33 The United States delegation recommended that the discussions of the Scientific Group should be of a scientific and technical nature only and that policy discussions and actions should be addressed to the Consultative Meeting (LDC 12/3/2). The Meeting supported these views.

4 PROPOSALS FOR THE RE-STRUCTURING OF THE ANNEXES TO THE CONVENTION

4.1 In accordance with resolution LDC.27(10), the Scientific Group had established an ad hoc Group of Experts on the Annexes to the Convention to carry out a review of the operational procedures of the Convention. The ultimate goal was to eliminate certain inconsistencies and ambiguities from the existing procedures, overcome difficulties caused by terminology and generally improve the regulation of dumping within an holistic, waste management context.

4.2 The ad hoc Group had sought to integrate current approaches to environmental and waste management into operational procedures of the Convention taking into account concepts and principles underlying the Convention. The ad hoc Group had also given due recognition to the importance of:

- .1 comparative assessment of alternative waste management and disposal options;
- .2 management of complex wastes as well as substances; and
- .3 temporal and spatial aspects of controls over dumping, for example related to the changing magnitude of waste disposal problems and the balance between present options and the future development of improved technologies.

4.3 The Meeting noted that other recommendations would continue to be made by the ad hoc Group concerning alternatives to the current structure of the annexes.

4.4 The ad hoc Group had held its second meeting in January 1989 and its interim report (LDC 12/4) identified the following guiding principles:

- .1 that no consensus existed among Contracting Parties that the ultimate aim of the Convention was to terminate dumping on a global basis;

- .2 that any new structure, if adopted, would constitute the principal basis for the issuance of permits for dumping of wastes at sea;
- .3 that any new structure for the operational procedures of the Convention should reflect a precautionary approach to dumping; and
- .4 that any new structure for the operational procedures should also:
 - .4.1 have a sound scientific foundation;
 - .4.2 be described in clear, unambiguous terms;
 - .4.3 emphasize waste categories as well as substances;
 - .4.4 reflect established principles of waste management; and
 - .4.5 be no less stringent than the existing black list/grey list approach.

4.5 The ad hoc Group presented a refinement of the schematic on the relationship between operational procedures of the London Dumping Convention (LDC 12/4, annex 1). The elements of the schematic include a prohibition list, an assessment of alternatives to dumping, waste material characterization, dumpsite characterization, impact assessment and monitoring design. Depending on the type and characteristics of the waste under evaluation, the schematic or parts thereof may be applied in an iterative manner with varying levels of sophistication. An administrative decision tree was also presented (LDC 12/4, annex 2).

4.6 The terms of reference for this effort which were adopted by the Tenth Consultative Meeting called for submission of the final report of the ad hoc Group to the Twelfth Consultative Meeting. The Scientific Group, after its review of the report of the ad hoc Group, recognized, however, that considerable further discussion and work were needed to finalize the work requested by resolution LDC.27(10). It accordingly recommended that the

ad hoc Group of Experts should be allocated two additional meetings to complete its tasks.

4.7 The observer from International Association of Ports and Harbors (IAPH) (LDC 12/INF.8) expressed its deep interest in the work of the ad hoc Group of Experts on the Annexes in considering the development of alternative approaches to the black list/grey list means of regulating substances under the Annexes. IAPH also expressed its concern at the interest shown by some delegations in the use of fixed sediment quality criteria in determining whether to allow the disposal at sea of dredged material.

4.8 At the twelfth meeting of the Scientific Group on Dumping, IAPH had pointed out that two methods under discussion - the Apparent Effects Threshold (AET) and the Sediment Quality Triad - are considered deficient because they fail to adequately take into account the mitigative properties of sediments and the effectiveness of "special care" measures in reducing the bioavailability of contaminants to acceptable levels for safe disposal at sea. These factors had already been recognized in the dredged materials guidelines adopted by the Tenth Consultative Meeting.

4.9 IAPH believed that the use of these guidelines was far superior to the use of inflexible sediment quality criteria in evaluating the suitability of dredged material for disposal at sea.

4.10 IAPH supported the work of the Contracting Parties and the ad hoc Group in seeking to improve the implementation of the Annexes to the Convention. It offered its continued assistance and expertise in assuring that the needs of ports and harbours for sea disposal of dredged material would be carried out in a manner consistent with the goals and purposes of the London Dumping Convention.

4.11 The United States delegation strongly supported the thorough and deliberate work being carried out on the restructuring of the Annexes by the ad hoc Group under the auspices of the Scientific Group on Dumping (LDC 12/4/1). It further noted that if any changes to the Annexes were needed

with a view to improving the scientific basis for regulation, it would seem appropriate to make them part of discussions related to the long-term strategy for the Convention. It was also stated that the ad hoc Group should list the different methods proposed by Contracting Parties for restructuring the Annexes to the Convention and explain why any had not been used. The United States delegation reiterated its position that it would only support a proposed change in the structure of the Annexes if there was convincing evidence that such a change would significantly improve the current methods used for achieving the goals of the Convention.

4.12 The question of "clean technologies" was raised by the observer from Greenpeace as an important consideration in the discussions on the restructuring of the Annexes.

4.13 The Danish delegation informed the Meeting that it had participated in the ad hoc Group and felt that a number of proposals being considered reflected a more cautious approach to dumping and a better application of waste management principles. Nevertheless, Denmark remained committed to a process which would ultimately lead to the cessation of dumping at sea. In this context Denmark very strongly supported the idea of keeping a "prohibition list" (black list) in any new scheme for the Annexes.

4.14 The delegation of the Federal Republic of Germany noted that the schematic as developed so far by the ad hoc Group of Experts was not in contradiction to Annexes I and II of the Convention, and could provide an acceptable approach to the ranking of the various Annex III provisions.

4.15 The Consultative Meeting welcomed the progress made by the ad hoc Group of Experts on the Annexes and encouraged the Group to continue its efforts to develop procedures which would allow a more harmonized approach for implementing the requirements of the Convention and would also reflect established principles of waste management.

4.16 The Consultative Meeting agreed to the proposed extension of the work schedule of the ad hoc Group of Experts and endorsed its work programme

(LDC 12/4). Participation in meetings of the ad hoc Group would include experts who had previously attended. However, a group member who would not be able to attend would be free to nominate a successor. Invitations would also be extended to those experts who had not previously attended but who submitted papers on the topics under consideration, subject to consultation between the Secretariat and the Chairman of the ad hoc Group of Experts.

5 AMENDMENTS TO THE ANNEXES TO THE CONVENTION

5.1 The Meeting recalled that the Tenth Consultative Meeting, by resolutions LDC.25(10) and LDC.26(10), had approved in principle amendments to the Annexes to the London Dumping Convention as follows (LDC 12/5):

- .1 the inclusion in Annex III, section A, of a paragraph containing the following text (section A, paragraph 9):

"In issuing a permit for dumping, Contracting Parties should consider whether an adequate scientific basis exists concerning characteristics and composition of the matter to be dumped to assess the impact of the matter on marine life and on human health."

- .2 the deletion of "organosilicon compounds" from the list of substances set out in Annex II to the Convention;

5.2 The Tenth Consultative Meeting, in adopting resolutions LDC.25(10) and LDC.26(10) relating to this matter, had designated the Twelfth Consultative Meeting for the formal adoption of the above amendments.

5.3 The Meeting noted that the proposed amendments had been circulated by the Secretary-General of IMO to all Contracting Parties (LDC.2/Circ.155) requesting them to indicate in writing if they did not expect to be in a position to adopt the amendments at the present Meeting in accordance with the procedure for preparation and consideration of amendments to the Annexes to the Convention as laid down in resolution LDC.10(V). It was further noted that Denmark and the Federal Republic of Germany had notified the Secretary-General

that they did not expect to be in a position to formally adopt the amendment to Annex II set out in paragraph 5.1.2 above.

5.4 After due consideration the Contracting Parties present at the Meeting unanimously adopted, with minor editorial changes, the amendment set out in paragraph 5.1.1 above in accordance with paragraph 2 of Article XV of the Convention. Resolution LDC.37(12) by which this amendment was adopted appears at annex 3 hereto.

5.5 With regard to the proposed amendment concerning the deletion of organosilicon compounds from Annex II as set out in paragraph 5.1.2 above, the delegations of Denmark and the Federal Republic of Germany reiterated their reservations concerning the adoption of the proposed amendment, as communicated to the Secretary-General in writing (see paragraph 5.3 above). The delegations of Finland, Iceland, Nauru, Norway, Solomon Islands and Sweden then informed the Meeting that they wished to associate themselves with the view of Denmark and the Federal Republic of Germany that organosilicon compounds should be retained in the list of substances set out in Annex II to the Convention.

5.6 The observer from Greenpeace shared the views expressed by the delegations referred to above. Greenpeace regarded organosilicon compounds as persistent and synthetic and expressed its concern that such compounds would be used to replace PCB's on a large scale. Their view was that it would be premature to delete organosilicon compounds from Annex II and that the "precautionary principle" should be applied.

5.7 The observer from the European Council of Chemical Manufacturers' Federations (CEFIC) reminded the Meeting that the Scientific Group's recommendation had been based on scientific considerations. It was not likely that organosilicon compounds would be dumped at sea, and in the unlikely event that dumping was to take place there would be no significant damage but only very localized effects. In CEFIC's view the amendment would strengthen the Convention by removing unnecessary controls on such substances. These arguments had been accepted by the governing bodies of the Oslo, Paris and

Barcelona Conventions. Far from weakening the London Dumping Convention, the proposed resolution would strengthen the Convention by adding to its credibility and showing that it was not generating legislation to control harmless substances which are not subject to disposal at sea.

5.8 CEFIC further stated in response to the above statement made by Greenpeace that the application of organosilicons as a replacement for PCB's in transformers and similar devices had been in use for more than ten years and that at the end of the life of the transformers and similar devices the silicones were recycled, because they were too expensive to throw away or lose in effluents.

5.9 The Chairman recalled that the process established by the Fifth Consultative Meeting to deal with amendments to the Annexes had been adopted to allow the administrations of Contracting Parties sufficient time to assimilate changes into national laws and regulations.

5.10 In further explaining the process the Chairman noted that the approval in principle of an amendment to the Annexes adopted by a Consultative Meeting should be finally approved by formal adoption at a subsequent, designated, Consultative Meeting. The request to Contracting Parties to indicate in writing if they would find themselves unable to adopt the amendment previously adopted in principle does not indicate a legal requirement but was part of the process to smooth the transfer of an amendment to formal adoption.

5.11 The above process had been followed in the case of the first amendment considered by the Consultative Meeting under this agenda item, but for the situation concerning the deletion of "organosilicon compounds" from Annex II, opinion was divided. The right of any Contracting Party to call for a vote on any proposed resolution was also acknowledged and the Chairman had been informed of the wishes of several Contracting Parties in this regard.

5.12 The Chairman informed the Meeting that he would ask the Chairman of the Scientific Group to outline the rationale behind the recommendation to delete organosilicon compounds from Annex II before proceeding with the vote.

5.13 The Chairman of the Scientific Group outlined the actions undertaken on various reviews of organosilicon compounds. Comprehensive documents submitted by several groups spanning a seven year period since the sixth meeting of the Scientific Group had been thoroughly reviewed, discussed and conclusions were drawn. The reports included scientific data on ecotoxicity, persistence, biological availability, distribution, production and uses. The information presented in the various submissions followed internationally accepted protocols for evaluating products of this nature.

5.14 The Chairman of the Scientific Group also noted that these various documents were reviewed in detail by competent scientific institutions (e.g. toxicologists, marine scientists, geochemists, etc.) within the individual Contracting Parties as well as by the Scientific Group itself. He reported that the results of their review and the conclusion of the Scientific Group was that the preponderance of scientific evidence supported the exclusion of organosilicon compounds from Annex II. He concluded that the Scientific Group had made a clear, unequivocal, unambiguous recommendation on this issue to the Consultative Meeting reminding it that Article XV of the Convention states that amendments to the Annexes will be based on scientific and technical considerations.

5.15 The observer from Greenpeace reminded the Contracting Parties that Greenpeace did not believe that the findings of the Scientific Group had been ignored, but that they had been fully considered with respect to the limits of scientific evidence and the complexity of the global environment.

5.16 The Chairman, recognizing the need to vote on the proposed amendment of Annex II related to organosilicon compounds, asked the Secretariat for legal advice concerning the provisions of Article XV(2) of the Convention referring to amendment procedures.

5.17 The Assistant Secretary-General, Mr. Mensah, Director of the Legal Affairs and External Relations Division of IMO, was then asked to explain the voting procedure. He noted that Rule 28 of the Rules of Procedure of the Convention established that "unless otherwise provided for in the Convention,

decisions of a Meeting shall be taken, elections determined and reports, resolutions and recommendations adopted by a majority of the Contracting Parties present and voting, provided the requirements of Rule 34 are satisfied". Rule 34 stated the requirement of a quorum being present. For the present situation, concerning an amendment to the Annexes, Article XV(2) of the Convention applied. Therefore the resolution under consideration would require approval by "... a two-thirds majority of those present ...".

Mr. Mensah explained that the phrase "those present" was not specifically defined and would be a matter for decision by the Consultative Meeting. However, if the Consultative Meeting wished to take account of the interpretation accepted by the IMO Assembly and other United Nations bodies, the definition of "Members Present" (ref. Rule 33 of the IMO Assembly Rules of Procedure) means "Members at the Meeting, whether they cast an affirmative or negative vote, whether they abstain, whether they cast an invalid vote or whether they take no part in the voting. Participants at the session who are not present at the Meeting at which the voting takes place shall be considered as not present".

5.18 The Chairman of the Consultative Meeting thanked Mr. Mensah for his assistance and ruled that the Consultative Meeting would adopt the accepted practice as outlined. He therefore called for a vote on the draft resolution prepared by the Secretariat for the adoption of the proposed amendment set out in paragraph 5.1.2 above.

5.19 The vote taken was 16 for, 10 against and 5 abstentions. These numbers represented all Contracting Parties present. The motion was therefore defeated and the proposed amendment to the Annex will not take place. Subsequently the delegation of Ireland gave a statement to explain its vote, as set out in the following paragraph.

5.20 The delegation of Ireland wished to register disappointment that the Consultative Meeting had not seen fit to accept the advice of its Scientific Group and to delete organosilicon compounds from Annex II to the Convention. Ireland participated in a series of protracted and detailed discussions within the Scientific Group on the environmental significance of these substances and

was party to the conclusion that there was no basis for their continued inclusion in the Annexes. Ireland also held the view that the reluctance shown by the Consultative Meeting to amending the Annexes in this case was indicative of a serious deficiency in the operational procedures of the Convention. Delegations supporting this view were therefore compelled to make the observation that, as long as this position persists, there would seem to be little prospect of the Convention maintaining its Annexes in an up-to-date and scientifically sustainable condition.

5.21 The delegations of France, Italy, Japan, South Africa, the United Kingdom and the United States associated themselves with the above statement.

5.22 The delegation of Finland declared in an explanation of vote that the previous vote on resolution LDC.25(10), carried out at the Tenth Consultative Meeting, was not a formal vote on an amendment to an Annex. The voting procedure for this indicative vote was governed by Rule 28 of the Rules of Procedure. However, a formal adoption of an amendment to an Annex shall be governed by paragraph 2 of Article XV of the Convention. Thus the delegation of Finland considered that it had the right to cast its vote in consistency with its policy expressed at the Tenth Consultative Meeting. In the view of that delegation the outcome of the voting at the present Meeting indicated that the voting at the Tenth Consultative Meeting would likely have given another result if it had been carried out in accordance with the same procedure as that followed at the present Meeting.

5.23 The delegations of Denmark, the Federal Republic of Germany, Iceland, Nauru, Norway and Sweden supported the views expressed by Finland.

5.24 The delegations of the Solomon Islands and Spain declared that they held a similar opinion to the delegation of Finland regarding the relevance to an amendment of an Annex to the Convention of the vote carried out on resolution LDC.25(10) on the amendment to the Annexes at the Tenth Consultative Meeting.

6 MATTERS RELATING TO THE DISPOSAL OF RADIOACTIVE WASTES AT SEA

Progress report of IGPRAD

6.1 The Chairman recalled that the third meeting of the Inter-Governmental Panel of Experts on Radioactive Waste Disposal at Sea (IGPRAD) had been postponed due to IMO's budgetary crisis. The Chairman then informed the Meeting that a working group meeting had been convened on 27 October 1989 comprised of the Chairman of IGPRAD, the Chairmen of the two working groups established under IGPRAD, representatives from lead countries involved in the work of IGPRAD, and a representative from the IAEA, as well as by representatives from countries which had indicated their wish to join this working group (LDC 12/6/1). Mr. A. Voipio (Finland), the Chairman of IGPRAD, was also Chairman of the working group. The working group had evaluated the progress of work achieved during the intersessional period and had prepared a status report for consideration by the Twelfth Consultative Meeting (LDC 12/WP.1).

6.2 The outcome of the working group meeting held on 27 October 1989, is reflected in paragraphs 6.3 to 6.21 below.

6.3 Before proceeding with any detailed discussion, the working group decided that it would be appropriate to consider how best to deal with the papers that had been submitted for consideration. The Secretariat was requested to circulate to all Contracting Parties the comments and reports submitted to this working group meeting. In this connection the Secretariat was also requested to invite further submissions for IGPRAD 3 and these would be handled in a fashion similar to the procedure adopted for the first two meetings of IGPRAD.

6.4 It was also agreed that each lead country's or agency's submission to IGPRAD 3 should include information on how the comments submitted to it had been taken into account along with an explanation of any incorporation, modification or rejection of comments provided. Each lead country or agency was also requested to indicate what, if any, changes had been made to documents re-submitted to IGPRAD 3.

Legal issues

6.5 Finland had agreed to carry out further studies on legal issues and submitted a revised document on "International Law on Ocean Dumping" (LDC.2/Circ.246).

6.6 Nauru noted that its paper "Comments on Legal Issues" had been received after Finland's second draft was prepared, and that although some of its comments had been addressed in the revision, others remained to be considered. It felt that a need existed to provide further comments for IGPRAD's consideration.

6.7 Regarding the re-examination of national laws with a view to clarifying whether sea disposal of high- and low-level radioactive waste is prohibited, regulated by permit system or not mentioned; the Secretariat stated that a new questionnaire to Contracting Parties would be needed to answer these questions.

Political issues

6.8 Australia had agreed to examine the many political factors leading to the adoption of the South Pacific Regional Convention (SPREP). It submitted a paper on the SPREP Convention and noted that it was basically a factual background paper which served to illustrate the political will to prohibit sea disposal of radioactive waste in the South Pacific.

6.9 The Secretariat provided a brief overview of the report on Ethical Aspects of Nuclear Waste (LDC 12/6/4) submitted by Sweden. This was also available as a paper to the Twelfth Consultative Meeting.

6.10 The working group then turned its attention to the fact that Spain had informed the Secretariat that regrettably it would not be able to carry out additional studies on the following social and political topics:

- public opinion polls;

- examination of the main factors influencing policy on sea dumping and storage of radioactive waste; and
- methods for improving public information programmes.

6.11 It was generally agreed that political issues were perhaps the most open aspect of the IGPRAD work programme and certainly one of its key elements. The review of the above mentioned additional studies confirmed that a good political science examination of the main factors influencing policy on sea dumping and storage of radioactive wastes was of priority concern.

6.12 In this connection, Australia mentioned that there were many recent developments in UN resolutions relating to environmental protection matters. With this in mind, it kindly offered to prepare a factual paper on these policy developments for IGPRAD 3. It was also suggested that the Twelfth Consultative Meeting should actively explore finding an alternate lead country but, should this fail, there may be the need to consider either the hiring of a consultant or the use of a Government official seconded to IMO to complete this important work.

Social and economic issues

6.13 France reaffirmed its commitment to review the social and economic issues in conjunction with those scientific and technical studies scheduled for completion in 1990. In this connection, it was noted that there had been a rather limited response to the questionnaire prepared by France on social and economic issues and that Contracting Parties who had not previously responded to the questionnaire should be encouraged to do so.

6.14 Norway agreed to continue work on its conceptual cost-benefit model (LDC/IGPRAD 2/2/4) and noted that it had received two papers from Nauru (1. Recommendations for the Cost-Effective Analysis of Low-level Radioactive Waste Disposal; and 2. Economic Aspects of Radioactive Waste Dumping at Sea), and one from Sweden (Cost Effectiveness Analysis as a Tool in Managing Releases of Radioactive Materials and other Genotoxic Agents into the

Environment)). It reaffirmed its commitment to update its cost-benefit model based on further comments and additional input data.

