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NINTH CONSULTATIVE MEETING OF  
CONTRACTING PARTIES TO THE  
CONVENTION ON THE PREVENTION  
OF MARINE POLLUTION BY DUMPING  
OF WASTES AND OTHER MATTER  
23-27 September 1985  
Agenda item 12

REPORT OF THE NINTH CONSULTATIVE MEETING

Table of Contents

	<u>Paragraph Nos.</u>	<u>Page Nos.</u>
1 INTRODUCTION .....	1.1 - 1.17	3 - 7
2 STATUS OF THE LONDON DUMPING CONVENTION ....	2.1 - 2.5	7
3 REPORT OF THE SCIENTIFIC GROUP ON DUMPING ..	3.1 - 3.30	8 - 15
4 REPORT OF INTERSESSIONAL ACTIVITIES RELATING TO THE DISPOSAL OF RADIOACTIVE WASTES AT SEA, INCLUDING FINAL REPORT OF THE SCIENTIFIC REVIEW .....	4.1 - 4.105	16 - 41
5 DISPOSAL INTO THE SEA-BED OF HIGH-LEVEL RADIOACTIVE WASTES AND OTHER MATTER .....	5.1 - 5.9	41 - 43
6 PROBLEMS RELATING TO THE IMPORT/EXPORT OF WASTES FOR DISPOSAL AT SEA .....	6.1 - 6.8	43 - 45
7 ENVIRONMENTAL HAZARDS CAUSED BY THE DISPOSAL AT SEA OF PERSISTENT PLASTICS AND OTHER PERSISTENT SYNTHETIC MATERIALS (INCLUDING FISHING NETS) .....	7.1 - 7.9	45 - 47
8 PROMOTION OF TECHNICAL ASSISTANCE .....	8.1 - 8.14	47 - 50
9 RELATIONS WITH OTHER ORGANIZATIONS .....	9.1 - 9.21	50 - 55
10 FUTURE WORK PROGRAMME AND DATE OF NEXT SESSION .....	10.1 - 10.14	56 - 58
11 OTHER BUSINESS .....	11.1 - 11.10	59 - 61

ANNEXES

- Annex 1 - Agenda for the Ninth Consultative Meeting
- Annex 2 - Resolution LDC.19(9) - Criteria for the Allocation of Substances to the Annexes
- Annex 3 - Resolution LDC.20(9) - Interim Provisions for the Surveillance of Cleaning Operations Carried out at Sea On Board Incineration Vessels
- Annex 4 - Resolution LDC.21(9) - Dumping of Radioactive Wastes at Sea
- Annex 5 - Full statements in relation to the vote on the disposal at sea of radioactive wastes
- Annex 6 - Resolution LDC.22(9) - Environmental Hazards Caused by the Disposal at Sea of Persistent Plastics and Other Persistent Synthetic Materials (Including Fishing Nets)
- Annex 7 - Substantive items to be included in the agenda for the Tenth Consultative Meeting and for the ninth meeting of the Scientific Group on Dumping

## 1 INTRODUCTION

### Opening of the Meeting

1.1 The Ninth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, convened in accordance with Article XIV(3)(a) of the Convention, was held at IMO Headquarters, London, from 23 to 27 September 1985 under the Chairmanship of Mr. G. L. Holland (Canada). Dr. F. S. Terziev (USSR) and Admiral A. Cruz, Junior (Portugal) were first Vice-Chairman and second Vice-Chairman respectively.

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

ARGENTINA	GREECE
AUSTRALIA	HAITI
BELGIUM	HONDURAS
BRAZIL	ICELAND
CANADA	IRELAND
CHILE	ITALY
CUBA	JAPAN
DENMARK	KIRIBATI
DOMINICAN REPUBLIC	MEXICO
FINLAND	NAURU
FRANCE	NETHERLANDS
GABON	NEW ZEALAND
GERMANY, FEDERAL REPUBLIC OF	NORWAY
OMAN	SEYCHELLES
PANAMA	SOUTH AFRICA
PAPUA NEW GUINEA	SPAIN
PHILIPPINES	SWEDEN
POLAND	SWITZERLAND
PORTUGAL	USSR
SAINT LUCIA	UNITED KINGDOM
	UNITED STATES

1.3 Observers from the following States, not being Contracting Parties to the Convention attended the Meeting:

CHINA	PERU
ECUADOR	SAUDI ARABIA
LIBERIA	SYRIAN ARAB REPUBLIC
	URUGUAY

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

UNITED NATIONS  
UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)  
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC) OF THE UNITED NATIONS  
EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)