Scientific and technical issues

6.15 The International Atomic Energy Agency (IAEA) is continuing its work on several scientific and technical issues pursuant to requests from the Tenth Consultative Meeting. The IAEA representative reported on the work performed by the Agency in support of the London Dumping Convention during the intersessional period 1988-89. With respect to the inventory of radioactive wastes input into the sea, it noted that only minimal information had been provided by Contracting Parties. The working group agreed that the success of this exercise required the full collaboration of all Contracting Parties.

6.16 On the topic of risk comparison, the IAEA informed the working group that a document was in preparation which would cover different types of risk ranging from the normal risks of life in a modern society to the specific risks of sea dumping of low-level radioactive wastes.

6.17 On the issue of sea/land-based comparisons, it was mentioned that a document was in preparation which reviews available reports dealing with real case situations.

6.18 It was noted that a new GESAMP working group (Working Group No.29) had been created on a "Comprehensive framework for the assessment and regulation of waste disposal in the marine environment". This GESAMP working group will not only consider existing agreements for marine environmental protection but also evaluations along similar lines that have been made within other fora (the International Council for the Exploration of the Sea (ICES, 1989), and the Swedish Ministry of Environment and Energy (MEE, 1989)).

Revised IGPRAD working schedule

6.19 Based on the discussions of the working group, the Chairman of IGPRAD expressed the view that the completion dates mentioned in the existing IGPRAD working schedule (LDC 2/Circ.240) remained a good estimate.

6.20 The working group agreed to put forward two main options to the Twelfth Consultative Meeting for the convening of its next meeting. These options were:

Option 1:

To hold IGPRAD 3 with both its working groups in May 1990, however, the assessment of scientific and technical studies would be limited; or

Option 2:

To hold IGPRAD 3 with both its working groups in the autumn of 1990, if possible back to back with the Thirteenth Consultative Meeting.

6.21 The working group agreed that IGPRAD 3 should also address two critical issues as part of its deliberations. These would include the intended completion date and the final format for the report to the Consultative Meeting. In this connection, it was felt by most participants that the involved studies would most likely be completed by 1993, and that the report to the Consultative Meeting should include an analysis of the findings, including conclusions for further consideration by the Consultative Meeting.

Further discussion on IGPRAD

6.22 The delegation of Sweden then introduced its paper on Ethical Aspects of Nuclear Waste (LDC 12/6/4) which was prepared by the Swedish National Board for Spent Nuclear Fuel. In the report, two lines of reasoning are pursued, both of which lead in principle to the same conclusion: a repository should be constructed in such a way that controls and corrective measures would be unnecessary, while at the same time not making controls and corrective measures impossible. That delegation also informed the Meeting that Sweden, in co-operation with some international organizations, will convene a symposium entitled "Environmental Consequences of Hazardous Waste Disposal" in Stockholm, 27-31 May 1991. It is hoped that the symposium will be a starting point for an international development of principles for management of

chemical and radioactive waste. The symposium will follow the recommendation given by the workshop on "Principles for Disposal of Radioactive and Other Hazardous Wastes" held in Stockholm in June 1988 (see also paragraph 14.13).

6.23 The representative from the International Atomic Energy Agency (IAEA) introduced its status report (LDC 12/11/2) on the work performed during the intersessional period 1988-89 by the Agency in support of the Convention. It was noted that much of the status report was addressed in the IGPRAD progress report (see paragraphs 6.15 to 6.17). IAEA in its report provided a further explanation on the inventory of radioactive waste inputs into the sea. IAEA has requested the eleven Contracting Parties and IAEA Member States that had been engaged in the disposal at sea of low-level radioactive wastes to provide the relevant information. To date four Contracting Parties still have not replied and the IAEA emphasized that the success of the inventory required the full collaboration of all Contracting Parties. The IAEA representative also drew attention to an information document it had made available on "Facts about low-level radiation" (LDC 12/INF.16).

6.24 The observer from Greenpeace drew attention to the fact that LDC Resolution 21(9) on Dumping of Radioactive Wastes at Sea calls for an inventory of all sources of radioactive waste inputs into the sea and not merely those inputs from dumping at sea. The Greenpeace observer stated that a report on naval accidents between 1945-88 was available to the Meeting and should be considered in the inventory being undertaken by IAEA (LDC 12/INF.28). The report indicates that due to naval accidents there are now 50 nuclear warheads and nine nuclear reactors lost on the sea floor.

6.25 In response to the question from Greenpeace regarding the current limited scope of the inventory, the representative of IAEA noted that it was working in co-operation with the Commission of the European Communities (CEC) and UNSCEAR to augment its data base on other sources of radioactive waste input into the sea. Regarding relevant information for developing an inventory to include releases from military naval accidents, the IAEA representative stated that any such information received by his organization would be generally available to the Contracting Parties. Furthermore, the

IAEA representative noted that information currently available tended to be rather general (description of accident, countermeasures, monitoring) and was not readily amenable for calculating emissions.

6.26 The Chairman of the Meeting, while recognizing the confidentiality of information on military naval accidents involving nuclear warheads, nevertheless encouraged Contracting Parties to submit appropriate information for the compilation of the above-mentioned inventory insofar as this was possible.

6.27 The delegation of the United States informed the Meeting that it had published environmental data on the "Scorpion" and "Thresher" accidents and that there was no significant impact at the time of sinking. Subsequent monitoring had shown no significant effect on the marine environment. These statements had been publicly available for several years and information to this effect had been provided to the Secretariat in 1987.

6.28 The delegation of the USSR indicated that a detailed investigation had been carried out with respect to the recent accident involving the nuclear submarine "Komsomolets" in the Norwegian Sea and that no contamination above normal background levels could be detected (LDC 12/INF.30). That delegation stated that the USSR had no intention of disposing of decommissioned nuclear powered submarines at sea.

6.29 The Meeting then turned its attention to the fact that Spain had informed the Secretariat that regrettably it would not be able to carry out additional studies on the social and political topics as mentioned in paragraph 6.10 above. The Chairman expressed the Meeting's gratitude to Spain for the important work it had carried out in this regard and noted that of the three topics in question the examination of the main factors influencing policy on sea dumping and storage of radioactive wastes was of priority concern. In considering possible means for continuing this work, the Chairman suggested that the hiring of a consultant, finding a new lead country, seconding an official to IMO or compilation of written submissions by the Secretariat were possible options. With the absence of a volunteer to be a

new lead country and no consultant funds immediately identifiable, the Meeting agreed to the latter option while at the same time Contracting Parties undertook to pursue the availability of the other options mentioned. The Secretariat pointed out that some assistance from Contracting Parties in the compilation of the relevant submissions would be very welcome.

6.30 The two options for holding IGPRAD 3, as mentioned in paragraph 6.20, were then examined. After considerable discussion it was agreed to hold IGPRAD 3 in the autumn in conjunction with the 13th Consultative Meeting for reasons of economy and to benefit from the completion of additional scientific and technical studies (see also paragraph 13.9).

Feasibility of sea-bed disposal of high-level radioactive waste

6.31 The Secretariat introduced a paper on an overview of the OECD/NEA research in relation to assessing the feasibility of disposing of high-level radioactive waste into the sea-bed (LDC 12/6). This work had been published in 1988 by OECD/NEA in an eight volume series on "Feasibility of Disposal of High-Level Radioactive Waste into the Seabed".

6.32 The representative from OECD/NEA noted that following the issue of the above-mentioned publication, the Co-ordinated Research Programme sponsored by NEA in the last decade had now come to its end. However, considering that a number of NEA member countries were still interested in keeping this concept under review, consultations on an ad hoc basis would continue within the Agency to maintain a watching brief on scientific progress in this field, and to consider possible initiatives which could be envisaged in terms of international co-operation. It was underlined that for the time being the emphasis of radioactive waste disposal programmes is clearly on land disposal, and that therefore resources for sea-bed disposal studies were very limited.

6.33 The Nauru delegation, supported by the observer from Greenpeace, expressed concern about the ongoing research in this field. It requested OECD/NEA to provide further details on current activities related to the disposal into the sea-bed of high-level radioactive wastes, including

budgetary provisions, and contributions made for such activities. The Chairman suggested that such specific questions should be addressed to OECD/NEA separately.

The disposal at sea of decommissioned nuclear-powered vessels and disposal into a sub-sea-bed repository of low-level radioactive wastes

6.34 The Eleventh Consultative Meeting of Contracting Parties to the London Dumping Convention, when discussing the work currently carried out by its Inter-Governmental Panel of Experts on Radioactive Waste Disposal at Sea (IGPRAD), noted that a number of questions related to the disposal at sea of decommissioned nuclear powered vessels, as well as the disposal into a sub-sea-bed repository of low-level radioactive wastes, had not yet been considered within the framework of the London Dumping Convention.

6.35 Accordingly, the Secretariat solicited, through a circular (LDC.2/Circ.222), views and comments from Contracting Parties to the London Dumping Convention on the following:

- .1 Measures adopted by Contracting Parties in implementing article VII(4) of the London Dumping Convention with respect to the disposal at sea of decommissioned nuclear powered military vessels;
- .2 Perspectives of Contracting Parties as to whether the Consultative Meeting of Contracting Parties to the London Dumping Convention is the appropriate forum to consider disposal of low-level radioactive wastes into a sub-sea-bed repository accessed from the sea, such as via a mobile platform, or fixed platform or artificial island; and
- .3 Perspectives of Contracting Parties as to whether disposal of low-level radioactive wastes into a repository, constructed in bedrock either totally or partially beneath the sea, and accessed from shore (e.g. via a tunnel or other conduit) would be dumping at sea under the terms of the London Dumping Convention.

6.36 The Secretariat informed the Meeting of the responses received from thirteen Contracting Parties (LDC 12/6/2, LDC 12/6/2/Add.1). The Consultative Meeting also noted that additional responses had been received by the Secretariat during this Consultative Meeting (LDC 12/INF.25).

6.37 The Nauru delegation submitted a paper on the "Dumping of Decommissioned Nuclear Submarines at Sea: A Technical and Legal Analysis" (LDC 12/6/3) as a support document for its position that the dumping at sea of decommissioned nuclear-powered military vessel is covered and prohibited by the London Dumping Convention. The delegation of Nauru referred to the revised IAEA Definition and Recommendations concerning radioactive wastes which, in that delegation's view, would allow the disposal of all decommissioned nuclear submarines at sea. It expressed concern that sea dumping of such vessels would set a precedent for similar sea disposal of many commercial reactors in need of decommissioning now and in the near future.

6.38 The delegation of Norway also expressed the view that disposal at sea of decommissioned nuclear submarine is covered by the London Dumping Convention.

6.39 In response to a question from the delegation of the United Kingdom, the Chairman confirmed that the 1983 resolution LDC.14(7) by which the dumping of radioactive material was suspended, as well as subsequent resolutions adopted on this matter (resolution LDC.21(9), resolution LDC.28(10)), were voluntary in nature and not legally binding.

6.40 The Nauru delegation recalled that in 1983 Nauru and Kiribati had proposed an amendment to the Annexes of the Convention that would in effect prohibit radioactive waste dumping at sea. That delegation stated that Nauru had no immediate plans to recall resolution for this amendment but reserved the right to request action on this proposal in the future.

6.41 The Spanish delegation submitted two proposed resolutions concerning, respectively, the disposal of low-level radioactive wastes into the sea-bed carried out at sea and the same activity carried out from the shore. The Spanish delegation set out the arguments justifying its conclusion that the

disposal of low-level radioactive wastes into the sea-bed carried out at sea did fall within the scope of the London Dumping Convention and, accordingly, was currently suspended by virtue of resolution LDC.21(9). Similar activities carried out from the shore should be the subject of a study by a group of legal experts with the participation of representatives of the Paris Commission, the Helsinki Commission and UNEP. The Spanish delegation stated that, in the meantime, no activity should be carried out relating to disposal into the sub-sea-bed accessed from the shore.

6.42 In parallel with the Spanish draft resolution on a sub-sea-bed repository accessed from land, the delegation of Ireland submitted a draft resolution calling for the reconvening of the ad hoc group of legal experts under the Consultative Meeting to examine the compatibility of waste disposal into sub-sea-bed repositories accessed from land with the provisions of the London Dumping Convention or other international conventions. This resolution arose from Ireland's concern at what it saw was a lacuna in international agreements on this issue because such repositories had not been considered when conventions on the protection of the marine environment had been drawn up.

6.43 Greenpeace International submitted its view that sub-sea-bed disposal in repositories accessed from shore should be considered dumping at sea under the terms of the London Dumping Convention (LDC 12/INF.17).

6.44 The Swedish delegation strongly expressed its view that disposal of low-level radioactive wastes into a repository constructed in bedrock beneath the sea-bed and accessed from shore was not covered by the concept of "dumping" under the terms of the London Dumping Convention. Dumping is defined in the London Dumping Convention as disposal at sea and from vessels, aircraft, platforms or other man-made structures at sea. This legal definition should, according to Sweden's point of view, exclude repositories accessed from shore.

Establishment of a working group and its findings

6.45 The Consultative Meeting established a working group to review the responses to LDC.2/Circ.222 and to prepare a revised and updated summary of responses taking into account those received during the Meeting. The working group was also instructed to consider the implications of accidents involving nuclear-powered vessels.

6.46 Vice-Admiral H. A. da Silva Horta (Portugal), chairman of the working group, reported its findings (LDC 12/WP.4), as summarized in paragraphs 6.47 to 6.54.

6.47 The working group reviewed the response to the circular LDC.2/Circ.222 and prepared a revised summary table of response, taking into account all the information received (LDC 12/WP.4, annex).

6.48 With regard to issue 1 (see paragraph 6.35.1), it was noted by the working group that this issue pertains to Articles III(1)(a)(ii) and VII(4) of the Convention which read:

"Article III

For the purposes of this Convention:

1. (a) "Dumping" means:

(i) ...

(ii) any deliberate disposal at sea of vessels, aircraft, platforms or other man-made structures at sea.

Article VII

4. This Convention shall not apply to those vessels and aircraft entitled to sovereign immunity under international law. However, each Party shall ensure by the adoption of appropriate measures that such vessels and aircraft owned or operated by it act in a manner consistent with the object and purpose of this Convention, and shall inform the Organization accordingly."

Accordingly, the principles contained in the above Articles of the Convention apply to the disposal at sea of any vessel, whether military or non-military, nuclear-powered or non-nuclear-powered, commissioned or decommissioned.

6.49 In the summary of responses (LDC 12/WP.4, annex), therefore, the replies to issue 1 have not been included.

6.50 With regard to issue 2 (see paragraph 6.35.2), the working group found that the responses were unanimous in that the Consultative Meeting is the appropriate forum to consider disposal of low-level radioactive wastes into a sub-sea bed repository accessed from the sea.

6.51 With regard to the issue 3 (see paragraph 6.35.3), a substantial majority of the responses were that such disposal would not constitute "dumping at sea" under the terms of the London Dumping Convention. Some Parties, however, felt that the Convention does apply and some others were not able yet to formulate an opinion. In addition, some favoured increased international control of this activity.

6.52 The working group observed that the above issue seemed appropriate to be addressed at the discussions on the long-term strategy of the Convention. In conclusion, the working group recommended that the ad hoc group of legal experts reconvened under paragraph 3.22 above should determine whether the disposal of low-level radioactive wastes into sub-sea-bed repositories accessed from land constitutes "dumping at sea" under the terms of the London Dumping Convention and, if not, whether the provisions of other conventions would apply.

6.53 The ad hoc group of legal experts should report its findings to the Thirteenth Consultative Meeting. In order to assist the legal experts, the Secretariat should seek information from other relevant international bodies. Some delegations observed that whether or not the repository is under the internal water of the country conducting the activity was also relevant to the legal questions to be considered by the ad hoc group.

6.54 With regard to accidents at sea involving releases of radioactive material, the working group agreed that Contracting Parties should be requested to provide all relevant information to the IAEA regarding accidents at sea involving releases or other deposits of radioactive material. It was emphasized that such information would enable the inventory of radioactive substances that enter the marine environment to be improved. It might also provide a better basis for assessing the likely consequences of any future accidents involving nuclear-powered vessels.

Action taken by the Consultative Meeting

6.55 The Consultative Meeting accepted the report of the working group and agreed that the ad hoc Group of Legal Experts on Dumping reconvened under paragraph 3.22 above should consider the issue as proposed under paragraph 6.52 above. The revised summary of responses to LDC.2/Circ.222 is set out at annex 4 to this report.

6.56 The Spanish delegation reiterated its view that the disposal of low-level radioactive waste into a sub-sea-bed repository accessed from the sea was regulated by the London Dumping Convention. It proposed that this question should also be referred to the ad hoc Group of Legal Experts and suggested that the draft resolution tabled by Spain on this subject matter should be sent to the ad hoc Group of Legal Experts on Dumping and the next Consultative Meeting.

6.57 Other delegations were of the view that, although the Consultative Meeting is an appropriate forum to discuss the question, this did not automatically mean that the requirements of the London Dumping Convention Articles apply to such disposal. However, they would not object to a referral of the question to the ad hoc Group of Legal Experts. The Consultative Meeting therefore agreed to the Spanish proposal. The draft resolution tabled by Spain is shown in annex 5.

6.58 The delegation of Ireland indicated that as the recommendations of the working group, adopted by the Consultative Meeting, adequately reflected its

concerns, it could therefore withdraw its draft resolution tabled under paragraph 6.42 above.

7 MATTERS RELATING TO THE INCINERATION OF WASTES AND OTHER MATTER AT SEA

Interpretation of resolution LDC.35(11)

7.1 The Chairman drew attention to the report of the twelfth meeting of the Scientific Group on Dumping (LDC/SG 12/13) and to the actions required by the Consultative Meeting as noted by the Secretariat (LDC 12/3, paragraph 2.9 to 2.11).

7.2 The Chairman of the Scientific Group indicated that several documents had been discussed at the twelfth meeting of that Group covering the scientific and technical aspects of the management of incineration at sea. He invited the Consultative Meeting to take note of the discussions. He noted that a future work programme on matters related to incineration at sea had been developed (LDC/SG 12/13, annex 3), but that no consensus had been reached concerning the implementation of that programme, due to differing interpretations of resolution LDC.35(11).

7.3 Regarding the distribution of organohalogen compounds and heavy metals in sediments of the North Sea, the Chairman of the Scientific Group noted that significant discussions had been held on the results of various sediment and biological monitoring programmes in the North Sea. Several interpretations of the data had been discussed without any agreement as to the plausible cause and effect relationships to incineration at sea activities. Disagreements stemmed from data variability, sampling methods, and methods of interpretation. He noted that the disagreement emphasized the need for further and more precise studies of the incineration site and the surrounding environment and the technology involved with incineration at sea.

7.4 Regarding differing interpretations of resolution LDC.35(11), the Chairman of the Scientific Group noted that two views had been brought forward. One view was that it was the purpose of the resolution to terminate

incineration at sea by the end of 1994, through exploring means to better ascertain and promote land-based alternatives to this waste management practice. Another view was that the resolution requested the examination of the possible role of incineration at sea in a global waste management context prior to taking a final decision on the termination of incineration at sea before the end of 1994.

7.5 The Chairman of the Scientific Group requested that the Consultative Meeting provide an authoritative interpretation of resolution LDC.35(11) and to decide on the additional studies needed to fulfil the provisions of that resolution.

7.6 On behalf of the Nordic countries, the delegation of Denmark introduced a "Draft Resolution on the re-evaluation on incineration at sea of noxious liquid wastes with the aim of phasing it out" (LDC 12/7/1/Rev.1). The resolution was submitted in order to enable the Consultative Meeting to guide the work of the Scientific Group on Dumping.

7.7 In the opinion of the Nordic countries, the intent of resolution LDC.35(11) and of the guiding principles used in drafting that resolution (as had been proposed by the Chairman of the Eleventh Consultative Meeting and agreed by that Consultative Meeting) was the intent to terminate incineration at sea, setting a target date of 1994. Therefore, the work to be carried out by the Scientific Group on Dumping should be directed with the aim of phasing out this practice in the near future. Accordingly, emphasis should be placed on clean technologies and product substitutions. Further, special attention should be given to the progress and experience of the Parties to the Oslo Convention in their attempt to phase out incineration at sea in the Oslo Convention area.

7.8 The United States delegation (LDC 12/7/3/Rev.1) suggested that a work programme that might be established on this topic should use as a starting point the terms of reference forwarded by the Scientific Group (LDC/SG 12/13, annex 3). The United States stressed that it had available adequate land-based facilities for the destruction of hazardous wastes and so,

apparently, had some other countries. However, in its view a number of countries may lack adequate land-based facilities to manage hazardous wastes, and therefore, the United States was in favour of evaluating the practical availability of safer and more environmentally acceptable land-based alternatives as called for in resolution LDC.35(11).

7.9 The United States delegation further stated that if acceptable land-based alternatives exist on a global basis, then phasing out incineration at sea should be considered. However, if phasing out incineration at sea would result in pollution of coastal waters through inadequate treatment or storage on land, then nothing would be gained and much may be lost by such a ban.

7.10 The Netherlands' delegation expressed its views concerning resolution LDC.35(11) (LDC 12/INF.18), stating that the incineration at sea of liquid chlorinated hydrocarbon wastes originating in its territory had been terminated and that the Netherlands would soon also have an alternative solution for the disposal of other halogenated wastes. Thus, from a national point of view, the Netherlands was able to support a decision to terminate incineration at sea on a global basis by 1994. However, the Netherlands thought it unwise to decide to terminate incineration at sea globally without assessing this method in relation to other methods available in the different areas of the world. Therefore, the Netherlands was in favour of having this item considered by the Scientific Group in a general and global waste management context and of the Consultative Meeting further evaluating this matter in 1992.

7.11 The Chairman reminded the Meeting that resolution LDC.35(11) was a compromise reached at the Eleventh Consultative Meeting and that efforts by the Twelfth Consultative Meeting to clarify the interpretation of that resolution might prove fruitless. He suggested that a better approach might be to reach consensus on the work programme of the Scientific Group on this subject and accordingly he proposed that a working group should be set up during this Meeting to further develop such a work programme.

7.12 The Meeting approved this approach. As a consequence the legal interpretations and opinions contained in some documents submitted to the Meeting (LDC 12/7/1/Rev.1: Nordic countries; LDC 12/3/3: Greenpeace) were not discussed in detail in plenary.

7.13 The working group established above met under the chairmanship of Mr. R. J. van Dijk (Netherlands). Delegates from eight Contracting Parties and observers from two international non-governmental organizations participated in the working group. Using the work programme of the Scientific Group on this subject (LDC/SG 12/13, annex 3) and taking into account the various submissions made under this agenda item, the working group prepared a revised work programme for the Scientific Group. The report of the working group (LDC 12/WP.2) was approved by the Meeting. This includes a revised work programme for the Scientific Group on Dumping as set out in annex 6 to this report.

7.14 In the light of the revised work programme, the Meeting requested the Scientific Group to:

- .1 provide advice to the Contracting Parties on how to conduct the re-evaluation;
- .2 review clean technology and practical availability of land-based alternatives; and
- .3 take into account all relevant information on incineration technology and associated environmental implications.

7.15 The revised work programme includes several specific items addressing the practical availability of safer and environmentally more acceptable land-based alternatives, especially no-waste and low-waste technologies. The Scientific Group shall also take into account information from research and monitoring programmes associated with both sea-based and land-based incineration.

7.16 The Meeting agreed that in order to assist the Scientific Group on Dumping to carry out its task, independent environmental consultants should be engaged to investigate in more depth selected issues, including the inventory on the practical availability of safer and environmentally more acceptable land-based alternatives. Interim reports should be made available to the thirteenth meeting of the Scientific Group.

7.17 The Meeting also recalled that the Contracting Parties had agreed, by resolution LDC.35(11), to take all possible steps to minimize or substantially reduce the use of marine incineration of noxious liquid wastes by 1 January 1991. It urged Contracting Parties to report on the steps taken so far in this respect by 31 March 1990.

7.18 The observer from Greenpeace International introduced a detailed list of references and contacts on clean technology and source reduction, that may be of use to the revised work programme (LDC 12/INF.19).

7.19 The observer from the Association of Maritime Incinerators (AMI) made some suggestions for future incineration research (LDC 12/7/2), especially the need for laboratory tests to obtain samples under controlled circumstances.

7.20 The representative from the Intergovernmental Oceanographic Commission (IOC) reminded the Meeting that a seagoing workshop on biological effects measurement, organized by IOC (GEEP) in conjunction with ICES, would take place off Bremerhaven in the North Sea in 1990 (LDC 12/11/4; see also paragraph 3.27 above). In view of the planned studies on sediments and the sea-surface micro-layer, and the proximity of the study area to the incineration zone, it was anticipated that the workshop might contribute information and improved techniques for assessing the environmental effects of incineration at sea.

7.21 Turning to the issue of how to complete the required studies within the agreed time-frame, the Irish delegation noted that time had already been lost and that the work should not be solely left to consultants, but that all

Contracting Parties should be requested to submit the relevant information. The Secretariat indicated that several avenues would be explored for funding the required studies. It also expressed the hope that Contracting Parties and observer organizations would consider making contributions in this regard.

Guidance on incineration at sea

7.22 The Consultative Meeting noted that a document entitled "Matters Relating to the Incineration of Wastes and Other Matter at Sea: Guidance on Incineration at Sea" (LDC 12/7) had been prepared by the Secretariat at the request of the Eleventh Consultative Meeting. The document was a compilation of all the current requirements and provisions regarding the control of incineration at sea developed under the London Dumping Convention and the respective shipping requirements.

8 CONSIDERATION OF THE REPORT OF THE TASK TEAM ON LIABILITY

Report of the Task Team

8.1 The Chairman of the Task Team (Mr. A. Bos, Netherlands) introduced the report of the Task Team on Liability (LDC 12/8), noting that the report had been based on submissions from 18 Contracting Parties and several international organizations, (LDC 12/8, paragraph 2.2). Unfortunately, only three of the five member countries of the Task Team were able to participate in its meeting.

8.2 He informed the Meeting of the difficulties encountered by the Task Team in its attempt to compare and summarize the information submitted to the Task Team, in that:

- .1 different legal systems were in effect in the States which submitted the material;
- .2 the questions contained in the circular distributed by the Secretariat (LDC.2/Circ.226) addressed matters which are dealt with by a wide range of national legislation; and

8.8 Most States also indicated that their laws do not extend to liability for damage caused by dumping beyond their territory or maritime zones. A few States, however, stated that their domestic courts can exercise jurisdiction in these cases.

8.9 With regard to the question of who is liable for damage, from the material submitted to the Task Team, it appeared that domestic rules provide for the liability of the operator of a ship, the owner of the waste, or of the entity in charge at the moment the damage occurs. Several States referred explicitly to the possible liability of the administrations which have issued a permit.

8.10 With respect to international legal regimes of civil liability, States referred to their obligations under international treaties, without expressing in a clear manner how these would apply to dumping at sea. The Task Team noted that the treaties mentioned by States (LDC 12/8, paragraph 4.2) had only a very limited reference to waste disposal at sea. With regard to State responsibility or liability, a comprehensive list had also been provided (LDC 12/8, section 7).

8.11 The Task Team noted that "State responsibility" and "State liability" are currently being studied by the International Law Commission. The Task Team agreed that "State responsibility" is well established in customary international law and that this would include a number of duties, referring to the duty to notify a State that may be affected, to consult with such a State and to mitigate any damage that might have occurred.

8.12 With regard to "State liability" for damage from lawful activities, there is a wide range of views, and at this stage the concept of State liability for detrimental effects of lawful activities cannot be considered as a generally accepted rule of customary international law.

8.13 The Chairman of the Task Team further noted that it had not been the task of his team to make any recommendations, but that the Task Team nevertheless felt that some concluding remarks should be made which might

assist the Consultative Meeting in its deliberations. The Task Team identified some relevant, albeit conflicting, elements which the Consultative Meeting may wish to take into account. These were set out in the report of the Task Team (LDC 12/8, section 6) as follows:

- .1 there is a rapidly growing awareness in the international community of the need to improve the protection of the environment, including the marine environment;
- .2 the London Dumping Convention provides for the strict regulation and control of waste disposal at sea by national administrations. With respect to the need for the elaboration of a State liability regime, it was noted that the London Dumping Convention has so far been largely successful in preventing harmful ocean dumping. However, in spite of the requirements of the Convention, it cannot be ruled out that dumping at sea may under certain circumstances result in harmful effects to the marine environment and human health, in particular in cases and areas where the requirements are not adhered to;
- .3 it appeared that national regimes address liability for dumping in most cases, taking into account the scope of national laws and the geographical location of dumping; in this context, the Task Team noted that almost all dumping occurs within 200 miles of national territory. Dumping does however also occur on the high seas and could cause damage there, and in some such cases national laws might not adequately address liability for damage;
- .4 since dumping activities take place in the marine environment in and outside areas of national jurisdiction, national laws and international rules of civil liability may be inadequate to address the subject of State responsibility or liability;
- .5 liability for ocean dumping could be addressed through developments in national law, through an international civil liability regime, or through a regime of State liability;

- .6 in light of particulars of the dumping activities, it might be seen as necessary to elaborate specific rules relating to liability in the case of damage resulting from these activities;
- .7 the Task Team noted that under the London Dumping Convention all dumping of low-level radioactive waste has been carried out on the high seas. The suspension of the disposal of radioactive wastes at sea has been very effective in that since its adoption, no sea disposal of low-level radioactive wastes has been carried out. Sea disposal of radioactive wastes will probably not be resumed until current studies and assessments contemplated in resolution LDC.21(9) have been completed. This demonstrates the ability of the Consultative Meeting to react promptly in cases where doubts have been expressed about possible harmful impacts of dumping on the environment;
- .8 the report of the Task Team refers to discussions held currently within a number of international and regional bodies, e.g., the ILC, IAEA, IMO, ECE and OECD, concerning questions related to State responsibility and liability. One may question whether in light of all these ongoing activities the elaboration of a liability regime within the London Dumping Convention deserves priority; and
- .9 in light of the complex nature of the task of elaborating a liability regime and the other ongoing activities within the framework of the London Dumping Convention, attention should be given to the priority to be assigned to this question. Attention should also be drawn to the question of whether such a regime, once elaborated, would be likely to achieve wide acceptance by the Contracting Parties.

Additional information

8.14 The Secretariat informed the Meeting of the state of development concerning liability and compensation for damage caused by the carriage of

hazardous and noxious substances (HNS) (LDC 12/8, paragraph 5.3.3). It was noted that the IMO Legal Committee at its sixty-first session, held in September 1989, decided to give top priority to the work related to the possible HNS Convention. The IMO Assembly at its sixteenth regular session held in October 1989 approved the decision of the Legal Committee. Depending on the decision taken in connection with this subject, the consideration of possible amendments to the Convention on Liability for Maritime Claims, 1976 (LLMC) has also been included in the work programme for the 1990-1991 biennium.

Action by the Consultative Meeting

8.15 The Consultative Meeting expressed its appreciation for the work done by the Task Team. Several delegations concurred with some of the concluding remarks in the report, in particular with respect to the relative priority which should be given to elaborating a liability regime within the London Dumping Convention.

8.16 The delegations of Finland and Sweden expressed their regrets that due to other pressing commitments of their legal experts, they had not been able to participate as members of the Task Team in the deliberations of that group. However, they expressed their readiness to assist in any future exercises on this topic.

8.17 The Spanish delegation stated that the reduced size of the Task Team had altered the balance of streams of thought that might have otherwise been presented to the Consultative Meeting.

8.18 The Meeting was of the view that the issue of liability was an extremely important one. It was agreed that the ad hoc Group of Legal Experts on Dumping reconvened under paragraph 3.22 above should continue the work of the Task Team. The questionnaire on liability and compensation (LDC.2/Circ.226 of 1 February 1989) together with the Task Team's report should be recirculated to enable States which have not yet responded to do so.

8.19 The delegations of Brazil, France, the Federal Republic of Germany and Ireland undertook to submit relevant information for consideration by the ad hoc Group of Legal Experts.

9 TRANSBOUNDARY TRANSPORT OF HAZARDOUS WASTES

9.1 The Consultative Meeting was informed of the outcome of the Conference of Plenipotentiaries on the Global Convention on the Control of Transboundary Movements of Hazardous Wastes (Basel, Switzerland 20-22 March 1989); in particular of the adoption of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and of Resolution 2 on the relationship of the Basel Convention and the London Dumping Convention (LDC 12/9). It was noted that by this Resolution the Contracting Parties to the London Dumping Convention were invited to review the existing rules, regulations and practices with respect to dumping of hazardous and other wastes at sea in the light of the new requirements of the Basel Convention with a view to recommending any additional measures needed within the London Dumping Convention, including its Annexes, in order to control and prevent the dumping of hazardous and other waste at sea.

9.2 The Meeting noted the preliminary study prepared by the Secretariat comparing the relevant requirements of the London Dumping Convention with those of the Basel Convention (LDC 12/INF.7, LDC 12/9/1). It was agreed that the preliminary study formed a basis for further review by Contracting Parties of the provisions of the London Dumping Convention in the light of the Basel Convention pursuant to the aforementioned Resolution 2 adopted by the Basel Conference of Plenipotentiaries.

9.3 The delegation of Switzerland, speaking as the country which hosted the Basel Conference, recalled that the Basel Convention was developed as a result of an initiative taken by Switzerland in consultation with the Ministers of the Environment of France, the Federal Republic of Germany and Italy and followed up by the Organisation for Economic Co-operation and Development (OECD) and the United Nations Environment Programme (UNEP). That delegation noted that Switzerland has provided host facilities for the interim

Secretariat located in Geneva and urged all States to accept the Basel Convention as soon as possible.

9.4 The representative of UNEP summarized the main provisions of the Basel Convention (LDC 12/INF.6). The Convention was based on two fundamental principles: the minimization of the quantity and hazardous characteristics of wastes generated, and the treatment and the disposal of waste as close as possible to its source. The transboundary movement of wastes should therefore be the exception rather than the rule.

9.5 UNEP further drew the attention of the Meeting to the fact that the Basel Convention provided a comprehensive regime whereby the transboundary movement of hazardous wastes would be strictly controlled and monitored. The cornerstone of the Convention was the requirement that before such wastes could be exported there had to be a written confirmation from the State of import that the waste was acceptable and would be disposed of in an environmentally sound manner. Attention was also drawn to the fact that the Convention required States to respect the right to prohibit the import of hazardous wastes by prohibiting the export of hazardous wastes to such States which have declared a ban.

9.6 In response to a question from the Chairman regarding the anticipated date of the first meeting of Contracting Parties to the Basel Convention, the UNEP representative informed the Meeting that the Basel Convention would enter into force 90 days after receipt of the twentieth instrument of ratification, acceptance, etc. and that the Executive Director of UNEP would convene the first meeting of Contracting Parties no later than one year after that date. Currently 36 States had signed the Convention and one had ratified.

9.7 The Secretariat subsequently informed the Meeting that on the basis of information received from UNEP on 30 October 1989, the following countries are currently preparing ratifications of the Basel Convention: Ecuador, Lichtenstein, Mexico, the Netherlands, Norway, Portugal, Saudi Arabia and Switzerland.

9.8 The observer from Greenpeace introduced its document on "The International Inventory of Waste Trade" published by Greenpeace during the negotiation of the Basel Convention (LDC 12/INF.2) and additional information published after the Basel Conference (LDC 12/INF.2/Add.1). Greenpeace suggested that the Consultative Meeting should adopt a resolution urging Contracting Parties to the London Dumping Convention to take appropriate measures to prevent the export of hazardous wastes to countries that are not Party to the London Dumping Convention, thus filling a perceived void in the dumping regulations.

9.9 The observer from the Advisory Committee on Pollution of the Sea (ACOPS) informed the Meeting on the outcome of the International Conference on Transport of Toxic Wastes which had been organized by ACOPS and held at IMO Headquarters from 3 to 5 October 1989 (LDC 12/INF.12). One of the major purposes of the Conference was to encourage and facilitate the rapid entry into force of the Basel Convention and its effective implementation, by launching a public awareness campaign as envisaged by Article 10(4) of the Convention. The *raison d'être* of the Conference emerged from concern by ACOPS that the Convention would be ineffective unless it entered into force rapidly and unless matters related to assistance to developing countries, development of clean technologies and reduction of waste at source were adequately addressed. ACOPS expressed its willingness to actively co-operate with the Contracting Parties to the London Dumping Convention and the relevant organizations such as IMO and UNEP in promoting measures aimed at the reduction, control and environmentally sound disposal of hazardous wastes.

9.10 The Meeting noted IMO Assembly resolution A.676(16) on Transboundary Movement of Hazardous Waste (LDC 12/INF/15), adopted at the sixteenth session of the Assembly. The resolution inter alia affirmed the unique responsibility and competence of IMO in the field of safe and environmentally sound marine transport, and requested the Marine Environment Protection Committee and the Maritime Safety Committee of the Organization to jointly review the relevant rules, regulations and practices with respect to the marine transport of hazardous wastes in the light of the Basel Convention.

9.11 The Meeting was informed of resolution CM/RES.1225(L) of the Council of Ministers of the Organization of African Unity (OAU) which decided to set up a working group composed of legal and environmental experts to draw up a Draft African Convention on the Control of the Transboundary Movement of all forms of Hazardous Wastes in the Continent (LDC 12/INF.5). The UNEP Executive Director and the Executive Heads of other UN bodies and Specialized Agencies were requested to lend the said working group all necessary assistance.

9.12 The Meeting agreed that Contracting Parties should be invited to review the provisions of the London Dumping Convention in the light of the Basel Convention and to submit their views inter alia on the need to recommend any additional measures within the London Dumping Convention or the Basel Convention in order to enhance the effectiveness of either Convention with respect to the environmentally sound disposal of wastes. The Meeting agreed that the study prepared by the Secretariat (LDC 12/INF.7) should be circulated to all Contracting Parties with a view to assisting them in the carrying out of such a review. Comments, proposals, studies, etc. should be received by the Secretariat no later than 1 July 1990. The Secretariat would then prepare a consolidated paper incorporating the material received and circulate it for consideration at the next Consultative Meeting of Contracting Parties. It was agreed that the ad hoc Group of Legal Experts on Dumping at its meeting in October 1990 (see paragraph 13.9.5) should consider this matter in some detail.

9.13 The Meeting welcomed a draft resolution put forward by the delegation of Mexico on the export of wastes for disposal at sea which aimed at, inter alia, updating resolution LDC.29(10) on the same subject in the light of the Basel Convention. It was agreed that the draft resolution as shown at annex 7 will be considered at the Thirteenth Consultative Meeting. Contracting Parties were invited to submit comments on the draft resolution to the Secretariat no later than 1 July 1990.

10 INFORMATION EXCHANGE ON WASTE DISPOSAL TECHNOLOGY

10.1 National and regional seminars on waste disposal at sea

10.1.1 The Meeting welcomed the activities of the Organization in convening national and regional seminars on the control and prevention of pollution by waste disposal at sea (LDC 12/10). With financial assistance from the Swedish International Development Authority (SIDA) and other United Nations organizations, such as the United Nations Environment Programme (UNEP), and the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the Secretariat has been active in organizing seminars for the exchange of scientific and technical information related to the implementation of the Convention.

10.1.2 The Meeting was informed of the China/IMO/IOC National Seminar on the Control of Waste Disposal at Sea, which was held in Shanghai from 11 to 17 September 1989 (LDC 12/10/3). The purpose of the seminar was the transfer and exchange of scientific and technical knowledge regarding the handling, treatment and disposal of waste with a view to promoting the control of waste disposal at sea within a comprehensive waste management approach. The Meeting particularly noted the conclusions of the Seminar that the dumping at sea legislation and permit system in China conformed well with the requirements of the London Dumping Convention, that the procedures currently in use for the assessment of wastes proposed for dumping at sea reflect current scientific advice from the London Dumping Convention, and that there was a strong commitment in China to marine environment monitoring. Due to the interest expressed in specific topics (e.g. biological monitoring techniques), it was recommended that workshop sessions be established and that opportunities be provided for agencies in China to gain experience from other Contracting Parties to the Convention in relation to the development and use of environmental quality criteria.

10.1.3 The delegation from China expressed its appreciation to IMO for having organized, in co-operation with the respective Chinese administration, the above seminar which in its view was very valuable in promoting the effective

implementation of the requirements of the London Dumping Convention. China would continue to make every effort towards close co-operation with the Secretariat with a view to furthering the aims and objectives of the London Dumping Convention. Efforts have also been made by China to improve co-operation with other international organizations working in the field of marine pollution prevention. In this regard mention was made of a China/IOC seminar and workshop in Dalian, China, in April 1990 to investigate contaminant inputs from rivers into the marine environment and their implication for sediment quality.