1.5 Observers from the following inter-governmental and non-governmental organizations also attended the Meeting:

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT/NUCLEAR ENERGY  
AGENCY (OECD/NEA)  
COMMISSION OF THE EUROPEAN COMMUNITIES (EEC)  
INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES)  
OSLO COMMISSION AND PARIS COMMISSION  
PERMANENT INTERNATIONAL ASSOCIATION OF NAVIGATION CONGRESSES (PIANC)  
INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)  
EUROPEAN COUNCIL OF CHEMICAL MANUFACTURERS' FEDERATIONS (CEFIC)  
ENGINEERING COMMITTEE ON OCEANIC RESOURCES (ECOR)  
FRIENDS OF THE EARTH INTERNATIONAL (FOEI)  
INTERNATIONAL UNION FOR THE CONSERVATION OF NATURE AND NATURAL  
RESOURCES (IUCN)  
GREENPEACE INTERNATIONAL

1.6 The Chairman when opening the Consultative Meeting welcomed all the participants and expressed his appreciation that delegations from an increasing number of Contracting Parties were attending this Meeting.

1.7 On behalf of the Meeting the Chairman also expressed appreciation for the support of the International Maritime Organization in accomodating the increased demands of work to be carried out in relation to the Secretariat duties for the London Dumping Convention.

#### Earthquake disaster in Mexico

1.8 The Chairman, speaking on behalf of the Consultative Meeting, offered sympathy and condolences to the Mexican delegation for the tragic loss of life and damage to property resulting from the recent earthquake in Mexico. The Mexican delegation, in thanking the Chairman for his kind words, said that the solidarity of the international community at this time has strengthened the



spirit of mutual understanding, which is so precious to the people and Government of Mexico.

Address of welcome

1.9 The Secretary-General of the International Maritime Organization in his welcome address recognized the increasingly important role of the London Dumping Convention as a basis for the global application of sea disposal principles and in the prevention and control of marine pollution arising therefrom and expressed the readiness of the Organization to take all possible steps to continue to provide the necessary Secretariat support for the work of Consultative Meetings.

1.10 In noting the work achieved during the intersessional period by the Panel of Scientific Experts on radioactive wastes, the Secretary-General extended his thanks and gratitude both to the experts themselves and to all the countries, organizations and agencies that had, in a very generous way, supported the Panel's work.

Adoption of the Agenda

1.11 The Consultative Meeting considered the Provisional Agenda for the Meeting (LDC 9/1) with a view to adoption. Amendments concerning item 7 of the Provisional Agenda were proposed by the Japanese delegation in order to avoid ambiguity and duplication of work currently being carried out within the framework of other Conventions on the control and prevention of marine pollution. The amended Agenda of the Meeting, as adopted, is shown at Annex 1. This includes, under each item, a list of documents that were considered. The Meeting also agreed on a timetable and work schedule for the Meeting (LDC 9/1/1, Annex 2).

Observer status of International Non-Governmental Organizations (NGO's)

1.12 An application for observership status had been received inter-sessionally from the Marine Action Centre, Cambridge. The Meeting was informed that the Group of Chairman and Vice-Chairmen had felt that the Marine Action Centre lacked the necessary specialized technical expertise relating to

the objectives of the Convention as required by the Rules of Procedure as a condition for receiving observership status. Therefore the Group did not recommend the participation of the Marine Action Centre at this Meeting.

1.13 In light of the lack of response from the European Atomic Forum (FORATOM) and the European Nuclear Society (ENS) to invitations to attend LDC Meetings, the Meeting agreed that these organizations should not be invited to future Meetings.

1.14 The recently established Association of Maritime Incinerators (AMI) had also applied for observership status. The Meeting agreed that the necessary background material which will be submitted in the near future be evaluated by the Chairman, the two Vice-Chairmen and the Secretariat and that the participation of that Association in the intersessional ad hoc Working Group on Incineration at Sea (see paragraph 3.19 ) and the Tenth Consultative Meeting would depend on this evaluation.

1.15 It was agreed that invitations to the Tenth Consultative Meeting should be sent to the Permanent International Association of Navigation Congresses (PIANC), the International Association of Ports and Harbors (IAPH), the European Council of Chemical Manufacturers' Federations (CEFIC), the Engineering Committee on Oceanic Resources (ECOR), Friends of the Earth International (FOEI), the International Union for the Conservation of Nature and Natural Resources (IUCN), Greenpeace International and, pending the recommendation by the Chair and the Secretariat, to the Association of Maritime Incinerators (AMI).

#### Submission of documents

1.16 The Secretariat reminded the Meeting of the deadlines agreed for submission of documents for consideration at Consultative Meetings (LDC 7/12, paragraph 11.1). In noting the problems encountered by the Secretariat regarding late submissions to this Meeting, Contracting Parties and observers were urged by the Chairman to strictly adhere to the rules for submitting documents.

Report on Credentials

1.17 The Consultative Meeting noted the report by the Secretary-General that credentials of delegations attending the Meeting were in due and proper form.

2 STATUS OF THE LONDON DUMPING CONVENTION

2.1 The Meeting took note of the report of the Secretary-General prepared on 15 August 1985 (LDC 9/2) concerning the current status of the London Dumping Convention and the progress being made in the acceptances of the 1978 and 1980 amendments thereto. The Meeting was informed that since the preparation of the report there had been two further acceptances of the Convention, thus bringing the total number of Contracting Parties to sixty States. The Meeting welcomed the fact that since its Eighth Consultative Meeting the following countries had become Contracting Parties to the Convention: Australia, Belgium, Italy, the Seychelles, the Solomon Islands and Saint Lucia.

2.2 The Belgian delegation informed the Meeting that in accepting the London Dumping Convention it had also accepted the 1978 amendments to the Convention concerning procedures for the settlement of disputes and indicated that, accordingly, corrections to the table contained in Annex 2 of document LDC 9/2 would be appreciated.

2.3 The representative from the People's Republic of China informed the Meeting that an instrument accepting the Convention will be deposited in the near future. That delegation also emphasized the importance of the London Dumping Convention for the control and prevention of marine pollution.

2.4 The Meeting noted with appreciation the continuing efforts of the Secretary-General to increase the number of Contracting Parties to the Convention, as summarized in document LDC 9/2/1 and asked him to continue his efforts in this respect.

2.5 The Meeting also appreciated the efforts made by the Secretariat in organizing seminars on the prevention of marine pollution by dumping at sea (see paragraphs 8.11-8.13). It felt that such seminars may result in an increase in the number of Contracting Parties to the Convention.

### 3 REPORT OF THE SCIENTIFIC GROUP ON DUMPING

3.1 The Report of the Eighth Session of the Scientific Group on Dumping (LDC/SG.8/12) was introduced by the Chairman of the Group, Mr. R. Boelens (Ireland). He identified the main topics discussed by the Group, in particular those issues requiring immediate action by the Consultative Meeting (LDC 9/3).

3.2 The Consultative Meeting adopted the Report of the Scientific Group and, in doing so, noted the remarks of the Federal Republic of Germany concerning differences in philosophy with regard to the control of dumping. That delegation had no reservations regarding the content of the Report but pointed out that basic differences in the philosophy of dumping are held by individual members of the Scientific Group. These differences were reflected in the rationale put forward; those parties opposed to dumping require that proof of "harmlessness" is a precondition for dumping, while others require evidence on "harmfulness" before restrictions on dumping are taken into consideration. The Federal Republic of Germany in fact gives priority to all practical land-based disposal options. The different positions led to different interpretations of the same scientific considerations and results. The Scientific Group should therefore be given the task of striving for harmonization of the different basic philosophies.

#### Outcome of the meeting of the ad hoc Expert Group on Criteria for the Allocation of Substances to the Annexes

3.3 The Meeting noted the summary of the conclusions and recommendations made by the ad hoc Expert Group on Criteria for the Allocation of Substances to the Annexes presented at Annex 2 of the Report of the Scientific Group and expressed its satisfaction at the progress which had been made.

3.4 The Consultative Meeting took note of the recommendations contained in the report of the Scientific Group (LDC 8/12, paragraph 3.11) that an amendment should be made to Annex III, Section A (waste characteristics) to include a sentence similar to that in paragraph B9 of Annex III (adequacy of information on dumpsites), but agreed that such action should be deferred pending the outcome of future discussions within the Scientific Group which could lead to further proposals to amend the Annexes.

3.5 In response to a question from the Spanish delegation concerning the role of non-scientific factors in the annexation process (LDC/SG.8/12, Annex 2, paragraph 2.4), the Chairman of the Scientific Group provided the clarification that such factors might be introduced within the Consultative Meeting but that the Scientific Group should deal only with technical and scientific considerations.

3.6 The report of the Scientific Group, in its Annex 2, contains a draft resolution on Criteria for the Allocation of Substances to the Annexes ("Guidelines"). The Consultative Meeting was invited to adopt this resolution, and the Guidelines annexed thereto, taking into account that the Guidelines were not intended for use as rigid rules but should be used as a basis for considerations of the Scientific Group and be experimented with and adapted as necessary.

3.7 While accepting the need for guidelines to facilitate the proper classification of substances within the Annexes of the Convention, the Meeting expressed some concern over certain aspects of the draft resolution on criteria for the allocation of substances to the Annexes (LDC/SG.8/12, Annex 3). The delegations of the Federal Republic of Germany and Japan noted the inclusion of a number of new factors in the list of properties to be considered in evaluating hazard potentials, additional to those of toxicity, bioaccumulation and persistence, and suggested that further discussion was necessary before these new factors could be used in the hazard evaluation process. Doubts were also expressed by the delegation of Denmark concerning the inclusion of undefined terms such as "significant exposure", "significant levels" and "high degree of interference" which, in the opinion of that delegation, introduced an element of subjectivity into the annexation process. For these reasons the above delegations felt that further study of the Guidelines was warranted.