10.2 International Ocean Disposal Symposium

10.2.1 The Secretariat reported on the Eighth International Ocean Disposal Symposium (IODS 8) which was held in Dubrovnik, Yugoslavia, from 9 to 13 October 1989 (LDC 12/10/1). It was noted that there were 80 participants from around the world including eight experts from developing countries who were sponsored by the IMO/SIDA programme. Much of the IODS programme was dedicated to the review and development of sediment quality criteria. It was believed by most participants that at this stage of development it would be extremely difficult and perhaps even counter-productive to employ sediment quality criteria beyond a local or regional scale due to the heterogeneous nature of sediments and oceanographic conditions. Disposal at sea of domestic sewage sludge was the major case study reviewed at the symposium and it was agreed that the input of nutrients which exceeded the assimilative capacity of the coastal marine environment was a major concern. The Symposium also addressed the various waste management strategies being used and the role of the oceans in any waste management strategy.

10.2.2 The Ninth International Ocean Disposal Symposium (IODS 9) will be held in the United States with support from the United States Environmental Protection Agency. Advertisements will shortly be distributed inviting proposals for a location for IODS 9 in the United States and, at the same time, seeking proposals to host IODS 10 in a developing country. In this connection, it was noted that the technical and administrative support for an IODS symposium costs approximately US\$ 80,000. The IODS Steering Committee is

preparing a proposal for obtaining the needed financial assistance from various donor agencies as well as from individual Contracting Parties to the London Dumping Convention. The IODS Steering Committee considered it essential that such financial support be found within the next year in order that IODS 10 and subsequent symposia can be assured of taking place.

10.2.3 In response to a question from the Federal Republic of Germany, the Secretariat confirmed that the proceedings from the symposium will be reproduced in a scientific journal and hopefully will be available within the next six to twelve months.

10.2.4 The observer from Greenpeace drew attention to the continued emphasis on dumping symposia at meetings held within the framework of the London Dumping Convention and suggested that as a significant number of States were now phasing out industrial waste dumping, it was incumbent on the Convention to place at least equal emphasis on clean technology/source reduction conferences. The Chairman drew attention to the Globe '90 Conference to be held in Vancouver, Canada, in March 1990 on environmental technologies.

10.2.5 Under this agenda item, the Secretariat drew attention to the September 1989 International Environmental Congress in Hamburg on "The Harbour - An Ecological Challenge". The delegation from the Federal Republic of Germany offered to explore the feasibility of making copies of the International Environment Congress publication available to interested parties through the Secretariat.

10.2.6 The Meeting noted IMO's input to a forthcoming World Bank publication on "The Environmentally Sound Disposal of Dredged Materials".

10.2.7 The delegation from Finland then introduced the Nordic Action Plan for the prevention of pollution of the sea (LDC 12/INF.20). The Action Plan is very comprehensive in dealing with most sources of marine pollution. It takes into account all the requirements included in the London Dumping Convention, MARPOL 73/78, the Oslo Convention, the Paris Convention, the Helsinki Convention and the Bonn Agreement. It also takes into account multilateral

and bilateral agreements adopted in this respect between the Nordic countries as well as bilateral agreements between Nordic countries and other countries.

10.3 Public Relations

10.3.1 The Eleventh Consultative Meeting, when considering problems related to the lack of co-operation between Contracting Parties and methods to increase the confidence of the public in the prevention and control procedures of the London Dumping Convention, suggested that more efforts should be made with a view to improving public relations, i.e. by preparing booklets and articles for the public media outlining the aims, objectives and achievements of the London Dumping Convention (LDC 12/10/2).

10.3.2 In the light of the above consideration, a special public session was arranged on Monday 30 October 1989 from 4 p.m. to 6.30 p.m. The following speakers were invited to make presentations on the health of the marine environment as well as on the progress and needs in relation to the basic principles of the London Dumping Convention, as set out in Articles I and II of the Convention*:

Professor A. McIntyre, Emeritus Professor of Fisheries and Oceanography, University of Aberdeen (Independent speaker)

Dr. O. Linden, Director of Marine Research, the Swedish Environmental Institute, Associate Professor, University of Stockholm (Independent speaker)

* Article I: "Contracting Parties shall individually and collectively promote the effective control of all sources of pollution of the marine environment, and pledge themselves especially to take all practicable steps to prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea."

Article II: "Contracting Parties shall, as provided for in the following Articles, take effective measures individually, according to their scientific, technical and economic capabilities, and collectively, to prevent marine pollution caused by dumping and shall harmonize their policies in this regard."

The Rt. Hon. Baroness White (ACOPS)

Mr. H. Llanos, Deputy Secretary General, Permanent Commission for the South Pacific (CPPS)

Mr. K. Jørgensen, Danish Agency of Environmental Protection (Denmark)

Dr. C. E. Purdom, Directorate of Fisheries Research at the Fisheries Laboratory in Lowestoft MAFF (United Kingdom)

Mr. W. A. Nitze, Deputy Assistant Secretary of State for Environment, Health and Natural Resources (United States)

10.3.3 Mr. C.P. Srivastava, Secretary-General of IMO opened the public session. A summary of Mr. Srivastava's opening speech and summaries of the presentations by the invited speakers are reproduced at annex 8.

10.3.4 The Chairman invited comments on possible ways for improving similar future public relations exercises.

10.3.5 The Consultative Meeting appreciated the efforts made by the Chairman in co-operation with the Secretariat in arranging an open and public session where, inter alia, measures taken for the implementation of the basic principles and requirements of the London Dumping Convention had been presented, together with an overview on the status of the marine environment. The Meeting agreed that similar exercises should be carried out at future Consultative Meetings, taking into account the experience gained at this first open session. The Meeting expressed its appreciation to the speakers for their presentations on Monday afternoon during the open session.

10.3.6 The observer from the International Association of Ports and Harbors (IAPH) suggested that further initiatives could be made by the Secretary-General of IMO whereby periodic reports on the Convention could be submitted to embassies in London as news releases, and the convening of receptions for Ambassadors of countries from non-Contracting Parties to the London Dumping Convention. The Secretariat assured the Meeting that many diplomatic missions in London included permanent representatives to IMO who received regular updatings on the work of the Organization through the circulation of "news briefings", etc. The Secretary-General would nevertheless continue to take

every possible opportunity to promote increased membership in the London Dumping Convention.

11 RELATIONS WITH OTHER ORGANIZATIONS

The UN General Assembly

11.1 The Meeting was informed of an extract from a report by the UN General Assembly prepared in response to its Resolution 42/20 (1987), covering Protection and Preservation of the Marine Environment (LDC 12/11). It included an account of developments under the London Dumping Convention up to, but not including, the Eleventh Consultative Meeting, as part of a review of international activities relevant to the UN Convention on the Law of the Sea. A report reflecting matters discussed and decided upon by the Eleventh Consultative Meeting had been submitted by the Secretariat to the UN with a view that this be included in a report to the United Nations Assembly in 1989.

The IMO/FAO/Unesco/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP)

11.2 The Secretariat highlighted matters relevant to the London Dumping Convention which had been discussed at the nineteenth session of GESAMP (May 1989) (LDC 12/11/1). The Meeting noted that GESAMP was carrying out a number of tasks either at the request of the Consultative Meeting or related to its work. These studies addressed the following topics:

- .1 review of potentially harmful substances;
- .2 coastal modelling of waste dumped or discharged at sea;
- .3 the state of the marine environment;
- .4 long-term consequences of low-level contamination on the marine environment;
- .5 strategies for marine environment protection and management;
- .6 comprehensive framework for the assessment and regulation of waste disposal in the marine environment; and
- .7 impact of anthropogenically mobilized sediments in the coastal environment.

11.3 The Consultative Meeting considered the above studies to be of great importance to the work of the Consultative Meeting and to IGPRAD, and it expressed its thanks to the Organization for the support of the respective GESAMP Working Groups and its expectation that the Organization would continue its support of GESAMP.

11.4 The observer from Greenpeace questioned whether the advice from GESAMP was unbiased, in that it appeared committed to an "assimilative capacity" approach philosophy which did not reflect new thinking on the "precautionary approach" and scientific uncertainty. Greenpeace noted that it would endeavour to provide some constructive input to the future work of GESAMP.

11.5 The Chairman of the Consultative Meeting felt that GESAMP had responded very well to requests from the London Dumping Convention. At the same time, constructive criticism of its work was also felt to be very important.

The Intergovernmental Oceanographic Commission (IOC)

11.6 The IOC representative provided a summary of work conducted under its major programme, the Global Investigation of Pollution in the Marine Environment (GIPME), and particularly its Group of Experts on Effects of Pollutants (GEEP), which has been co-sponsored by IMO since 1986 (LDC 12/11/3). Three draft manuals are being prepared by GEEP, describing procedures for measuring the biological effects of pollutants on marine benthic communities, in fish and in bivalve molluscs.

11.7 The results of two previous GEEP Research and Training Workshops (in Oslo and Bermuda) have shown that a number of approaches exist which can reliably indicate the biological effects of pollution at sub-lethal levels. The results from these workshops will be disseminated to a wider scientific community, initially through a workshop in Xiamen, China, in 1991. A training workshop, to be organized in Xiamen (December 1989) and co-sponsored with Unesco, will address the use of mesocosms in marine pollution studies.

11.8 Two workshops, co-sponsored by IOC, FAO and UNEP, on statistical analysis of benthos monitoring data from coastal zones, were organized in Piran, Yugoslavia (June, 1988) and Athens, Greece (September 1989).

11.9 A planned major GEEP activity is the ICES/IOC Workshop on Biological Effects of Contaminants (Bremerhaven, March 1990) (LDC 12/11/4). This workshop is described in paragraphs 3.27 and 7.20 above.

11.10 The need for an Open Ocean Baseline Study has been discussed over a long period and finally, through a kind offer by the Government of the Federal Republic of Germany, a cruise will be organized in spring 1990 on R/V Meteor, which will include sampling for analysis of heavy metals, nutrients and some organic compounds at stations in the west Atlantic.

The role of UNEP in the field of waste management

11.11 UNEP activities related to the management of hazardous wastes (LDC 12/INF.3) were described by the Secretariat. The Meeting noted UNEP's efforts to improve the exchange of information, and to encourage co-operation related to the sound management of hazardous wastes. The Secretariat also highlighted the Cairo Guidelines and the importance of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, and described the relevant training activities organized by UNEP in co-operation with governments and other UN organizations.

UN Conference on Environment and Development, Brazil, 1991

11.12 The delegation of Brazil drew the attention of the Meeting to the fact that, pursuant to UN General Assembly Resolution 43/196, a United Nations Conference on Environment and Development will be considered by the UN Assembly, at its forty-fourth session (LDC 12/INF.23). It was noted that the Resolution requests the UN Secretary-General to obtain the views of the United Nations and other inter-governmental organizations on the objectives, content and scope of the conference, through the Economic and Social Council, and to make them available to the Governing Council at its fifteenth session.

11.13 In this context it was proposed that the review of the long-term strategy for the Convention (agenda item 12) should be scheduled in such a way as to ensure that a consolidated document on the London Dumping Convention and its future development could be submitted through the appropriate channels to the UN Conference.

The Oslo Commission

11.14 The observer from the Oslo Commission informed the Meeting of recent activities carried out within the framework of the Oslo Commission (LDC 12/INF.10). The Meeting noted that following the adoption of a Protocol for including dumping in internal maritime waters under the scope of the Oslo Convention, Contracting Parties to that Convention would be required to report dumping in such waters to the Commission. In this context, the Parties to the Oslo Convention have been requested to submit to the Secretariat their national definitions of their internal maritime waters. A legal working group will be convened in 1990 to consider in detail the implications of this amendment.

11.15 It was further noted that the Oslo Commission had decided that the principles of reduction and cessation of dumping of hazardous materials, as set out in the 1987 North Sea Conference, shall be applied by coastal States. In 1989 the Oslo Commission had accordingly adopted a decision on the reduction and cessation of dumping of industrial waste, with an associated Prior Justification Procedure. Dumping of industrial waste in the North Sea is scheduled to cease by 31 December 1989 and in other parts of Convention waters by 31 December 1995. Exceptions would only be permitted in cases of waste for which there were no practicable land-based alternatives and which caused no harm to the marine environment.

11.16 With regard to removal and disposal of offshore platforms, the Commission has decided to develop guidelines for the management of such operations but until these became available the provisions for bulky wastes (Annex II to the Oslo Convention) will apply to the disposal of platforms at sea. The special case of abandoning or toppling a platform at site will be reviewed by a legal expert group in 1990.

11.17 The United States delegation noted with particular interest the decision of the Oslo Commission to include internal waters under its regulations, particularly since in the United States there are two legal systems that govern disposal depending upon whether the disposal takes place landwards or seawards of the baseline.

11.18 It was noted that dumping in internal waters in the Oslo Commission area mainly concerns dredged material and that internal maritime waters were to be defined by each Contracting Party.

The Helsinki Commission

11.19 The delegation of Finland outlined activities under the Baltic Marine Environment Protection Commission related to the dumping of dredged material and to the removal of offshore structures (LDC 12/INF.11). Particular reference was made to the requirements of Article 9 on prevention of dumping, and Article 10 on exploration and exploitation of the sea-bed and its subsoil as contained in the Helsinki Convention. With regard to the activities under the Helsinki Commission, it was noted that amendments to the Guidelines for co-operation in investigating violations or suspected violations were adopted in 1989.

11.20 Based on detailed information on dredged material that was collected during 1988-89, it was established that national procedures for issuance of permits exist in all member States. However, common criteria for the issuing of permits have yet to be developed. In line with the practice for submission of permits issued under the Oslo Commission to the Secretariat of the London Dumping Convention, the permits for dumping of dredged material issued in the area covered by the Helsinki Convention will be submitted by Contracting Parties to the secretariats of both the Helsinki Commission and the London Dumping Convention.

The Antarctic Treaty

11.21 The Meeting noted some matters of relevance to the London Dumping Convention which were discussed during the 15th Consultative Meeting of the Contracting Parties to the Antarctic Treaty, Paris, 9-20 October 1989 (LDC 12/INF.13).

11.22 One item dealt with waste management and the result of the discussion was the adoption of a Code of Conduct on Waste Disposal in Antarctica. Among the matters covered in the Code are:

- .1 maximum reduction of waste produced, or disposed of;
- .2 each government shall establish a waste disposal classification as a basis for records and studies;
- .3 classes of wastes are identified and handling and treatment stipulated, e.g. removal (fuel, heavy metals etc.), removal unless safely incinerated (plastics, rubber etc.), removal as far as practicable (liquid wastes other than domestic wastes, sewage and solid, non-combustible wastes, etc.), removal unless incinerated or rendered sterile (biological material);
- .4 incinerators used on land shall be designed to reduce harmful emissions as far as practicable;
- .5 solid non-combustible wastes which are to be disposed of at sea shall only be dumped at selected dumpsites in deep water, within or outside the Antarctic Treaty area and only in accordance with provisions of the London Dumping Convention;
- .6 dumping of any other wastes shall be carried out in accordance with the provisions of the London Dumping Convention;
- .7 vessels not equipped with an incinerator shall, as far as practicable, stockpile wastes for discharge into deep waters or outside the Treaty area in accordance with the provisions of MARPOL 73/78 and the London Dumping Convention as applicable.

11.23 The Consultative Meeting of the Treaty also adopted a recommendation which, inter alia, calls on Contracting Parties to ensure compliance by their

vessels with the provisions of the London Dumping Convention and other international agreements relating to marine pollution when carrying out activities in the Antarctic. The recommendation also provided for the convening of a meeting of experts to provide advice on additional requirements to reduce and prevent pollution of the Antarctic marine environment.

11.24 It was noted that there was a great deal of interest at the Paris meeting in the item entitled "Comprehensive measures for the protection of the Antarctic Environment and dependent and associated ecosystems". It was also noted that the Paris meeting had decided to convene a special Consultative Meeting in 1990 to explore and discuss all proposals relating to the protection of the Antarctic environment.

11.25 The Consultative Meeting expressed its willingness to co-operate with the Contracting Parties of the Antarctic Treaty, if invited to do so, with a view to creating a harmonized system for waste management and the protection of the marine environment in relation to the disposal of wastes from human activities.

The International Council for the Exploration of the Sea (ICES)

11.26 The ICES observer summarized the outcome of the 1989 meeting of the ICES Advisory Committee on Marine Pollution (ACMP) (LDC 12/INF.14). ACMP provides independent scientific advice on behalf of ICES to the Oslo, Paris and Helsinki Commissions, as well as to ICES Member States, on marine environmental issues. The ICES observer referred to advice provided on a number of topics, including a further statement on "Philosophy, Principles and Strategy of Monitoring". An earlier statement on the latter topic had been used by the Scientific Group in the development of advice on monitoring within the London Dumping Convention. Considerable progress has been made on methods for determining temporal trends of contaminant contents in fish tissues and it is hoped to extend this work to examining similar trends in sediments and water.

11.27 ICES has provided guidance on procedures for normalizing data on the concentrations of substances in marine sediments to take account of granulometric and textural variations. Progress has also been made in the selection of methods for biological effects measurement and in this respect reference was made to the forthcoming ICES/IOC Workshop in Bremerhaven (LDC 12/11/3) (see also paragraphs 3.27 and 7.20 above).

11.28 ICES has prepared guidelines on "Procedures for the Monitoring of Benthic Communities around Point-Source Discharges", together with examples of the application of these guidelines. ICES is also conducting a number of analytical intercomparison exercises on nutrients in seawater, chlorinated biphenyls and polycyclic aromatic hydrocarbon determinations, and on trace metals in suspended particulate matter. A new overview of mercury in the marine environment and a revised overview on chlorinated dibenzo-p-dioxins and chlorinated dibenzo-furans has also been carried out.

11.29 ICES has further carried out an examination of the exceptional Chrysochromulina polylepis bloom, which occurred in Scandinavia in 1988. It has also assessed the impacts on seal stocks in the North-East Atlantic and Baltic Seas of the disease epidemic that occurred in 1988.

11.30 A statement on approaches to environmental management prepared by ICES (LDC 12/INF.24) is addressed under agenda item 12 (see paragraphs 12.5 and 12.6 below).

Bonn Agreement

11.31 The delegation of France stated that, consistent with the Ministerial Declaration of the 2nd North Sea Conference (1987), the Contracting Parties to the Agreement on Cooperation Concerning Pollution Prevention in the North Sea (the Bonn Agreement) decided to notify to the Secretariat of the Paris Memorandum of Port State Control any information concerning violations of MARPOL 73/78, Annex I, in the North Sea. Contracting Parties to the Bonn Agreement have also requested the Secretariat of the Paris Memorandum to study procedures which would permit the responsible officials to undertake

inspections and sampling likely to establish whether a violation has taken place.

12 LONG-TERM STRATEGY FOR THE CONVENTION

Introduction of submissions

12.1 The Secretariat provided background reference material on the long-term strategy for the Convention (LDC 12/12), including the Task Team 2000 report, information from a report on the Status of and Recent Developments within the the London Dumping Convention (in response to UN resolution 43/18), and recommendations from the report of the World Commission on Environment and Development (the Brundtland Report). Interpretations on the precautionary approach, the relationship between the London Dumping Convention and the Law of the Sea Convention, and information reflecting the outcome of the Summit Meeting of the Heads of States or Governments of seven major industrial nations and the President of the European Communities, July 1989, was also provided.

12.2 The Meeting noted that the so-called precautionary approach had become a very important consideration for the interpretation and implementation of the Convention; however, it had not been defined by the Consultative Meeting for the purpose of the Convention (LDC 12/12/Add.1). It was felt by many Contracting Parties that the Convention takes a precautionary approach to the prevention and control of marine pollution; at the same time, it was widely recognized that there are a variety of interpretations of a precautionary approach and this was apparent in a number of topics being addressed within the framework of the London Dumping Convention, e.g.:

- by the Ad Hoc Group of Experts on the Annexes to the London Dumping Convention;
- by the Inter-Governmental Panel of Experts on Radioactive Waste Disposal at Sea;

- by the Scientific Group, in particular with regard to its considerations on incineration at sea; and
- by the Secretariat when organizing seminars on the control of waste disposal at sea.

In this connection, the Consultative Meeting was invited to provide further guidance on the application of the precautionary approach with respect to:

- the purpose and objectives of the Convention;
- the role of disposal at sea within a comprehensive waste management approach; and
- technical co-operation and assistance.