3.8 The delegations of Finland, France and Norway shared the concerns expressed by the Federal Republic of Germany, Japan and Denmark regarding certain aspects of the draft resolution. In supporting the adoption of the draft resolution these delegations nevertheless emphasized the need that any future development of the allocation criteria should be carried out in close co-operation with the Oslo Commission.

3.9 In the ensuing debate the Chairman of the Scientific Group acknowledged that the proposed Guidelines might, in practice, be found to contain limitations but he emphasized that they should not be considered as being inflexible and that their value could best be demonstrated by their application in solving outstanding problems with regard to the classification of certain substances. The representative of the Oslo and Paris Commissions informed the Meeting that the Guidelines had recently been adopted by the Oslo Commission with minor modifications and had already proved useful in resolving difficulties in the annexation of substances within the framework of the Oslo Convention. The delegations of Canada, Sweden, United Kingdom, United States and USSR were of the opinion that the proposed Guidelines constituted significant progress and recommended their adoption.

3.10 Having taken account of all the views expressed the Consultative Meeting adopted resolution LDC.19(9) on Criteria for the Allocation of Substances to the Annexes, including the Guidelines as prepared by the Scientific Group. This resolution is shown at Annex 2. It was further agreed that the new Guidelines would supersede the existing General Guidelines for Classification of Substances to Annexes I and II to the London Dumping Convention (LDC IV/12, Annex II).

Consideration of the need for guidelines for the disposal at sea of dredged material

3.11 In addition to the proposals made by the Scientific Group with regard to the development of guidelines for the disposal at sea of dredged material, the Consultative Meeting also took note of documents submitted on this matter by the United States (LDC 9/INF.7), by PIANC (LDC 9/3/1) and by IAPH (LDC 9/INF.11).

3.12 As requested by the Eighth Consultative Meeting, the Scientific Group had reviewed the applicability of the recently adopted Guidelines for the Application of Annex III to the Convention (resolution LDC.17(8)) to the disposal of dredged material. The Group had agreed that dredged material was not a primary source of contaminants and that the long-term solution to the control of pollution from dredging would require control at source. In discussing this matter the delegation of the Federal Republic of Germany



emphasized that controlling contaminants at source was of particular importance as affecting pollutant levels in sediments since dredging operations could be a significant pathway for the transfer of hazardous substances to and within the marine environment.

3.13 The Consultative Meeting noted that the Scientific Group had not been able to agree on the need for special guidelines for the disposal at sea of dredged material; some Contracting Parties believed they were necessary while others were satisfied with the existing Annex III Guidelines. However, inadequacies in the Interim Guidelines for the Implementation of paragraphs 8 and 9 of Annex I of the Convention (LDC IV/12, Annex 5), as applied to dredged material, were recognized by the majority of Contracting Parties. After further consideration the Group had determined that the problem in applying the existing Annex III Guidelines to dredged material was related to the appropriate sequence of assessments, and progress had been made in developing a flow-chart to illustrate the interrelationships between the various terms, guidelines and Annexes relevant to the assessment of dredged material for regulatory purposes.

3.14 Despite the progress noted above, the Scientific Group had concluded that the final resolution of this matter would need detailed discussion, and therefore it had requested the Consultative Meeting to approve the convening of an intersessional group of experts to study the problem. In considering this request, the Meeting took note of the strong support for an intersessional working group expressed by IAPH and by PIANC (LDC 9/3/1). The observer from IAPH, when introducing his document (LDC 9/INF.11), advised the Meeting that IAPH would be prepared to submit a technical paper to assist the working group in its efforts and to address the special mitigative properties which distinguish dredged material from municipal and industrial wastes and which, in the view of IAPH, support the establishment of separate guidelines for the disposal of dredged material under the Annexes to the Convention. Similar views were expressed by the observer from PIANC and the delegation of the United States, both of which requested that their submissions made to the Consultative Meeting be included with other technical documents to be considered by the working group.

3.15 The representative of the Oslo and Paris Commissions, responding to the suggestion that the proposed working group should be a joint LDC/Oslo Commission group, welcomed this initiative. He informed the Consultative Meeting that experts from Contracting Parties to the London Dumping Convention not being Parties to the Oslo Convention would be warmly invited to participate as observers at an expert meeting of the Oslo Commission to be convened immediately after the joint session and which would address regional problems related to dredged material disposal.

3.16 The Consultative Meeting, having taken note of the above submissions, unanimously agreed to convene a joint LDC/Oslo Commission Meeting of Experts on Dredged Material with terms of reference as prepared by the Scientific Group (LDC/SG.8/12, Annex 5). The Secretary informed the Meeting that preparatory arrangements had been made to hold the expert meeting at IMO Headquarters, 28-30 October 1985. In keeping with established procedures, participation would be decided by the Secretariat in consultation with the Chairman of the Scientific Group, taking into account documentation submitted by Contracting Parties, Non-Contracting Parties and observer organizations.

3.17 The Consultative Meeting requested the Chairman of the Scientific Group on Dumping, Mr. R. Boelens (Ireland) to also chair the meeting of the ad hoc Group of Experts on Dredged Material.

#### Incineration at sea

3.18 The Meeting took note of the continuing discussions concerning incineration of wastes at sea, in particular the concern which had been expressed over the degree of efficiency and environmental safety of this practice. In this context, the Consultative Meeting noted with appreciation a summary of ongoing research activities related to incineration presented by the United States (LDC 9/3/2). In the opinion of the United States delegation incineration at sea was a valuable technique for the destruction of certain wastes and it supported the continued use of this technique until better methods of waste destruction on land have been developed.

3.19 A number of technical questions related to the efficiency of combustion by marine incineration facilities had been identified and the Scientific Group

recommended that these questions should be addressed by an intersessional ad hoc group of experts to be convened as soon as the current research had been completed. That group of experts would assess questions regarding the safety and acceptability of incineration at sea and report thereon through the Chairman of the Scientific Group to the Consultative Meeting. The Consultative Meeting agreed to this proposal and noted with satisfaction the willingness of the Oslo Commission to work jointly with the Consultative Meeting so that the London Dumping Convention and the Oslo Commission would benefit jointly from the session. The terms of reference of the working group will be established by the Scientific Group on Dumping at its ninth meeting and the date of the ad hoc Working Group on Incineration at Sea was tentatively set for October 1986. It was also noted that the International Union for the Conservation of Nature and Natural Resources (IUCN) was developing plans for a conference on incineration at sea in the near future.

3.20 The delegation of Finland informed the Meeting about land-based incineration facilities in Finland and of its national provisions for the disposal of hazardous wastes (LDC 9/INF.5).

3.21 The delegation of Haiti expressed concern over the possibility of incineration activities being conducted in the Caribbean Sea area and asked whether any delegations were aware of such proposals. The observer from Greenpeace International stated that plans for incineration operations in the Caribbean Sea area had been in existence for some time but these had been suspended pending scientific and technical enquiries which, in his view, should be completed in a comprehensive manner before any resumption of incineration at sea could be allowed.

3.22 The delegation of Saint Lucia, referring to the so-called "Cartagena" Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region, established in 1983 but not yet entered into force, advised the Meeting that his country shared with other Caribbean nations a concern over marine incineration and that future developments in this regard would be followed with interest (see also paragraph 9.12).

Surveillance of cleaning and repairs of marine incineration facilities

3.23 The Consultative Meeting considered the draft resolution on Requirements for the Surveillance of Cleaning Operations Carried Out on Board Marine Incineration Facilities at Sea (LDC/SG/12, Annex 6) together with comments submitted intersessionally on this item (LDC 9/3/3). In this context the Meeting noted that these requirements may overlap with those of MARPOL 73/78, Annex II concerning the discharge at sea of noxious liquid substances and the guidelines currently being developed by the IMO Marine Environment Protection Committee (MEPC) for surveys and inspections of chemical tankers. Several delegations therefore emphasized the need that any provisions for the surveillance of cleaning operations at sea should be made consistent with the MEPC requirements before being adopted by the Consultative Meeting.

3.24 A number of delegations expressed general reservations about the need for, and the efficacy of, the proposed resolution. However, in the view of the Netherlands delegation, the resolution was a necessary measure to fill a significant gap in the existing regulations governing incineration at sea. The Chairman invited a small drafting group under the leadership of the Netherlands to prepare a revised text for adoption by the Consultative Meeting.

3.25 The drafting group, taking into account the above comments, prepared a revised text of the draft resolution. The Meeting adopted the resolution on Interim Provisions for the Surveillance of Cleaning Operations Carried out at Sea on Board Incineration Vessels (Resolution LDC.20(9)) as shown at Annex 3.

3.26 The Consultative Meeting requested the Secretariat to inform MEPC at its twenty-second session of the above resolution, inviting it to provide advice on this matter. In the light of such advice the Meeting would reconsider the Interim Provisions with a view to preparing formal mandatory requirements.

Monitoring

3.27 The Consultative Meeting noted that reports on monitoring activities, as required under Article VI of the Convention, had not yet been received by the Secretariat in the form developed by the Fourth Consultative Meeting for notification purposes (LDC IV/12, Annex 7) and that the Scientific Group had

identified deficiencies in that report format. The Meeting agreed that the Scientific Group should investigate alternative reporting formats at its next session and that Contracting Parties should submit proposals to facilitate an early resolution of this matter.

3.28 The Consultative Meeting noted that, in accordance with the recommendations of Task Team 2000 (LDC 8/4), the Scientific Group had been asked to develop guidelines for carrying out monitoring in accordance with the Convention (Article VI(1)(d)) and that this should include a review of monitoring activities currently conducted within the framework of other international bodies. The Meeting agreed that it was important that Contracting Parties identify the purposes of "monitoring" activities, e.g. to demonstrate that dumping operations by their countries were being carried out in compliance with the Convention.