12.3 The United States delegation expressed its view that the future of the London Dumping Convention depends upon developing a climate in which the diverse philosophies of the Contracting Parties can be recognized and in which efforts are made to reach reasonable levels of compromise (LDC 12/12/1). It therefore suggested that a new task team be established to build upon the work begun by Task Team 2000 and to make recommendations to the Consultative Meeting on a strategy for future implementation of the Convention.

12.4 The observer from the International Association of Ports and Harbours (IAPH) expressed the view that sea disposal of dredged material was considered to be fully consistent with the precautionary principle and with a comprehensive waste management approach (LDC 12/INF.8). It was noted that the Guidelines adopted for dredged material disposal were based on a strong consensus position within the Convention.

12.5 The ICES observer reported on the advice provided by the ICES Advisory Committee on Marine Pollution (ACMP) in an environmental management context (LDC 12/INF.24). The statement was prepared on the basis of a conviction amongst ACMP members that a more holistic or comprehensive approach to

environmental protection was warranted, and follows from the current preoccupation with single sector (e.g. the marine environment) and single avenue (e.g. sea dumping) approaches to environmental protection reflected by current international agreements. ACMP therefore prepared this statement of its views on management approaches from the perspective that it might afford opportunities for a more comprehensive environmental protection and waste management system.

12.6 The ACMP statement is based on the application of three fundamental principles - justification, compliance with limits of exposure and optimization. The first of these principles would ensure that any practice adopted by society has benefits that outweigh its detrimental consequences. The second principle would require that exposures to hazardous substances of animals, man and amenities are below those causing either unacceptable damage or risks of damage. The third principle states that, even if a practice is justified and that exposures fall below those required to protect individuals and amenities, further reduction in exposures and their effects need to be made to the extent possible, taking into account technical, social and economic factors. Finally, the ICES observer noted that in devising limits of exposure for compliance purposes it is important to recognize that there are two regimes of effect. These are respectively stochastic (probabilistic) effects and non-stochastic effects where the latter involve an exposure threshold for effects. The application of the compliance and optimization principles needs to take account of these two effects' regimes. It was noted that ACMP would be very pleased to receive comments on its advice through ICES, Palaegade 2-4, DK1261, Copenhagen, Denmark.

12.7 The observer from Greenpeace International reported on international fora which advocate an end to the dumping of waste at sea (LDC 12/INF.26). It also referred to conferences and meetings advocating reduction and cessation of dumping of industrial waste at sea by taking into account the so-called precautionary principle. Greenpeace International also provided a compilation of decisions made by other international organizations and bodies concerned with the prevention of marine pollution which have taken into account the precautionary principle (LDC 12/INF.27). In drawing specific attention to

examples of the precautionary approach in action, the Greenpeace observer cited the Oslo Convention's decision to prohibit sea disposal of industrial waste along with the Oslo Convention's requirements for justification and pre-notification.

12.8 The International Union for Conservation of Nature and Natural Resources (IUCN) made reference to various definitions and considerations with respect to the implementation of the precautionary principle and precautionary approach (LDC 12/INF.29). It was noted that in the Baltic Sea there was clear evidence of how critical loads of familiar, assimilative substances such as nutrients, can be suddenly exceeded.

Report of the Working Group on the Long-Term Strategy

12.9 The Chairman of the Consultative Meeting then asked the Chairman of the Working Group on the Long-Term Strategy for the Convention (Mr. A. Sielen, United States) established under item 2 of the agenda, to report the findings of his Group (LDC 12/WP.3). Mr. Sielen noted that representatives from nineteen countries and three non-governmental organization had participated in his Working Group. He reminded the Meeting that the Working Group had been requested to consider several key aspects including the process for a review, the membership of a task team that might be established, the scope of activity for a review, and a possible input to the proposed 1992 United Nations Conference on the Environment and Development. The Chairman of the Working Group explained that his Group had prepared a work plan for establishing a steering committee to examine the long-term strategy for the Convention, as well as terms of reference for such a committee. Key considerations addressed in the work plan for the steering committee included the nature and composition of the members, a timetable which took into account the above mentioned 1992 UN Conference, and the relation of the London Dumping Convention to other conventions and organizations.

12.10 Regarding the terms of reference for the envisaged steering committee, the Chairman of the Working Group acknowledged that there were competing interests between establishing a small steering committee to ensure greater

work efficiency and a somewhat larger steering committee which could be considered to be more representative. It was also noted that the terms of reference were divided into three major topics, including: status of the Convention; implementation of the Convention; and new directions for the Convention as considered by the Chairman of the Consultative Meeting (LDC 12/2/2).

12.11 The Chairman of the Working Group concluded his report by confirming the Group's unanimous recommendation that Mr. Geoff Holland, current Chairman of the London Dumping Convention, be asked to chair the steering committee on the long-term strategy for the Convention.

12.12 The Consultative Meeting unanimously supported the latter recommendation. Mr. Holland accepted the Meeting's request and agreed to take over that office.

Comments on the work programme on a long-term strategy for the Convention

12.13 The Chairman of the Consultative Meeting invited comments on the acceptability of the proposed work programme and terms of reference as outlined above (LDC 12/WP.3).

12.14 The Finnish delegation, on behalf of the five Nordic countries, stated that with regard to the terms of reference for the steering committee, it was important to keep in mind the planned 1992 UN Conference on Environment and Development. The conference will address a range of important global and regional environmental issues, such as the climate change, and protection of the marine environment. In this connection, it was mentioned that the very purpose of the London Dumping Convention, as stated in Article I, is to promote the effective control of all sources of pollution of the marine environment. Against this background, the Nordic countries suggested that it was of the utmost importance that the Contracting Parties to the London Dumping Convention contribute to the preparatory work for the UN Conference in a substantial way. Keeping in mind the high ambition of that Conference, it was also suggested that the Contracting Parties should not be satisfied by

only limited technical improvements to the implementation of the Convention but instead should consider ambitious plans for the improvement of the global protection of the marine environment. Taking into account the 1992 deadline, Contracting Parties were encouraged to concentrate their efforts on certain crucial issues, such as the threat to the marine environment from the land based sources. In this regard it was felt that experiences from the implementation of, for example, the Paris Convention or Baltic Sea Convention could be utilized.

12.15 The delegation of Belgium expressed the view that the comprehensive list of factors and topics outlined in the terms of reference proposed by the Working Group were perhaps overly extensive and that it was preferable to establish some sense of priority. It was that delegation's view that the priority topics should cover solely the basic purpose and principles of the Convention. With this in mind there would be two distinct possibilities under consideration; one, the control of waste disposal at sea; and, two, prohibiting dumping at sea.

12.16 The delegation of the Federal Republic of Germany recommended that the composition of the steering committee should include the Chairmen of the Consultative Meeting and of the Scientific Group on Dumping.

12.17 The delegation of Nauru supported the views expressed by the Nordic countries and the Federal Republic of Germany. In that delegate's opinion, the steering committee should focus its attention on the basic purposes and principles of the Convention and then focus its attention on new directions for the Convention.

12.18 The delegation of the Solomon Islands commented that there was a third option for consideration by the steering committee whereby the Annexes to the London Dumping Convention would be modified in such a way that they would list what was permissible to be dumped at sea as opposed to what was not.

12.19 The delegation of Greece gave its support to the intervention by the Belgian delegation and noted that it believed that there should be an open

invitation to all Contracting Parties to participate in the steering committee. It was acknowledged that a small steering committee may be more effective but, unless the steering committee was considered to be representative, it would not be able to achieve the work in hand.

12.20 The delegation of China expressed the view that the recommendations of the Working Group provided in general a very good and acceptable basis for examining the long-term strategy for the Convention. That delegation emphasized that co-operation was essential for the effective functioning of the Convention and provided several examples of where such co-operation was deemed to be necessary. These examples included facilitating greater membership to the London Dumping Convention, relations with other UN agencies and international conventions, regional responses to global environmental protection, and technical co-operation and assistance. That delegation encouraged the International Maritime Organization to provide increased support to the London Dumping Convention and its associated activities.

12.21 The United States delegation mentioned that it was in sympathy with the position as mentioned by Belgium, and expressed the view that the operative requirement for the steering committee should be to identify, analyse and compare different strategic directions and options for the London Dumping Convention. The importance of the planned 1992 UN Conference on Environment and Development was also emphasized.

12.22 The delegation of France suggested a somewhat cautious approach in exploring new directions for the London Dumping Convention. It was felt that broadening the scope of the London Dumping Convention should take into account the type of practical difficulties and challenges as already in evidence from the Paris Convention on land-based discharges to the marine environment. That delegation also supported the position as stated by Belgium.

12.23 The delegation of Canada noted that there were many elements of agreement amongst the various interventions. It suggested that the Chairman of the steering committee should be given sufficient latitude so as to enable him to complete the task. That delegation also expressed interest in having

the objectives of the Convention as embodied in Articles I and II reflected in the preamble to the resolution on the long-term strategy.

12.24 The delegation of the United Kingdom expressed support for the positions of Belgium, Greece and the United States. In that delegation's view, the work related the examination of a long-term strategy for the Convention involved mainly policy issues and as such all Contracting Parties wishing to provide input and to participate in the steering committee's mechanisms should be allowed to do so.

12.25 The delegation of New Zealand stated that the Working Group had in fact provided a sound framework for the needed review and resolution of the various opinions with respect to the long-term strategy for the Convention. That delegation indicated support for the Federal Republic of Germany's proposal concerning the participation of the Chairmen of the Consultative Meeting and of the Scientific Group in the steering committee.

12.26 The delegation of Brazil believed that due to the importance of the planned 1992 UN Conference on Environment and Development, greater emphasis should be placed on the short-term rather than the long-term strategy for the Convention. That delegation expressed support for the position of the Nordic countries and Greece and emphasized the importance of ensuring that developing countries would be adequately represented on the steering committee.

12.27 The delegation of Brazil further reminded the Meeting of its statement under agenda item 11 (see paragraph 11.12) concerning the United Nations General Assembly's resolution 43/198, of 20 December 1988. The UN General Assembly this year during its forty-fourth session will make a decision on the exact scope, title, venue and date of the planned 1992 UN Conference on Environment and Development and on the modalities and financial implications of holding the conference. The resolution also requests the views of relevant intergovernmental organizations on the objectives, content and scope of the conference, and to submit these views to the UN Assembly through the Economic and Social Council. Brazil also pointed out that the conference will be held in Brazil and that the Assembly will decide if it would be in Rio de Janeiro,

Sao Paulo or Brasilia. Brazil undertook to submit a paper in 1990 in order that the Consultative Meeting would be in a better position to agree on the type of response needed in connection with the 1992 UN Conference.

12.28 The delegation of Portugal supported the positions stated by Belgium, Nauru and France and emphasized that the effective implementation of the London Dumping Convention in its current form should be considered as a priority item. The Netherlands delegation echoed the views expressed by Portugal and again acknowledged the importance of giving a high priority to the 1992 United Nations Conference on Environment and Development.

12.29 The delegation of Ireland expressed the view that the terms of reference as recommended by the Working Group were perhaps too large and comprehensive, and suggested that they should be amended to reflect the various comments which had been provided. It also expressed concern about the effectiveness of having a steering committee with an open invitation for participation.

12.30 The delegation of Switzerland expressed interest in having the steering committee examine the role of the Consultative Meeting and of the Secretariat, and evaluate the results of the various groups and ad hoc groups associated with the Convention.

12.31 The delegation of Sweden expressed support for the Federal Republic of Germany's position.

12.32 The delegation of the USSR stated that the Working Group's recommendations provided a firm foundation for examining a long-range strategy for the Convention.

12.33 The Chairman noted that there were several substantial proposals from countries such as Finland, Belgium, France, Portugal and the Netherlands which suggested that there was a need to give some order of priority to the various items mentioned in the terms of reference recommended by the Working Group, and also to resolve the variety of views expressed in relation to the selection of members for the steering committee.

12.34 Based on the various proposals mentioned above, the Chairman submitted a revised resolution on the long-term strategy for the London Dumping Convention which would include holding a steering committee meeting open to all interested parties in the spring of 1990. The steering committee meeting should establish priorities and assign tasks based on the terms of reference annexed to the resolution. A report on a long-term strategy for the Convention would be prepared for submission to the Thirteenth Consultative Meeting.

12.35 In response to procedural questions such as the submission of documents, meeting agenda and venue, the Chairman noted that a circular letter outlining these details would be distributed as soon as possible.

12.36 The Secretariat noted that the steering committee meeting would have to be convened without interpretation. In this connection, IMO has made provisions for four meeting weeks with interpretation to be held during the biennium 1990-1991. These provisions would be needed for the convening of two Consultative Meetings and two meetings of IGPRAD during that biennium.

12.37 The lack of interpretation for the planned steering committee meeting was of serious concern to many delegations. The delegation from Chile strongly suggested that full interpretation was essential for any meeting held to consider a long-term strategy for the London Dumping Convention. That delegation also drew attention to the wish of the Meeting to foster greater participation in the Convention. This suggestion was supported by the delegations from China, Spain, Nauru, Argentina, Mexico and France.

12.38 Several suggestions were made on how interpretation for a steering committee meeting could be provided. The delegation of France suggested that a request for special funding should be sent to those countries most concerned. The delegation of the United States, in recognizing that the cost for a one week meeting with interpretation would be US\$50,000, suggested that each delegation attending the steering committee meeting should be requested to make an appropriate contribution to cover the associated costs. The delegation from Ireland in acknowledging the benefits of interpretation and also recognizing the constraints of the IMO budget for providing another

meeting week with full interpretation in 1990, suggested that the Thirteenth Consultative Meeting should consider the possibility of holding a Special Meeting on a long-term strategy for the Convention by using one of the two meeting weeks with full interpretation allocated in 1991. The Chairman also noted that a Contracting Party could be a host Government for the steering committee meeting and provide the necessary interpretation facilities.

12.39 The delegation of Brazil reminded the Meeting that in practical terms there was already evidence within the London Dumping Convention as well as within other fora that non-English speaking countries were willing and able to participate in working groups without interpretation, for example, the working groups associated with the Inter-Governmental Panel on Radioactive Waste Disposal at Sea (IGPRAD).

12.40 The Chairman suggested that a one day session with interpretation could be taken from the proposed five day IGPRAD meeting planned for 1990 and allocated to a steering committee meeting. The Meeting confirmed that a four day IGPRAD meeting might be adequate to meet its terms of reference.

Action by the Consultative Meeting

12.41 In response to the concerns raised by delegations emphasizing the need for interpretation associated with any meetings involving a long-term strategy for the Convention, three options were examined, i.e. to hold:

- .1 a steering group meeting in the spring of 1990 with one day of full interpretation (i.e. a four day IGPRAD meeting in autumn 1990 with interpretation);
- .2 a steering group meeting in the spring of 1990 without interpretation but with one additional day for review of the long-term strategy report during the meeting week of IGPRAD (i.e. four day IGPRAD meeting) with further debate including full interpretation during the Thirteenth Consultative Meeting; or
- .3 a combined IGPRAD and steering committee meeting in spring of 1990.

12.42 After considerable discussion, the Meeting agreed to option .1 above: viz. a steering group on the development of a long-term strategies for the convention (rather than a steering committee) should be established which would hold a meeting in spring 1990; one day of that meeting should be held with interpretation. IGPRAD would hold a four day meeting (rather than a five day meeting) in autumn 1990 with interpretation. The Chairman of the originally proposed steering committee would also act as Chairman of the Steering Group. The Meeting further requested the Chairman of the Steering Group to examine, in consultation with the Secretariat, additional means for providing interpretation to the spring meeting of the Steering Group. Specific mention was made of the earlier proposals submitted by France and the United States. The establishment of a steering committee or task team or the convening of a Special Meeting as proposed during the above discussion would be considered at the next Consultative Meeting or another future Consultative Meeting, as appropriate.

12.43 The Meeting adopted the resolution LDC.38(12) on a long-term strategy for the London Dumping Convention and the terms of reference for the Steering Group attached thereto as shown in annex 9.

Precautionary principle

12.44 The delegation of the Federal Republic of Germany submitted a possible definition of the principle of precautionary action as follows:

"The Contracting Parties accept the principle of anticipatory environmental protection to be a framework for safeguarding the marine ecosystem by elimination of dumping of substances that are persistent, toxic and liable to bioaccumulate. This applies especially when there is reason to assume that certain damage or harmful effects on the living resources of the sea are likely to be caused by such substances, even when there is no scientific evidence to prove a causal link between dumping on the one hand and severe effects on the other hand (the principle of precautionary action)."

12.45 The Chairman proposed that the above definition as well as other definitions of "precautionary approach" and "precautionary principle" introduced at this Meeting should be referred to the Scientific Group. The Meeting agreed that the definition set out above was of considerable interest and as such should be referred to the Scientific Group on Dumping for further consideration. In this regard, the Chairman of the Scientific Group welcomed any technical submissions on dealing with the technical assessment frameworks used by Contracting Parties in support of the precautionary approach.

12.36 The Canadian delegation supported the proposal made by the Chairman to refer the preparation of a definition of the "precautionary principle" or the "principle of anticipatory environmental protection" to the Scientific Group. It further recommended the Scientific Group to consider the document published by the Federal Republic of Germany on "Guidelines on Anticipatory Environmental Protection" as this document appeared to embody the most comprehensive and balanced description of the principle and its application currently.

12.37 The delegation of the Federal Republic of Germany, at the request of a number of delegations undertook to provide copies of the booklet mentioned above by Canada, entitled: "Umweltpolitik: Guidelines on Anticipatory Environmental Protection", published by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, to the next meeting of the Scientific Group on Dumping for detailed study.

12.38 The United States delegation expressed its view that the London Dumping Convention does take into account a precautionary approach, but that there were many different national interpretations which range from the prohibition of sea disposal to a comprehensive waste management approach. As such it was felt that an unclear use of the term "precautionary principle" can prove to be quite divisive.

12.39 The delegation of the Solomon Islands noted that its preference in relation to a precautionary approach was for clean technology, as opposed to a cost-benefit approach where it was not always possible to distinguish who benefited at whose cost.

12.40 The observer from Greenpeace noted that his organization had presented several definitions in relation to the precautionary approach, but in fact its interest was more related to an examination of how a precautionary approach was applied. In this connection, Greenpeace drew attention to the International Conference on Pollution Prevention: Clean Technology and Clean Production - The Environmental Challenge of the 1990s (Washington D.C., 10-13 June 1990) which would cover a number of issues mentioned above. The sponsors of that Conference are the United States Environmental Protection Agency and the International Association of Clean Technology. Further information will be made available through the Secretariat.

13 FUTURE WORK PROGRAMME AND DATE OF NEXT SESSION

Future work programme of the Consultative Meeting and the Scientific Group on Dumping

13.1 The Consultative Meeting was invited to consider the updated action plan prepared by the Secretariat (LDC 12/13). Contracting Parties were invited to submit comments on the updated action plan during the intersessional period. The future work programme proposed by the Scientific Group (LDC/SG.12/13, Annex 5) was revised in the light of the progress of work during this Meeting. The Meeting also adopted a list of substantive items for inclusion in the agenda of the Thirteenth Consultative Meeting as shown in annex 10.

13.2 Several substantive comments were made in relation to the items proposed for inclusion in the agenda for the thirteenth, fourteenth and fifteenth meetings of the Scientific Group on Dumping. The Chairman of the Scientific Group was asked to comment on the proposed work programme in light of the discussions held at this Consultative Meeting. The Chairman of the Scientific Group commented that the further consideration of the position of substances in the Annexes, for example, with regard to organosilicon compounds, was dependent on submissions by Contracting Parties or observer organizations; the review of incineration at sea would take into account the programme on incineration at sea agreed by this Consultative Meeting, as shown at annex 6;

that the further examination of the sea disposal of offshore installations and structures would take into account the results of the next meeting of the ad hoc legal group of experts; and the review of a precautionary approach would examine the definition of, and application of, a precautionary approach as discussed under agenda item 12

13.3 The United States delegation, supported by the delegation of the Federal Republic of Germany, requested that the Scientific Group on Dumping give a high priority to considering the definition and application of a precautionary approach at its next meeting.

13.4 The delegation of Nauru submitted a draft resolution, which was supported by the delegations of Brazil and Côte d'Ivoire, requesting the Scientific Group to investigate the consequences of phasing out dumping at sea of industrial wastes.