#### Reports on dumping

3.29 The Consultative Meeting noted that the reports on permits issued for waste disposal at sea in 1981 and 1982 had been finalized and that these had been circulated to all Contracting Parties (LDC.2/Circ.138). With regard to the report on the nature and quantities of wastes actually dumped at sea during the period 1976-1981 (LDC/SG.8/INF.4), the Meeting firmly endorsed the view of the Scientific Group that every effort should be made to fill the gaps in this report at the earliest opportunity. This inventory of dumping activities constituted a valuable record for which there was a worldwide demand and, therefore, the Meeting urged Contracting Parties which had not already done so to submit outstanding information to the Secretariat as soon as possible.

#### Future work

3.30 The Scientific Group on Dumping had prepared a draft agenda for its ninth session and this was reviewed in the light of discussions and decisions of the Consultative Meeting. The revised draft agenda is given at Annex 1. Additional comments concerning the future work of the Scientific Group are presented in section 10 of this report.

4 REPORT OF INTERSESSIONAL ACTIVITIES RELATING TO THE DISPOSAL OF  
RADIOACTIVE WASTES AT SEA, INCLUDING FINAL REPORT OF THE SCIENTIFIC REVIEW

Introduction of the report of the Expanded Panel on the Scientific Review of  
Radioactive Waste Disposal at Sea (LDC 9/4)

4.1 The Chairman of the Expanded Panel (Dr. Beninson) summarized the main results of the review. He noted that the original report prepared by a Scientific Expert Panel (LDC/PRAD.1/2) had been adopted unanimously by the panel of independent scientists, and that at the Expanded Panel Meeting most issues had been resolved totally and the remainder by majority decision. Essentially, radionuclides give rise to radiation which in turn interacts with biological systems to cause effects. Whereas the environmental behaviour of radionuclides is governed by physical and chemical properties, the biological effects are dependent only on the radiation dose. There is a considerable body of knowledge concerning the biological effects of radiation and this indicates that they can be the result of chance effects in single cells, e.g. cancer-induction and hereditary effects, the stochastic effects, or effects in many cells which become apparent at the tissue level, the non-stochastic effects. The stochastic effects are those of concern and the available data indicate proportionality between dose and probability of an effect in the dose range of interest from the radiation protection point of view. Increments of doses are independent and the risk of harm can be assessed by estimating that increment. The total detriment (expectation of harm) can be assessed by means of the collective dose. For individuals, it is straightforward to judge the significance of the implied increased risk when this is very small, but it is more difficult to assess the acceptability of the total detriment (equivalent to collective dose).

4.2 Dr. Beninson also stated that assessment of doses in the case of ocean dumping has to rely on a modelling approach because:

- .1 doses are too small to be determined by direct measurement; and
- .2 doses will occur in the future.

Modelling is qualified by knowledge of relevant processes and the related parameters and their uncertainties.



4.3 At the Expanded Panel Meeting it became clear that an implicit conclusion of the original expert panel needed to be made explicit, that is:

"No scientific or technical grounds could be found to treat the option of sea dumping differently from other available options when applying internationally accepted principles of radioprotection to radioactive waste disposal".

This conclusion found general support within the original Scientific Expert Panel but was not completely accepted by the Expanded Panel meeting.

4.4 Dr. C. Garrett as the Chairman of the Oceanographic Sub-Group of the Scientific Expert Panel presented a short discussion of modelling and assessment in relation to dumping of radioactive waste. A range of models is required to provide an objective assessment of the risks to humans and to marine organisms. The models may be in the form of simple algebraic formulae or of complex systems of differential equations. Models are subject to continuing improvement; modern models include processes excluded in the past; other processes are excluded because simple calculations show them to be insignificant. Some parameters required for the models are available from simple measurements, others have to be estimated from our knowledge of tracer distributions in the oceans. For most parameters there is a range of possible values which can be used in sensitivity analyses. The results should then encompass the true situation. Models valid for the future should accommodate the possibility of climatic change and the consequent variation in large scale oceanic circulation, but the most important results appear to be insensitive to such perturbations.

4.5 Dr. B. Lindell as the Chairman of the Radiological Sub-Group of the Scientific Expert Panel described radiation protection philosophy. In the case of man this is embodied in the Recommendations of the International Commission on Radiological Protection (ICRP), which have been developed by IAEA, WHO and ILO to form the basis of internationally accepted radiation protection standards. The Panel examined the scientific basis of this system of radiation protection and found it to be sound. The panel did not, however, consider the acceptability, or otherwise, of the implied degree of protection.

4.6 In the case of marine organisms, the situation is quite different because there are no internationally agreed criteria for adequate protection. The Scientific Expert Panel concluded that there should be no significant harm to local populations of marine species and, therefore, that there should be little damage to their reproductive potential. Because the predicted doses from dumping were less than those which had been shown to affect reproduction in aquatic organisms under laboratory conditions, it was concluded that there was no likelihood of any significant damage.

4.7 For man the annual dose limit is 1mSv regardless of source (excepting natural background and medical exposure) and clearly this limit cannot apply to a single source, which must, therefore, be subject to a source-related "upper bound" of less than 1mSv. No source-related upper bound has yet been proposed for sea dumping. The optimal solution in terms of radiation protection requires that the individual dose from sea dumping is less than the dose limit, that the collective dose is as low as reasonably achievable and that there is no significant damage to populations of marine organisms.

4.8 Assessments have shown that the individual doses are very low, and that the associated risk is also very low by whatever standards of comparison are chosen. The significance of the collective doses which have been estimated is more difficult to judge, although they are not large in comparison with other sources.

#### Intersessional correspondence

4.9 The Consultative Meeting took note of some background information related to the organizing of the meetings of panels of experts and of the conclusions and recommendations of the independent Scientific Expert Panel which were not included in the report of the Expanded Panel Meeting (LDC 9/4/1). The Meeting also noted the concerns expressed by a number of governments, organizations and individuals with regard to the disposal at sea of radioactive wastes (LDC 9/4/2). The Secretariat informed the Meeting of the additional communications recently received by the Secretary-General from governments, organizations, agencies and individuals related to radioactive waste disposal at sea. The Meeting further noted the recommendation adopted by the sixteenth meeting of the General Assembly of IUCN asking the Consultative Meeting that

with respect to the disposal of radioactive wastes at sea, the "burden of proof" that such activities are safe should be placed on the proponents of such disposal, in order for any disposal to be permitted (LDC 9/4/2, Annex).

Comments to the report of the Expanded Panel (LDC 9/4)

4.10 The delegation of Nauru stated that the original proposal (LDC 7/7) to amend the Annexes to the Convention in respect of radioactive waste had been based on its own scientific evaluation (LDC 7/INF.2). The Meeting noted that this document had elicited comments from France (LDC 8/5) and that a response to these comments had been made by Nauru (LDC 9/4/3). The delegation of Nauru stated in this context that its opposition to continued dumping of radioactive wastes was nevertheless based on the report of the Expanded Panel Meeting (LDC 9/4).

4.11 The Consultative Meeting, recalling that at its Eighth Consultative Meeting France (LDC 8/5) had commented critically on the scientific material submitted by Nauru to the Seventh Consultative Meeting in support of its proposal to prohibit any dumping of radioactive wastes at sea (LDC 7/INF.2), took note of the additional material which has now been submitted by Nauru (LDC 9/4/3) including the request that one of the criticizing experts, Mr. C. Hollister (United States) should provide details on his assertions. In this connection the Secretariat noted that an informal paper had been received from Mr. C. Hollister (member of the Scientific Expert Panel) rebutting a number of assertions which had been made in document LDC 7/INF.2. Photocopies of this paper were made available by the Secretariat upon request.

4.12 The delegation of Nauru considered that the report of the Expanded Panel Meeting (LDC 9/4) fully supported its fears concerning the consequences arising from the dumping of radioactive wastes. That delegation also noted that the legislatures of Guam and the Northern Marianas shared the concerns of Nauru (LDC 9/INF.15). The delegation of Nauru concluded that the original proposal to amend the Annexes to the Convention should be approved by consensus or, failing that, it should be submitted to a vote.

4.13 The delegation of Spain introduced comments to the Panel report (LDC 9/4/4). That delegation also considered that disposal of radioactive

wastes on land was safer and more controllable and supported the proposal (LDC 7/7) submitted by Nauru and Kiribati to the Seventh Consultative Meeting with a view to amending the Annexes to the Convention.

4.14 The observer from the Friends of the Earth International (FOEI) also commented on the report of the Expanded Panel Meeting. It concluded that knowledge of the environment was insufficient for it to be modelled adequately and with a sufficient margin of safety. The world population would be at risk if dumping were to be resumed and the report did not consider social and other factors which were at least as important as scientific and technical considerations. The criticism was also made that other options for disposal had not been considered. FOEI therefore supported the proposal of Nauru and Kiribati to amend the Annexes to the Convention aiming at the total prohibition of radioactive waste disposal at sea.

4.15 The observer from Greenpeace International, stating that the report of the Expanded Panel of Experts inadequately addressed several important concerns, including uncertainties in the modelling of ocean processes and calculations of total detriment, as well as social and economic impacts in comparison with land-based alternatives (LDC 9/INF.7), concluded that containment of radioactive wastes on land was preferable to disposal at sea, and he urged Contracting Parties to support the proposal (LDC 7/7) to amend the Annexes to the Convention.

4.16 The delegation of Kiribati informed the Meeting of the strong opposition to the dumping of radioactive wastes in the South Pacific area as expressed by the sixteenth South Pacific Forum (LDC 9/WP.1). That delegation also reaffirmed the opposition of its country to the practice of dumping radioactive wastes at sea.