13.5 The Irish delegation expressed strong concern over the proposal made by Nauru, stating that it was not convinced that the topic suggested was a matter for the Scientific Group at this time since it was prejudicial to the outcome of the Annex Working Group as well as the planned intersessional activities on the long-term strategy for the Convention. For these reasons, Ireland could not agree to including this topic in a future agenda of the Scientific Group and reserved its position on any decision by the Consultative Meeting to this effect.

13.6 The Chairman suggested that this issue could be initially discussed by the Consultative Meeting before detailed consideration of the proposal by the Scientific Group on Dumping. The Chairman of the Scientific Group agreed that this matter might be included in the work programme of his Group for discussion in 1991. The Meeting accepted these proposals and the delegation of Nauru withdrew its draft resolution.

13.7 The delegation of Denmark, supported by the delegation of Nauru and the Greenpeace observer, raised the question of including radioactive waste disposal at sea in the brief for the Scientific Group on Dumping. The

Chairman noted that the Sixth Consultative Meeting had decided that the work of the Scientific Group on Dumping should not be overloaded by considering the sea disposal of radioactive waste. He further noted that the request for the Scientific Group on Dumping to consider sea disposal of radioactive waste was a substantive item which would be more appropriately considered by the Thirteenth Consultative Meeting. In this connection, the Secretariat mentioned that this issue had been raised at the twelfth meeting of the Scientific Group on Dumping, at which time the Chairman of the Scientific Group correctly noted that the sea disposal of radioactive waste was not within the brief of the Scientific Group, but was addressed by other expert bodies designated by the Consultative Meeting (LDC/SG.12/13, paragraph 2.9) and the International Atomic Energy Agency (IAEA).

Date of the Thirteenth Consultative Meeting

13.8 It was agreed that the Thirteenth Consultative Meeting of Contracting Parties to the London Dumping Convention should be convened from 29 October to 2 November 1990.

Meetings of subsidiary bodies

13.9 The Consultative Meeting agreed to convene meetings of its subsidiary bodies as follows:

- .1 the third meeting of the Inter-Governmental Panel of Experts on Radioactive Waste Disposal at Sea (IGPRAD) should be held from 22 to 25 October 1990 (with interpretation);
- .2 the thirteenth meeting of the Scientific Group on Dumping should be held from 23 to 27 April 1990 (without interpretation);
- .3 a meeting of the ad hoc Working Group on the Annexes to the London Dumping Convention should be held from 15 to 19 January 1990 (without interpretation);

- .4 a meeting of the Steering Group on the Development of a Long-term Strategy for the London Dumping Convention should be held from 17 to 20 April 1990 (with interpretation to be provided on 20 April 1990 only); and
- .5 a meeting of the ad hoc Group of Legal Experts on Dumping should be held from 22 to 26 October 1990 (without interpretation).

13.10 The delegation of Chile reiterated its view that the discussion of any matters related to the future development of the long-term strategy for the London Dumping Convention should be allocated full interpretation facilities, due to the importance of these issues and their implication to all Contracting Parties. This view was supported by the delegations of Argentina, China, France, Mexico, Nauru and Spain (see also paragraph 12.37 above).

Budgetary provisions for the 1990/1991 Biennium

13.11 The Meeting noted with appreciation that the IMO Assembly had made budgetary provisions for the convening of four meeting weeks with interpretation during the 1990/1991 biennium. The Meeting expressed its appreciation to the Secretary-General of IMO for having provided secretariat support during the intersessional period in relation to the London Dumping Convention, and invited the Secretary-General to continue to make provisions for the advisory services associated with work to be carried out within the framework of the London Dumping Convention. This would include support for GESAMP which is undertaking a number of tasks important for the progress of work which are described in more detail under section 11 of this report, as well as for the IOC/IMO/UNEP Group of Experts on Effects of Pollutants (GEEP).

13.12 The Consultative Meeting further invited the Secretary-General to ensure that the necessary provisions be made for the convening of the ad hoc Group on the Annexes to the London Dumping Convention, of the Steering Group on the Development of a Long-Term Strategy for the London Dumping Convention and of the ad hoc Group of Legal Experts on Dumping, as listed above.

14 ANY OTHER BUSINESS

The "Exxon Valdez" oil spill in Prince William Sound, Alaska

14.1 The United States delegation reported on the action taken in response to an oil spill in Alaska from the super tanker "Exxon Valdez" (LDC 12/INF.4). This spill was the largest ever experienced in the United States.

14.2 The Meeting welcomed the above report which, although not falling under the scope of the London Dumping Convention, nevertheless provided valuable information on how the United States authorities had responded to the incident and outlined the lessons learned from that incident.

Accident involving the car-carrier "Reijin"

14.3 The Meeting took note of the information on an accident involving the car-carrier "Reijin" submitted by the delegation of Portugal (LDC 12/INF.21).

Pollution incident involving the tanker "Marao"

14.4 The Meeting took note of the information submitted by Portugal on a pollution incident involving the tanker "Marao" and the measures undertaken by the Portuguese Administration in this regard (LDC 12/INF.22).

IMO booklet entitled "Strategy for the Protection of the Marine Environment"

14.5 The Secretary informed the Meeting of the circulation of the updated version of the above mentioned IMO booklet. Delegations were invited to communicate any comments they may have on the contents of the booklet to the Secretariat.

Protection of the Arctic environment

14.6 The delegation of Finland noted that the Government of Finland has for for many years been concerned about the state of the extremely fragile and

vulnerable Arctic environment. In recent years the Arctic has witnessed a sharp increase in the rate of natural resources development. Pollution from the North Atlantic and Northern Pacific, land-based pollution from rivers, air pollution, navigation, oil drilling and other economic activities have created a serious threat to the Arctic environment. One major oil tanker accident alone or a blowout at an oil drilling platform may drastically change the environmental situation in the Arctic Ocean which still is among the least polluted of the world's oceans.

14.7 Against this background the Government of Finland took the initiative in proposing a ministerial conference of the eight Arctic countries (i.e. the five Nordic countries, Canada, USSR and the United States) on the protection of the Arctic environment, by sending a letter to the governments of seven other Arctic countries in January 1989. All the responses to the initiative were positive in principle. Therefore, the Finnish Government invited representatives of the said governments to attend a consultative meeting at Rovaniemi in Finland in autumn 1989.

14.8 Representatives of the eight Arctic countries met at Rovaniemi at the invitation of Finland from 20 to 26 September 1989 for the Consultative Meeting on the Protection of the Arctic Environment. It was underlined that the Arctic environment is extremely fragile and vulnerable and therefore in need of special measures. While there are a number of legal instruments such as the London Dumping Convention applicable to the Arctic ecosystem, it was noted that none has been elaborated for the specific purpose of protecting the Arctic environment and no delegation suggested that the existing system of legal measures is adequate.

14.9 The process will continue with a consultative meeting taking place next spring, probably in Canada, and a ministerial conference on protection of the Arctic environment to be convened next autumn in Finland.

Environmental consequences of hazardous waste disposal

14.10 The Swedish delegation informed the Meeting that the Minister of Environment and Energy of Sweden plans to hold a Symposium on Environmental Consequences of Hazardous Waste Disposal, probably in May 1991. This was a follow-up action recommended by the International Workshop on Principles for Disposal of Radioactive and Other Hazardous Wastes (Stockholm, 7-10 June 1988)*. Announcements of the Symposium will be sent to the Secretariat for distribution to all Contracting Parties.

Pollution from oil platforms

14.11 The delegation from Nauru noted that the Consultative Meeting had so far not given any attention to pollution arising from discharges from platforms into the sea derived from the exploration and exploitation of oil. Whilst this might not fall directly under the scope of the London Dumping Convention, there was widespread interest by Contracting Parties in being informed on the effects of such activities on the environment, as well as on the status and future development of measures for the prevention of marine pollution from these sources. That delegation requested the Secretariat to obtain relevant reports addressing this matter and to make these available to the Consultative Meeting.

15 ELECTION OF THE CHAIRMAN AND VICE-CHAIRMEN

15.1 In accordance with Rule 19 of the Rules of Procedure, the Meeting elected Mr. D. Tromp (Netherlands) as Chairman. Ms. S. Nurmi (Finland) was re-elected as First Vice-Chairman and Mr. A. Sielen (United States) was elected as Second Vice-Chairman.

* The Proceedings from the Workshop (ISBN 91-38-10314-1) can be obtained from:

Allmänna Förlaget
Kundtjänst
10647 Stockholm
Sweden

15.2 The Meeting expressed its deep appreciation for the efficient and impartial way in which Mr. Geoff Holland had conducted its proceedings since his election at the Eighth Consultative Meeting in February 1984, and paid tribute to the excellent leadership that had enabled a very substantial quantity of complex and important work to be accomplished during his period of office. The Meeting conveyed its very best wishes to Mr. Holland for his future career and noted with appreciation his ongoing association with the Convention as Chairman of the Steering Group on the Development of a Long-Term Strategy for the Convention.

15.3 The Meeting also expressed its sincere thanks to the outgoing Second Vice-Chairman, Vice-Admiral H. A. da Silva Horta, for his outstanding contributions during his term of office, for his valuable leadership as chairman of many ad hoc working groups established during Consultative Meetings, and last but not least, for his constructive proposals as Head of the Portuguese delegation.

16 CONSIDERATION AND ADOPTION OF THE REPORT

The report of the Twelfth Consultative Meeting and the resolutions of the Meeting as set out in the annexes to the report were adopted on the final day of the Meeting (3 November 1989).

ANNEX 1

AGENDA FOR THE TWELFTH CONSULTATIVE MEETING

1 Adoption of the Agenda

LDC 12/1	-	Secretariat
LDC 12/1/1	-	Secretariat
LDC 12/1/2	-	Secretariat

2 Status of the London Dumping Convention

LDC 12/2	-	Secretary-General
LDC 12/2/1	-	Secretariat
LDC 12/2/2	-	Chairman

3 Consideration of the report of the Scientific Group on Dumping

LDC 12/3	-	Secretariat
LDC 12/3/1	-	Secretariat/Spain
LDC 12/3/2	-	United States
LDC 12/3/4	-	Netherlands

LDC 12/11/4	-	Secretariat
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LDC 12/INF.8	-	IAPH
LDC 12/INF.9	-	Secretariat

4 Proposals for the re-structuring of the Annexes to the Convention

LDC 12/4	-	Secretariat
LDC 12/4/1	-	United States

LDC 12/INF.8	-	IAPH
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5 Amendments to the annexes to the Convention

LDC 12/5	-	Secretariat
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6 Matters relating to the disposal of radioactive wastes at sea

LDC 12/6	-	Secretariat
LDC 12/6/1	-	Secretariat
LDC 12/6/2	-	Secretariat
LDC 12/6/2/Add.1	-	Secretariat
LDC 12/6/3	-	Nauru
LDC 12/6/4	-	Sweden

LDC 12/11/2	-	IAEA
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LDC 12/INF.16	-	IAEA
LDC 12/INF.17	-	Greenpeace
LDC 12/INF.25	-	United Kingdom
LDC 12/INF.28	-	Greenpeace
LDC 12/INF.30	-	USSR
LDC 12/WP.1	-	Report of the working group
LDC 12/WP.4	-	Report of the working group

7 Matters relating to the incineration of wastes and other matter at sea

LDC 12/7	-	Secretariat
LDC 12/7/1/Rev.1	-	Nordic countries
LDC 12/7/2	-	AMI
LDC 12/7/3/Rev.1	-	United States
LDC 12/3/3	-	Greenpeace
LDC 12/11/4	-	Secretariat
LDC 12/INF.18	-	The Netherlands
LDC 12/INF.19	-	Greenpeace
LDC 12/WP.2	-	Report of the working group

8 Consideration of the report of the Task Team on Liability

LDC 12/8	-	Secretariat
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9 Transboundary transport of hazardous wastes

LDC 12/9	-	Secretariat
LDC 12/9/1	-	Secretariat
LDC 12/INF.2	-	Greenpeace
LDC 12/INF.2/Add.1	-	Greenpeace
LDC 12/INF.5	-	Secretariat
LDC 12/INF.6	-	UNEP
LDC 12/INF.7	-	Secretariat
LDC 12/INF.12	-	ACOPS
LDC 12/INF.15	-	Secretariat

10 Information exchange on waste disposal technology

LDC 12/10	-	Secretariat
LDC 12/10/1	-	Secretariat
LDC 12/10/2	-	Secretariat
LDC 12/10/3	-	Secretariat
LDC 12/INF.20	-	Denmark, Finland, Iceland, Norway and Sweden

11 Relations with other organizations

LDC 12/11	-	Secretariat
LDC 12/11/1	-	Secretariat
LDC 12/11/3	-	IOC
LDC 12/INF.3	-	Secretariat
LDC 12/INF.10	-	Oslo Commission Secretariat
LDC 12/INF.11	-	Secretariat of the Helsinki Commission
LDC 12/INF.13	-	Secretariat
LDC 12/INF.14	-	ICES
LDC 12/INF.23	-	Brazil

12 Long-term strategy for the Convention

LDC 12/12	-	Secretariat
LDC 12/12/Corr.1	-	Secretariat
LDC 12/12/Add.1	-	Secretariat
LDC 12/12/1	-	United States
LDC 12/2/2	-	Chairman
LDC 12/INF.8	-	IAPH
LDC 12/INF.24	-	Secretariat
LDC 12/INF.26	-	Greenpeace
LDC 12/INF.27	-	Greenpeace
LDC 12/INF.29	-	IUCN
LDC 12/WP.3	-	Report of the working group

13 Future work programme and date of next session

LDC 12/13	-	Secretariat
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14 Any other business

LDC 12/INF.4	-	United States
LDC 12/INF.21	-	Portugal
LDC 12/INF.22	-	Portugal

15 Election of Chairman and Vice-Chairmen

No documents under this item

16 Consideration and adoption of the report

LDC 12/16	-	Report
LDC 12/WP.5	-	Secretariat
LDC 12/WP.5/Add.1	-	Secretariat
LDC 12/WP.5/Add.2	-	Secretariat
LDC 12/INF.1	-	List of Participants

ANNEX 2

RESOLUTION LDC.36(12)

MONITORING ACTIVITIES CARRIED OUT IN ACCORDANCE WITH
ARTICLE VI(1)(d) OF THE LONDON DUMPING CONVENTION

THE TWELFTH CONSULTATIVE MEETING,

RECALLING Article VI(1)(d) of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, which provides that Contracting Parties shall monitor individually, or in collaboration with other Parties and competent international organizations, the condition of the seas for the purposes of this Convention,

RECALLING ALSO the definition of monitoring adopted at the Fifth Consultative Meeting, as set forth in paragraph 4.17 of LDC V/12,

RECALLING FURTHER that Contracting Parties are required to notify the Secretariat of permits issued and wastes dumped and incinerated at sea each year and that Contracting Parties have been invited to submit relevant information on monitoring activities to the Secretariat in accordance with either the notification form adopted at the Fourth Consultative Meeting or with the alternative reporting system accepted on a trial basis at the Tenth Consultative Meeting, both of which are set out in LDC 10/15, annex 7,

ACKNOWLEDGING that the Scientific Group on Dumping advised the Tenth Consultative Meeting regarding a revised definition of "monitoring for the purposes of the Convention", an alternative reporting system, together with annotations and guidelines for the interpretation of Article VI of the Convention, as set out in paragraph 6.11 of LDC/SG 9/13,

RECOGNIZING that the design and implementation of appropriate monitoring strategies are necessary and integral components of the assessment and permitting functions of national regulatory authorities and that these monitoring strategies may be quite specific to the materials, locations, and dumping and incineration operations being regulated,

RECOGNIZING ALSO that the experience gained by various Intergovernmental Organizations and by individual Contracting Parties in the design and implementation of monitoring programmes and in the interpretation of their results, should be of considerable interest and value to those Contracting Parties that plan to undertake such programmes,

NOTING that no Contracting Party has yet submitted monitoring information on the notification form adopted at the Fourth Consultative Meeting,

NOTING ALSO that some, but not all, Contracting Parties are now regularly submitting information on the permits issued and materials dumped and incinerated at sea and that an increasing number of monitoring reports are being received by the Secretariat,

RESOLVES:

- 1 to adopt a revised definition of monitoring as follows:

Monitoring "... the condition of the seas for the purposes of this Convention" (as required in Article VI(1)(d)), refers to those measurements performed by Contracting Parties, alone or in collaboration, to demonstrate compliance of their at-sea dumping and incineration practices with the overall intent of the Convention and the requirements of the Annexes,

- 2 that as part of their regular notification of permits granted, Contracting Parties should inform the Secretariat of monitoring activities to be carried out in conjunction with, or in response to, dumping and incineration operations at sea in accordance with the revised notification format shown at annex to this resolution,
- 3 that Contracting Parties are also encouraged to notify the Secretariat of any monitoring programmes which relate to the general condition of the seas,

- 4 that Contracting Parties should provide the Secretariat with copies of summary reports, along with detailed research and assessment reports, which result from monitoring of dump sites and/or wider sea areas related to dumping and incineration at sea, and that this requirement replaces all previous formats adopted for the notification of monitoring activities,
- 5 that in the design and conduct of monitoring carried out for the purposes of the Convention, Contracting Parties should take account of any guidance on this subject prepared by the Scientific Group on Dumping, as well as the most recent and relevant advice from appropriate scientific bodies such as the Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) and the Advisory Committee on Marine Pollution (ACMP) of the International Council for Exploration of the Sea (ICES) as submitted to, and endorsed by, the Scientific Group on Dumping from time to time; this includes the advice contained in the 1988 report of the Advisory Committee on Marine Pollution of ICES (Chapter 4 on Monitoring Strategies, reproduced in LDC/SG 12/5/7),
- 6 that the Secretariat should prepare, and update annually, a summary of monitoring activities notified by Contracting Parties in accordance with this resolution, indicating, for each notification, the dumpsites and incineration sites and geographical areas covered by such monitoring, the main parameters and compartments (e.g. water, sediments, biota) studied, the duration or frequency of the monitoring and the name and address of the institution from which additional information can be obtained.

ANNEX

PROCEDURE FOR THE NOTIFICATION OF PERMITS ISSUED FOR
THE DUMPING OF WASTES AND OTHER MATTER AT SEA

1 INTRODUCTION

1.1 Notification of General Permits issued

The Contracting Parties should send to the Organization, either directly or through a Secretariat established under a regional agreement, by 1 August in each year a record of the General Permits issued in the previous calendar year.

1.2 Notification of Special Permits issued

The Contracting Parties should immediately notify the Organization of each Special Permit issued.

1.3 Notification of monitoring requirements and plans

With each notification of permits issued the Contracting Parties should inform the Organization of the monitoring activities to be carried out in conjunction with, or in response to, dumping and incineration activities carried out at sea.

1.4 Details to be notified

The notifications should contain the information requested by the format set out below for each Special and General Permit (unless in any case a particular item of information is clearly inappropriate). Examples for different types of wastes and other matter are shown in section 3 below. These examples are given solely to illustrate the degree of detail expected under certain headings; they have no other significance.

2 FORMAT FOR THE NOTIFICATION OF GENERAL AND SPECIAL PERMITS

- .1 Issuing Authority.
- .2 Permit start date/Permit expiry date.
- .3 Country of origin of wastes or other matter and port of loading.
- .4 Detailed specification of waste or other matter and description of the process from which the waste or other matter is derived.
- .5 Form in which waste or other matter is presented for disposal, i.e., solid, liquid or sludge (in case of liquids or sludges include weight per cent of insoluble compounds).
- .6 Total quantity (in metric tonnes*) of waste or other matter covered.
- .7 Expected frequency of dumping.
- .8 Chemical composition of waste or other matter (this should be sufficiently detailed to provide adequate information, in particular with regard to the concentration of substances listed in Annexes I and II to the Convention; concentrations in mass per mass units**).
- .9 Properties of waste or other matter:
 - solubility;
 - relative density (specific gravity);
 - pH.
- .10 Method of packaging.
- .11 Method of release.
- .12 Procedure and site for subsequent tank washing.
- .13 Approved dumping site:
 - geographical position (latitude and longitude);
 - depth of water;
 - distance from nearest coast.
- .14 Monitoring requirements and plans.

* Preferably in metric tonnes; if given in cubic metres, additional information on relative density (specific gravity) should be provided under 2.9.

** Indicate whether on dry weight or wet weight basis.

- .15 Additional information with regard to the factors listed in Annex III of the Convention, in particular on the toxicity of waste or other matter (type of toxicity test, e.g. 96-hr LC_{50} , test species used). In case of chemical waste provide any information available on the biodegradability of the waste.

3 EXAMPLES

3.1 Dredged Materials

Item of format

- .1 (Issuing authority)
- .2 (15.1.81 - 31.12.81)
- .3 (Port of loading)
- .4 Dredgings from (source: estuary, harbour, etc.)
- .5 Silt and clay, 60% solids content (weight)
- .6 50,000 m³
- .7 once per week
- .8 levels of contaminants present in solids, e.g., Oil: 200 ppm;
Hg: 1 ppm; Cd: 2 ppm; Cu: 50 ppm; Pb: 100 ppm; Zn: 150
ppm; Cr: 50 ppm. (concentrations on dry weight basis)
- .9 - 60% insoluble
- 1.5 g/cm³
- pH 7
- .10 Not applicable
- .11 Immediate release from barge through bottom opening doors
- .12 Not applicable
- .13 (approved dumping site)
- .14 (additional information)

3.2 Sewage sludge

Item of format

- .1 (Issuing authority)
- .2 (15.1.81 - 31.12.81)
- .3 (Port of loading)
- .4 Primary/digested sewage from (source: town, city)
- .5 sludges, 9% (weight) solids content
- .6 300,000 t
- .7 Three times per week
- .8 5% organic solids
4% non organic solids
Levels of components, e.g. Oil: 50 ppm; Cd: 0.1 ppm; Hg: 0.1 ppm; Zn: 100 ppm; Cu: 50 ppm; Cr: 50 ppm; Ni: 10 ppm; Pb: 40 ppm; N: 0.21%; P: 500 ppm
(concentrations on wet weight basis)
- .9 - 4% insoluble solids
- 1.01 g/cm³
- pH 6
- .10 Not applicable
- .11 Release at 1000 tonnes/hr from bottom of moving vessel
(capacity 2000 tonnes)
- .12 Not applicable
- .13 (approved dumping site)
- .14 (additional information)

3.3 Acid residues from Titanium Dioxide Production

Item of format

- .1 (Issuing authority)
- .2 (15.1.81 - 31.12.81)
- .3 (Country of origin, port of loading)

- .4 Diluted hydrochloric acids with suspended solids; production of titanium dioxide (TiO_2); raw material: ilmenite (Norwegian)
- .5 Liquid; 2% insoluble solids
- .6 150,000 t
- .7 3 times per week
- .8 10% hydrochloric acid;
3% iron sulphate;
level of other metals: V, Cr, Zn, Cu, Cd analysed;
2% suspended solids
- .9 - 2% insoluble solids
- 1.1 g/cm^3
- pH 0.5
- .10 Not applicable
- .11 Discharged at 250 tonnes/hr into the wake of a vessel (1000 tonnes capacity) moving at 8 knots. Position of discharge 5m below surface.
- .12 Tank washing at dumping site
- .13 (approved dumping site)

3.4 Containers, scrap metal and other bulky wastes (e.g. wreckages) covered by Annex II, section C

Item of format

- .1 (Issuing authority)
- .2 (1.8.81 - 31.8.81)
- .3 Identity in the case of ships or aircraft
- .4 Specification of material (e.g. wooden hull, steel hull in the case of ships)
- .5 Not applicable
- .6 Dimensions
- .7 Frequency of dumping (e.g. one dumping only)
- .8 - .12 Not applicable
- .13 (approved dumping site)

- .14 Associated residues of contents of containers of any sort (including in the case of ships or aircraft, cargoes, fuel, etc.); precautions required to prevent pollution by such associated materials; measures taken to ensure wastes will sink and remain in place.

3.5 Radioactive wastes and other radioactive matter

For issuing special permits for the disposal of radioactive wastes at sea and for the operational control of such disposal, the details to be given in a notification format should reflect the results of considerations made in accordance with the IAEA Definition and Recommendations for the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (IAEA Safety Series No.78, section III).

ANNEX 3

RESOLUTION LDC.37(12)

AMENDMENT TO ANNEX III TO THE LONDON DUMPING CONVENTION

THE TWELFTH CONSULTATIVE MEETING,

RECALLING resolution LDC.26(10) by which Contracting Parties agreed in principle to the inclusion in Annex III, section A of the following text:

"9. In issuing a permit for dumping, Contracting Parties should consider whether an adequate scientific basis exists concerning characteristics and composition of the matter to be dumped to assess the impact of the matter on marine life and on human health.",

NOTING that by the above resolution LDC.26(10) Contracting Parties were invited to indicate in writing to the Secretary-General of the International Maritime Organization if they do not expect to be in a position to adopt formally the amendment at the Consultative Meeting designated for formal adoption and that no such notifications were received,

NOTING FURTHER that by resolution LDC.26(10) the Twelfth Consultative Meeting was designated for formal adoption of the above amendment,

RECALLING previous decisions of the Consultative Meetings that the amendments to the Convention agreed in principle by the Consultative Meeting should be implemented by Contracting Parties on a voluntary basis until their formal adoption,

- 1 ADOPTS the amendment to Annex III, section A of the Convention in accordance with Article XV(2) thereof,
- 2 ENTRUSTS the International Maritime Organization with the task of ensuring, in collaboration with the Governments of China, France, Spain, the Union of Soviet Socialist Republics and the United Kingdom of Great Britain and Northern Ireland, that the texts of the above amendment are

drawn up by 1 January 1990 in all official languages of the Consultative Meeting with the linguistic consistency in each text. The amendment in the English, French, Russian and Spanish languages would then become the authentic text of the amendment to Annex III to the Convention in accordance with Article XXII of the Convention.

- 3 RESOLVES that for the purposes of Articles XIV(4)(a) and XV(2) of the Convention, 8 February 1990 shall be treated as the date of the approval of the amendment,
- 4 REQUESTS the Secretary-General of the Organization to inform Contracting Parties of the above-mentioned amendment.

ANNEX 4

SUMMARY OF RESPONSES TO LDC.2/Circ.222

The purpose of circular LDC.2/Circ.222 was to solicit views and comments from Contracting Parties on the following issues:

- 1 measures adopted by Contracting Parties in implementing Article VII(4) of the London Dumping Convention with respect to the disposal at sea of decommissioned nuclear powered military vessels;
- 2 perspectives of Contracting Parties as to whether the Consultative Meeting of Contracting Parties to the London Dumping Convention is the appropriate forum to consider disposal of low-level radioactive wastes into a subsea-bed repository accessed from the sea, such as via a mobile platform or fixed platform or artificial island; and
- 3 perspectives of Contracting Parties as to whether disposal of low-level radioactive wastes into a repository, constructed in bedrock either totally or partially beneath the sea, and accessed from shore (e.g. via a tunnel or other conduit) would be dumping at sea under the terms of the London Dumping Convention.

Issue 1

The principles contained Articles III(1)(a)(ii) and VII(4) of the Convention apply to the disposal at sea of any vessel, whether military or non-military, nuclear-powered or non-nuclear-powered, commissioned or decommissioned.

Issues 2 and 3

Summary of responses on the disposal of low-level
radioactive wastes into a sub-sea-bed repository

Issues:			
Country	2*	3**	Comments
Chile	Yes	Yes	
Denmark	Yes	No	
Finland	Yes	No	
Fed. Rep. of Germany	Yes	No	
France	Yes	No	
Iceland	Yes	No comment	
			Issue 3:
Ireland	Yes	Possibly	Desire for some international control

* In response to Issue 2, the Netherlands answered "Yes" at the Working Group meeting.

** In response to Issue 3, Canada and the Netherlands answered "No" at the Working Group meeting. The Netherlands also requested a working group meeting of legal experts.

Issues:			
Country	2	3	Comments
			Issue 3:
Nauru	Yes	Yes	Requested expert working group
Norway	Yes	No	
Portugal	Yes	No	
South Africa	Yes	No	
			Issue 3:
Spain	Yes	Possibly	Requested expert working group
Sweden	Yes	No	
United Kingdom	Yes	No	
United States	Yes	No	

ANNEX 5

DRAFT RESOLUTION ON
THE DISPOSAL OF RADIOACTIVE WASTES INTO SUB-SEA-BED
REPOSITORIES ACCESSED FROM THE SEA
(as proposed by Spain)

THE [TWELFTH] CONSULTATIVE MEETING,

CONSCIOUS of the vital importance of the marine environment and the commitments made by the Contracting Parties for its protection, under the terms of the London Dumping Convention,

RECALLING that high-level radioactive wastes are listed under Annex I to the London Dumping Convention, and therefore cannot be dumped at sea, and that the disposal at sea of low- and intermediate-level radioactive waste is subject to resolution LDC.21(9), which establishes a suspension on the disposal at sea of radioactive wastes,

RECALLING ALSO that the Eighth Consultative Meeting agreed by consensus that the Consultative Meeting of Contracting Parties to the London Dumping Convention is the appropriate international forum to address the question of the disposal of high-level radioactive wastes into the sea-bed,

AGREES THAT:

- 1 The London Dumping Convention is the appropriate body to address the issue of low-level radioactive waste disposal into sub-sea-bed repositories accessed from the sea;
- 2 Disposal of low-level radioactive wastes into sub-sea-bed repositories accessed from the sea constitutes a form of disposal subject to resolution LDC.21(9), and is therefore suspended at present.

ANNEX 6WORK PROGRAMME OF THE SCIENTIFIC GROUP ON DUMPING
ON MATTERS RELATED TO INCINERATION AT SEA

1 Contracting Parties to the London Dumping Convention, in resolution LDC.35(11) adopted at the Eleventh Consultative Meeting, stated inter alia:

"that Contracting Parties shall re-evaluate incineration at sea of noxious liquid wastes as early in 1992 as possible with a view to proceeding towards the termination of this practice by 31 December 1994. The re-evaluation shall take into account the scientific and technical aspects of incineration at sea, and the practical availability of safer and environmentally more acceptable land-based alternatives. The re-evaluation shall also take into account any other related information that may be brought forward, with particular attention given to the Oslo Commission experience while phasing out incineration at sea".

2 In the light of the above decision the Twelfth Consultative Meeting agreed upon on a work programme of the Scientific Group on Dumping to cover the following:

- .1 to provide advice which might assist in conducting the re-evaluation requested by resolution LDC.35(11);
- .2 to review all available material on clean technology and the practical availability of land-based alternatives; and
- .3 to take into account all relevant information on specific aspects of incineration technology and associated environmental implications.

3 As regards this re-evaluation, the Consultative Meeting felt that the most important issues to be addressed are as follows:

- .1 With regard to the practical availability of safer and environmentally more acceptable land-based alternatives:
 - .1.1 to identify liquid wastes containing organohalogen compounds, or other noxious liquid wastes (e.g. wastes containing mercaptans) which have to be managed in an environmentally safe manner;
 - .1.2 to carry out an inventory to indicate the amounts and types of these wastes produced in countries around the world and the production processes from which these were derived in recent years (a distinction should be made between, for example, large scale processes and a variety of smaller production processes);
 - .1.3 to evaluate on the basis of this inventory the present management of these wastes, if possible by addressing aspects such as:
 - relevant regulations applied or in preparation
 - control requirements and practice
 - application of a waste management hierarchy
 - prevention/product substitutes/clean technology
 - recycling/dechlorination
 - destruction technologies
 - containment and storage
 - dispersal
 - import/export, transportation, collection and surveillance of wastes containing organohalogen compounds
 - co-operation with other countries;

- .1.4 to survey no waste and low waste technologies, as well as alternative abatement technologies, including those that are currently available and those that are presently in the research and development phase;
- .1.5 to evaluate the effectiveness, environmental acceptability, costs and benefits of these alternative technologies, with special attention to the practical steps that would enable transition to these alternatives;
- .1.6 to evaluate where possible the administrative, financial, technical and institutional arrangements for dealing with waste management;
- .1.7 to draw upon the experience of countries that have already terminated or are in the process of phasing out incineration at sea of specified wastes, in particular Contracting Parties to the Oslo Convention, and to include case studies as well as the names and addresses of national contacts and groups having specialized knowledge and/or responsibilities in the field of clean technologies;
- .1.8 to make use of the experience and/or data bases from organizations such as UNEP, EEC, OECD, IACT, Oslo Commission, etc., with regard to the production of wastes containing organohalogen compounds and their source reduction, and of national institutions for environmental waste management within Contracting Parties.

4 In preparing its report the Scientific Group should take into account all relevant information on specific aspects of incineration technology and associated environmental implications on land and at sea such as:

- the products of incomplete combustion;
- the formation of harmful substances in the plume;
- environmental contamination by residues from incineration; and
- effects of organic emissions by incineration on the sea-surface microlayer.

5 The Scientific Group on Dumping is asked to report to the Consultative Meeting in good time for consideration during the re-evaluation of incineration at sea in 1992. In order to assist the Scientific Group on Dumping to carry out its task, independent environmental consultants should be engaged to investigate in more depth selected issues, including the inventory addressed in paragraph 3 above. The Secretary is given the mandate to select the consultants in consultation with the Chairmen of the Consultative Meeting and the Scientific Group on Dumping and to organize a thorough briefing of such consultants. Interim reports of the consultants should be made available to the thirteenth meeting of the Scientific Group on Dumping.

ANNEX 7

DRAFT RESOLUTION ON
THE EXPORT OF WASTES FOR DISPOSAL AT SEA
(as proposed by Mexico)

THE [TWELFTH] CONSULTATIVE MEETING,

RECOGNIZING the obligation of Contracting Parties to promote, individually and collectively, the effective control of all sources of pollution of the marine environment,

RECOGNIZING FURTHER the increasing movement of wastes across national boundaries for a variety of purposes, and the environmental risks associated therewith,

RECALLING Resolution LDC.29(10), concerning the export of wastes for disposal at sea wherein the Tenth Consultative Meeting agreed, inter alia, to recommend that the Contracting Parties not export wastes for sea disposal to States not Party to the Convention or to appropriate regional conventions unless there are both compelling reasons and clear evidence that the wastes would be disposed of in compliance with the London Dumping Convention and such regional conventions,

NOTING the activities of organizations such as the EEC, ACP, OAU, OECD, and the Oslo Commission in addressing the problems associated with the transboundary movements of hazardous wastes since the adoption of Resolution LDC.29(10), and in particular, the efforts of UNEP in completing a global convention dealing with waste trade entitled the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,

NOTING FURTHER that the Basel Convention in its Preamble states the increasing desire for the prohibition of transboundary movements of hazardous wastes and their disposal in other States, especially developing countries, as well as the need to continue the development and implementation of environmentally sound low-waste technologies, recycling options, etc. with a view to reducing to a minimum the generation of hazardous and other wastes,

RECOGNIZING the right of individual States to apply rules governing the export of wastes for sea disposal that are more stringent than internationally agreed rules,

AGREES:

- 1 that Contracting Parties should take the appropriate measures to prevent the export of wastes, particularly wastes containing substances listed in Annexes I and II to the London Dumping Convention, to States not Party to the London Dumping Convention,
- 2 to designate the Thirteenth Consultative Meeting for the adoption of an amendment to the Convention reflecting the commitments agreed to in this resolution.

ANNEX 8

SUMMARY OF THE PRESENTATIONS AT THE PUBLIC SESSION

(Monday, 30 October 1989)

OPENING ADDRESS

by Mr. C.P. Srivastava,
The Secretary-General of the
International Maritime Organization

This special public session has been arranged to help examine the role of the London Dumping Convention as a positive mechanism for the conservation and protection of the marine environment. A number of speakers have been invited to make presentations on the state of the marine environment and also to report on the progress and needs with regard to implementing the basic requirements of the London Dumping Convention.

There are, for the time being, only two Conventions in force, regulating on a global basis the prevention of marine pollution: the London Dumping Convention and the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), and both are administered by this Organization. We at IMO are very proud that we have been given the responsibility and have been entrusted with these two matters related to the prevention of pollution of the sea.

It has in fact been IMO's greatest accomplishment in the environmental field during its thirty years of existence that both the Marine Environment Protection Committee and the Consultative Meetings of Contracting Parties to the London Dumping Convention have been firmly established. They are widely recognized as the global fora for consideration and development of international measures relating to the prevention of pollution from ships and the prevention of pollution from the intentional disposal of wastes at sea. With the recognition and support from not only Governments, but from all sectors of the maritime community, it has been possible for IMO to engage itself in a far-reaching regulatory programme which has characterized the 30 year period of the Organization.

As to the accomplishments themselves, undoubtedly the regulatory regime encompassed by MARPOL 73/78 is the main achievement. The fact that nearly 60 States have become Contracting Parties, representing more than 80% of the world's merchant tonnage, is indicative of the tremendous progress made. Oil, chemicals in bulk and in packaged form, and garbage are now (or will be shortly) regulated under the MARPOL regime. Through its work on the Manuals on Oil and Chemical Pollution, the Guide to International Assistance in dealing with major pollution incidents, and the various regional agreements and contingency plans developed as part of UNEP's Regional Seas Programme, IMO has also succeeded in disseminating the most up-to-date knowledge on pollution combating techniques to the maritime world and has facilitated mutual assistance and co-operation between States bordering the most vulnerable sea areas.

The London Dumping Convention, for which IMO provides the Secretariat, has also grappled with some extremely complex problems, such as sea disposal of radioactive wastes, incineration of wastes at sea and the export of wastes for disposal at sea. The London Dumping Convention has provided an effective regulatory framework for sea disposal of wastes since 1975 and has also promoted the control of all sources of marine pollution. At the same time the present elevation of "environmental concerns" to the top of the political agenda has meant that the question of how wastes should be managed and ultimately disposed of is under a continuous process of discussion and review.

There is, inevitably, much that remains to be done, and much that could probably be improved upon in the light of new technology and new ideas in critical areas such as technical co-operation and assistance. The problem of transboundary movements of hazardous wastes has attracted great public attention, and this Organization must be ready to assist in whatever way it can in making the international legal regime applicable to such movements as effective as possible. Questions arising over the role of disposal at sea within a comprehensive waste management strategy is also one of the main issues to be resolved within the framework of the London Dumping Convention.

THE STATE OF THE OCEANS

by Mr. Alasdair McIntyre

The conditions of the oceans is influenced by a variety of man's activities which are pursued in the hinterland, along the coastal strip and in the sea itself.

Man-induced alterations of river flow by dam building and other manipulations of hydrological cycles have caused major changes. Today in Africa and America at least 20% of the land run-off to the sea originates from impoundments. A wide range of land use practices including deforestation and irrigation also affect run-off. In addition, the widespread use of synthetic organic compounds in public health, agriculture and industry releases these chemicals into the environment and eventually into the sea. Thus activities in the hinterland, often far from the sea, have profound effects on the coast, causing erosion in some places and sedimentation in others, and result in the distribution of chemicals throughout the world.

The coastal zone itself is particularly vulnerable to the demands of industry and tourism (the former developing ports and operational complexities, the latter constructing hotels and recreational facilities). The consequent restructuring of the coastline disrupts traditional fisheries, interferes with marine life, and eliminates important habitats. The associated discharge of urban, industrial and agricultural wastes from land-based sources can be detected in the waters of the continental shelf.

At sea, pollution is caused by the operation of shipping and offshore installations, by disposal of dredge material, sewage sludge and industrial wastes, and by the exploitation of non-living resources. Accidents are always a potential source of contamination. Even fishing and mariculture, at the intensive level now practised, damage the physical environment as well as natural populations.

Arising from these human activities, six issues may be highlighted for priority attention, - the concreting of the coasts, microbial contamination of seafood and beaches from sewage, eutrophication, the progressive build-up of synthetic organic compounds particularly in the tropics, the fouling of the marine environment by plastic litter, and the accumulation of tar on beaches. However, it must be recognized that assessments of priority will differ from region to region, reflecting local situations and practices, and also that throughout the world public perception may sometimes accord greater priority to such marine contaminants as radionuclides, metals and oil.

It should be noted, however, that the open ocean is relatively clean. Some contaminants such as lead, synthetic organic compounds and radionuclides are widely detectable in the open seas but occur at levels which are biologically insignificant. Oil slicks and litter which are found along shipping lanes have minor impact on the communities of organisms living there.

The effects of pollution are mainly on the margins of the seas, and the problems must be addressed immediately. International bodies such as the IMO and the LDC have been particularly effective in the fields of shipping and dumping, but the sort of activities and approaches in which they are involved must be extended to other topics and other subject areas. With the continuing growth of human populations, the deterioration now evident in some parts of the coastal zone could increase in intensity and scale causing a global problem which will be managed only by strong national and international action taken now.

THE STATE OF SUB-TROPICAL AND TROPICAL SEAS

by Mr. Olof Linden

The common view of the global marine pollution problem is often based on the chemical pollution problems found in the North Atlantic and parts of the North Pacific where the coastal states are very industrialized. The situation in the sub-tropical and tropical regions is rather different. In these regions, direct and indirect destruction of coral reefs, coastal lagoons and mangrove forests are the major problems. The physical destruction of these habitats takes place either directly through reclamation, dredging, extraction for exploitation, or the use of destructive fishing methods; or indirectly through siltation due to land erosion or various development activities in the coastal zone.

The turbidity and siltation of coastal waters experienced over extensive coastal areas in southern Asia, East and West Africa, and the Caribbean, negatively affect productive shallow habitats such as coral reefs, seagrass beds, coastal lagoons. Also, the regulation of the water flow in rivers resulting from the construction of dams etc. has caused decreased fish production in coastal regions near the mouths of rivers particularly in Africa and Asia. Furthermore, direct destruction of productive coastal environments is occurring at an alarming rate in many parts of South-East Asia, Africa and the Caribbean.

Coral reefs are being destroyed by a variety of human activities including tourism, commercial exploitation for production of building material, fishing practices using explosives and poisons. Throughout the tropics, mangrove forests are being reclaimed for virtually any purpose or used for waste disposal. Particularly in southern Asia and parts of Latin America, mangrove areas are cleared extensively to be used for aquaculture operations. Very often the mangrove trees over large areas are indiscriminately chopped down for use as fuel. In most regions throughout the tropics, agricultural activities and forestry pose a significant threat to the coastal zone through the discharge of pesticides and fertilizers.

Also, most areas with high population density discharge untreated or inadequately treated sewage. As a consequence, eutrophication has brought about oxygen depletion, algal blooms, "red tides", outbreaks of jelly-fish. Microbial pollution, related to the release of sewage, constitutes a threat to public health along most tropical coasts.

The general absence of upwelling in tropical areas magnifies the importance of the productivity of the shallow coastal region where habitats such as mangrove forests, seagrass beds, coral reefs, estuaries and coastal lagoons become comparatively more important to the marine productivity, including fish production, than the corresponding habitats in temperate and arctic regions of the world oceans. As a consequence, in the tropics, most fishing activity is carried out near the shore. This is an important factor to consider when discussing the vulnerability of fish-producing tropical coastal waters to pollutants and other stress factors. Furthermore, the tropical coastal areas are often densely populated, and the dependence on the protein provided through fisheries is usually high. 35 to 75% of the fish sold on fish markets in most developing countries are species directly dependent on the shallow coastal habitats for food and spawning.

ACOP'S VIEW ON THE LONDON DUMPING CONVENTION

by the Rt. Hon. Baroness White

The London Dumping Convention (LDC) has been singularly effective in reducing pollution of the marine environment from radioactive waste dumping and, more recently, ocean incineration. And yet, the LDC suffers an identity crisis and a public relation problem. ACOPS believes that one problem facing the Convention is lack of consensus on its purpose. Does it exist to regulate ocean dumping, as its name implies, or to prohibit dumping? Until this question is resolved, meaningful co-operation between Contracting Parties to protect the marine environment will be difficult.

A second problem facing the Convention is its restriction to deliberate dumping at sea, which comprises only ten per cent of marine pollution. Currently there is no international treaty, regulating the other ninety per cent of marine pollution that originates from land-based sources. As the LDC phases out ocean dumping, it could expand its remit to cover all sources of marine pollution. Such an expanded Convention could serve as a vehicle for technological exchange, by which no waste/low waste production processes, as well as clean abatement technologies, could be made available to nations that need them.

Resolution of the fundamental purposes of the Convention, and expansion to include all sources of global marine pollution, would establish the LDC as the pre-eminent international treaty for the prevention of marine pollution, to the benefit of present and future generations.

THE PERMANENT COMMISSION OF THE SOUTH PACIFIC

by Mr. Hugo Llanos

The Permanent Commission of the South Pacific (CPPS) is an Intergovernmental Maritime Organization made up by Colombia, Chile, Ecuador and Peru, whose activities are carried out both at regional and international level. The CPPS was set up in 1952 to enforce provisions enacted by the Santiago Maritime Zone Declaration whereby, States Members of the CPPS have exercised exclusive sovereignty and jurisdiction over the 200 nautical mile zone. The main CPPS objective is to co-ordinate marine-related goals, including the protection of the marine environment.

Action Plan for the Protection of the Marine Environment and Coastal Areas of the South East Pacific

The Action Plan for the Protection of the Marine Environment and Coastal Areas of the South East Pacific was adopted in Lima, Peru, in November 1981 by the Member States of CPPS and Panama. The CPPS acts as its secretariat. The objective of the Action Plan is to protect the marine environment and coastal areas with the purpose of enhancing the preservation of human health and well-being of present and future generations.

In the manner of most Action Plans encouraged by the United Nations Environment Programme (UNEP), the South East Pacific Action Plan consists of four components, i.e. environmental assessment, environmental management, environmental legislation and backup arrangements.

Environmental assessment

The total regional domestic discharges amount to 1,500 million cubic metres per year, equal to an organic load of 380 million tons BOD. Chile and Peru contribute more than 80% organic matter per year.

Industrial waste discharges in the Pacific amount to 324.3 million cubic metres per year corresponding to an organic load of 136.9 million tons/year of BOD. Chile, Ecuador and Peru account for the highest figures.

As regards oil pollution, the main regional sources are the transport of crude and products oil through the Straits of Magallanes and the Panama Canal on their way to refineries and distribution centres. Another source of oil pollution consists of discharges at sea as a result of offshore operations and those occurring during loading and unloading operations at terminals. According to results of measurements of concentrations of dissolved/dispersed oil of hydrocarbons in sea water, concentrations above 10 mg/litre were found in Panama (Puerto Balboa and Panama Bay); Ecuador (Manta, Santa Elena Bay, Ancon-Posorja and Puerto Bolivar); Chile (Valparaiso Bay).

A large variety of activities have been carried out under the education and training component of the Action Plan. For example, inter-calibration exercises, training courses on the methods and techniques to determine the occurrence of heavy metals, pesticides and oil; microbiological techniques to ensure quality of water and beaches, etc. Since 1981, 55 seminars, workshops and meeting of experts related to the Action Plan were held and 1,241 experts will have attended training courses by the end of 1989.

Environmental management component

Several activities developed by the Action Plan have been pursued and incorporated by States Members in the Regional Action Plan such as the design and development of national contingency plans to control oil spills and the establishment of environmental management standards. The Plan has also promoted the design of new national projects dealing with marine pollution and handling and management of coastal and marine areas.

Environmental legislation

In 1981, the Convention for the Protection of the Marine Environment and Coastal Areas of the South East Pacific and the Regional Co-operation Agreement to Combat Oil Pollution and Other Noxious Substances in the South East Pacific in Case of Emergency were adopted. Later on, in 1983, in Quito (Ecuador), two additional instruments were endorsed: the Complementary Protocol to the Regional Agreement and the Protocol for the Protection of the South East Pacific Against Pollution from Land-based Sources. These instruments have been ratified and have entered in force. On 20 September 1989, in Paipa (Colombia), the Protocol for the Protection of the South East Pacific Against Radioactive Pollution and the Protocol for the Preservation and Management of Protected Areas of the South East Pacific were adopted. In addition to the above, recommendations were issued regarding a new Protocol on Civil Liability for Radioactive Pollution of the South East Pacific.

DANISH POLICY AND THE LONDON DUMPING CONVENTION

by Mr. K. Jørgensen

Denmark is opposed to dumping and incineration at sea, and gave the reasoning underlying this attitude, together with a brief presentation of measures taken by Denmark in relation to the prevention of pollution of the marine environment.

Reference was made to the Recommendations of the Brundtland Report on sustainable development, which have been put into a national follow-up plan. The work on the prevention and control of marine pollution within the LDC, as well as the national implementation, was described. The importance of the work within regional fora was also stressed, with special emphasis given to the work in the European Economic Community and the Nordic Council.

Examples from the various action plans were described, especially the action which shall result in a reduction of the nitrogen and phosphorus discharges to the aquatic environment by 50% and 80%, respectively.

For the future, the apparent need for a "precautionary" approach and the increased usage of clean technology (including recycling and changed production processes) was stressed.

And finally, some tentative thoughts about the objective and principles for a possibly expanded Convention covering land-based discharges as well as atmospheric inputs were offered, for example:

- use of best available technology
- implementation of the "precautionary" principle
- burden of proof to rest on the polluter
- the polluter-pay principle
- exchange of information on technology and monitoring the health of the environment.

THE SCIENTIFIC BASIS OF THE U.K. COMPLIANCE WITH THE
LONDON DUMPING CONVENTION

by Mr. C.E. Purdom

Scientific work to underpin United Kingdom action under the London Dumping Convention comprises monitoring activity in the seas, modelling of the environment, assessment of hazards and, in direct relation to waste disposal, the licensing of specific activities. The total cost of this to the Ministry of Agriculture, Fisheries and Food and to the Department of Agriculture, Fisheries and Food for Scotland is over £10 million per year and employs over 200 scientific and support staff.

Monitoring involves sampling of water, sediments and fish tissues and their analysis for a range of contaminants including radioactive materials, heavy metals, organochlorine compounds and nutrients.

Assessment work includes surveys of eating habits of people so that contaminants in sea food can be interpreted in public health terms for critical groups. So far the potentially harmful contaminants have been shown to be within internationally agreed limits, do not pose a threat to the critical groups and are declining generally.

Assessment is also conducted in relation to the animals and plants of the sea. Their response to exposure to contaminants is tested experimentally and surveyed in the field. There is no evidence of permanent damage anywhere but a clear case of environmental harm to molluscs from TBT from anti-fouling paint was established and new legislation to ban this material has been followed by a decline in TBT contamination and an improvement in mollusc growth. Surveys are also made of fish diseases. So far there is no evidence of any link between contamination levels and fish disease even in relation to inshore areas where contamination from the land greatly exceeds that from dumping.

The procedures for licensing waste disposal are strict and under close scientific scrutiny which assesses the need for sea disposal as opposed to other means, the materials to be disposed of and their compliance with LDC or Oslo requirements, the amount to be disposed of, and the area for disposal. Monitoring of the disposal sites before, during and after dumping is conducted using physical, biological and chemical tests and by visual observations. There is no evidence of long-term residence of dumped materials, nor of adverse effect on benthic or planktonic communities.

In conclusion, dumping is under close scientific scrutiny which is underpinned by a large annual commitment to research. The impacts of disposal have been predictable and, in general, the effects are barely discernible even in the vicinity of disposal sites.

The scientific principles of holistic waste management must not be diluted, they provide not only for safe regulated disposal practices but also for action in the event of accidental or natural contamination from whatever source. The science base is essential for the protection of the overall health of the seas and the world environment generally.

THE LONDON DUMPING CONVENTION AND THE
PROTECTION OF THE MARINE ENVIRONMENT

by Mr. W. A. Nitze

The United States representative, Mr. W.A. Nitze, spoke about how the United States views the London Dumping Convention and what it is doing to make the LDC an effective instrument of international environmental policy.

Effective implementative of the London Dumping Convention is an important component of the United States policy toward the marine environment; but ocean dumping is only one part of the matrix of water-pollution problems facing the world today. Problems affecting inland waters cannot be isolated from those in the near coastal environment or in the ocean.

In response, the United States is developing a comprehensive coastal and marine policy to integrate regulation of issues such as treatment and disposal of materials that have been or are being disposed of at sea with regulation or land-based sources of pollution.

Several legislative responses to marine pollution were described.

The Marine Protection, Research and Sanctuaries Act (MPRSA) regulates the ocean dumping of all types of materials that might adversely affect human health, the marine environment, or the economic potential of the ocean. In the absence of a permit, the Marine Protection Act prohibits the transport of materials for the purpose of dumping. The Act applies to dumping in the open ocean and in coastal waters. It does not apply to estuarine waters which are regulated by the Clean Water Act.

The Ocean Dumping Ban Act (ODBA) of 1988 amends MPRSA and its primary purpose is to end ocean dumping of sewage sludge and industrial waste by 31 December 1991. The Act also prohibits the dumping of potentially infectious medical waste in the ocean by either public or private vessels and regulates the transport of municipal or other non-hazardous commercial wastes.

Consistent with its LDC obligations, the United States also takes part in a variety of international programmes aimed at reducing marine pollution. Some are directed at specific types of pollution, while others focus on individual geographical regions. For example, with respect to The International Convention for the Prevention of Pollution by Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), the United States Coast Guard has promulgated regulations for the mandatory Annexes. Of the optional Annexes, MARPOL Annex V, which regulates the disposal of garbage, especially plastic, is particularly significant as floating plastic debris is a danger to marine animals.

The United States has implemented Annex V of MARPOL 73/78 through the Marine Plastic Pollution Research and Control Act of 1987 and the Degradable Plastic Ring Carrier Act of 1988.

Regional initiatives

Through the Convention on the Development and Protection of the Marine Environment in the Wider Caribbean, the United States is working with its neighbours to protect a shared resource. In addition, the United States has participated in the development of the Convention for the Protection of Natural Resources and the Environment of the South Pacific Region, and signed the Convention in 1986.

The Marine Environment Protection Committee (MEPC) of IMO draws attention to regions that are especially vulnerable to pollution. One such area is the Gulf of Mexico, the importance of which the United States keenly appreciates. Unfortunately, the region suffers from pollution problems endemic to coastal areas. The United States has, since 1987, been actively involved in a comprehensive national programme to protect and restore the water quality and resources in the Gulf.

The Great Lakes Programme is the oldest geographically focused environmental programme in the United States. It was launched in 1970 as a co-operative effort between the United States and Canada. The programme's first target was nutrient enrichment from point sources.

The programme is also tackling the more difficult problem of reducing nutrients from non-point sources.

The National Estuarine Programme

The United States is also addressing ocean pollution in a number of domestic programmes under the Clean Water Act. The National Estuarine Programme is specifically designed to preserve and protect estuaries that show symptoms of pollution and overuse. Typical problems include the accumulation of toxic chemicals such as polychlorinated biphenyls in seafood and loss of habitat owing to effects of population growth and development.

Alaskan oil spill

As a result of spillage from the tanker Exxon Valdez in March 1989 and other incidents, the United States is re-evaluating its policy on oil spill liability. In addition, the United States, both through IMO and domestic measures, is reviewing additional safety measures such as double hulls for tankers, improvements in navigational procedures and construction of offshore platforms for unloading cargo. The United States is examining even more closely proposed offshore drilling and leasing in several areas, including Bristol Bay in Alaska, the coast of California and several sections of the east coast.

Conclusion

In conclusion, the United States representative noted that there are not yet enough Parties to the London Dumping Convention to make it truly successful. More efforts should be made to gain the many industrializing countries as Parties to the Convention. Economic competitiveness as well as environmental concerns argue that Parties should urge non-Parties to join the Convention.

ANNEX 9

RESOLUTION LDC.38(12)
A LONG-TERM STRATEGY FOR THE LONDON DUMPING CONVENTION

THE TWELFTH CONSULTATIVE MEETING,

NOTING the Task Team 2000 report presented to the Eighth Consultative Meeting, and the Chairman's report on a long-term strategy presented to the Twelfth Consultative Meeting,

ACKNOWLEDGING the dynamic nature of the Convention, and the need to consider new advances in science and technology, and the evolving environmental policies of Contracting Parties,

RECOGNIZING the continued vigilance required to ensure the effective implementation of the Convention,

MINDFUL OF the importance of expanding membership in the Convention,

AWARE OF the need to provide technical assistance to developing countries,

NOTING FURTHER the need for increased international co-operation on the scientific and institutional aspects of marine environmental protection,

CALLING ATTENTION to the proposed 1992 United Nations Conference on Environment and Development, and other upcoming international environmental initiatives,

AGREES to conduct a study on a long-range strategy for the Convention, taking full account of the conclusions and recommendations of the Task Team 2000 report, and

AGREES to hold a meeting of a steering group to establish priorities and assign tasks, using the attached annex and comments from the Twelfth Consultative Meeting as a basis for discussion. These studies will be compiled into a report to be presented to the Thirteenth Consultative Meeting.

ANNEX

Terms of Reference

- 1 To evaluate the current status of the Convention taking into account its basic purposes and principles, membership, technical co-operation and assistance, relation with other organizations and conventions, and image.
- 2 To evaluate implementation of the London Dumping Convention, identify any problems and their underlying causes, and make appropriate recommendations.
- 3 To identify, analyse and compare, different strategic directions and options for the London Dumping Convention which would contribute to the overall protection of the environment. This would take account of measures and developments under existing international agreements and ongoing developments for the protection of the global and regional environments.
- 4 To draw up recommendations on the future development of the Convention in the light of the benefits and opportunities identified.
- 5 To take account as a matter of priority of the basic principles and purposes of the Convention as well as of the factors and topics outlined below:

Status of the Convention

- .1 acceptance of existing instruments (e.g. dispute settlement procedures) by Contracting Parties;
- .2 expanded membership;
- .3 relationship with other international organizations and international conventions; and
- .4 Convention's public image;

Effective implementation:

- .1 adequacy of existing rules and guidance;
- .2 adequacy of present scientific/technical foundation for decisions;
- .3 adequacy of existing institutional infrastructure for implementation;
- .4 mechanisms for scientific, technical, and administrative assistance;
- .5 national and international enforcement mechanisms;
- .6 science/policy interface;
- .7 resources;
- .8 remedial measures (e.g. recovery of dumped wastes); and
- .9 recommendations.

New directions:

- .1 implications of evolving national environmental policies for the London Dumping Convention;
- .2 scope of the Convention, e.g. expansion to include land-based sources;
- .3 role of the Convention with respect to overall waste management;
- .4 relationship of the Convention to evolving international environmental agenda (climate change, biological diversity, coastal pollution, etc.);
- .5 information and advice from other relevant international agencies;

- .6 new co-operative enforcement mechanisms;
- .7 technical assistance;
- .8 precautionary approach; and
- .9 recommendations.

ANNEX 10

LIST OF SUBSTANTIVE ITEMS FOR INCLUSION IN THE AGENDA
OF THE THIRTEENTH CONSULTATIVE MEETING AND FUTURE WORK
PROGRAMME OF THE SCIENTIFIC GROUP ON DUMPING

- 1 The Thirteenth Consultative Meeting
 - Consideration of the report of the Scientific Group on dumping
 - Long-term strategy for the Convention
 - Matters relating to the incineration of wastes at sea
 - Consideration of the report of the ad hoc Group of Legal Experts on Dumping
 - Transboundary movement of hazardous wastes
 - Information exchange on waste production and waste disposal technologies:
 - national and regional seminars
 - international symposia and conferences
 - public relations
 - Sea disposal of industrial wastes - consequences of phasing out sea disposal options
 - Matters related to the disposal of radioactive wastes at sea
- 2 The Scientific Group on Dumping

		<u>Meetings</u>			<u>Target</u>
		<u>1990</u> <u>13th</u>	<u>1991</u> <u>14th</u>	<u>1992</u> <u>15th</u>	<u>Completion</u> <u>Date</u>
1	Considerations of reports of the Annex Working Group	XX*	XX		1991
2	Position of substances in the Annexes			X	Continuous
3	Field verification of laboratory tests	X		X	Continuous

* XX denotes a higher level of presentation and debate

		<u>1990</u> <u>13th</u>	<u>1991</u> <u>14th</u>	<u>Meetings</u> <u>1992</u> <u>15th</u>	<u>Target</u> <u>Completion</u> <u>Date</u>
4	Monitoring and disposal activities at sea				
	- evaluation and assessment of monitoring	X	X	X	Continuous
	- compilation and development of monitoring guidelines	X	XX	X	Continuous
5	Matters related to incineration at sea:	XX	XX	XX	1992**
6	Waste management issues (comparative assessments; mitigation of the impact of dumping; source reduction, recycling; guidelines, manuals, bibliographies)	X	X	X	Continuous***
7	Evaluation of consequences of phasing out sea disposal of industrial wastes		X		
8	Hazard assessment procedures	X	X	X	Continuous
9	Sea disposal of offshore installations and structures		X		1991
10	Precautionary approach - technical considerations and application	XX			1990
11	Co-operation, definitions and information exchange	X	X	X	Continuous

** Re-evaluation of incineration at sea

*** 1990 alternatives to sea disposal of liquid industrial waste
1991 beneficial uses and alternative disposal of sewage sludge
1992 beneficial uses and alternative disposal of dredged material