4.17 The delegation of Denmark (LDC 9/INF.12), recognizing that the Expanded Panel Meeting report (LDC 9/4) provides an up-to-date assessment, emphasized that the report estimated that cases of severe harm might result from past and future dumping. Denmark also expressed the view that there are several uncertainties involved in the assessment of the impact on the environment and human health. The models used in the Report have not been sufficiently validated and comparisons between land-based options and sea dumping have not

been performed. The detriment would be spread all over the world to populations which might not have accepted such a burden, while the benefits were given only to a few countries. Denmark urged the Contracting Parties to take this into account when considering the proposal of Kiribati and Nauru (LDC 7/7) and asked Contracting Parties to bear in mind that dumping of radioactive wastes is irretrievable and that no corrective action could be taken in the event of miscalculation.

4.18 The delegation of Portugal reaffirmed its opposition to the practice of dumping radioactive waste at sea (LDC 9/INF.16). It was suggested that a mechanism of prior consultation be provided within the Convention to allow States that might be adversely affected to give explicit approval of dumping. It was considered that dumping should be suspended until such a mechanism would be implemented by the Contracting Parties.

4.19 On behalf of the five Nordic States (Denmark, Finland, Iceland, Norway and Sweden) the delegation of Finland informed the Meeting that the Nordic resolution proposed at the Seventh Consultative Meeting (LDC 7/7/3) had been submitted as a compromise proposal with a view to giving States with an interest in dumping time to find other means for the final disposal of radioactive wastes. An important element in that proposal was eight points enumerating various measures to be undertaken during a transitional period. That proposal was, however, no longer before the Meeting because the situation had totally changed.

4.20 The delegation of Finland further noted that Finland had consistently opposed disposal at sea and that it has developed land-based repositories including the disposal into the bedrock of low-and intermediate-levels of radioactive wastes which would isolate such wastes from the ecosystem. Support was offered to the proposal (LDC 7/7) to amend the Annexes to the Convention.

4.21 The delegation of Japan expressed its concern over the statement made by Greenpeace International (LDC 9/INF.15) particularly as this had been reproduced and circulated under IMO headed paper. That delegation emphasized that the Greenpeace statement was distorting the position and intentions of Japan in respect to radioactive waste dumping. In this connection the

Secretariat pointed out that as a matter of principle it was not responsible for the contents of statements reproduced for the Meeting on behalf of participating countries and organizations which were reproduced under IMO headed paper.

4.22 The delegation of South Africa (LDC 9/INF.17) emphasized the importance of Article XV of the Convention and noted that the report of the Expanded Panel Meeting (LDC 9/4) contained no conclusions and therefore could not be regarded as final. Before decisions could be taken, it was suggested that a finalized report should be prepared.

4.23 The delegation of the United Kingdom requested the representatives of the Scientific Expert Panel to comment on some of the conclusions which were being drawn from the Panel report by Contracting Parties.

4.24 Dr. Beninson noted that except for the contributions of  $^{14}\text{C}$  where comparisons have been made the report did not contain comparisons of the alternatives of sea and land disposal because this should only be done for the purposes of optimization where options are compared in specific cases. A generic assessment could not be made. The Scientific Expert Panel had examined the available information on sea dumping and confirmed that internationally accepted principles of radiological protection could be applied. Regarding uncertainties, assessments of collective dose for optimization purposes had to be made as realistic as possible because conservative assumptions would introduce bias for or against any given disposal option. If there are large uncertainties in the estimate of collective dose it does not provide a secure basis for cost-benefit analysis.

4.25 Dr. Garrett pointed out that the uncertainties in the model parameters and the dose estimates are discussed in the report as are the results of sensitivity analyses. He stated that the findings in the report of the Expanded Panel appeared to have been ignored, distorted or misinterpreted by some parties in unprofessional attempts to exaggerate the uncertainties in that report.

4.26 The delegation of Norway noted the increasing international concern over the dumping of radioactive waste at sea. In the view of Norway the report of



the Expanded Panel does not provide findings which would ascertain the safe disposal of radioactive wastes at sea. That delegation stated that safer and more easily controllable land-based alternatives are available. Norway therefore urged the Meeting to agree to abandon waste disposal at sea.

4.27 The delegation of St. Lucia believed that the burden of proof did not support dumping, and its country had not acceded to the Convention to support a procedure which entailed risk to man. That delegation was of the opinion that the dumping of radioactive wastes should be banned.

4.28 The delegation of Sweden stated that Swedish law prohibits radioactive waste disposal at sea and that a land-based geological repository is being developed. That delegation also stated that low- and intermediate-level radioactive wastes should not be dumped at sea.

4.29 The delegation of the Dominican Republic expressed its concern about the possibility of radioactive waste dumping in the Caribbean. As long as scientific controversies exist over the consequences of dumping at sea, it should be banned.

4.30 The delegation of Denmark stated that the dumping of any industrial wastes should be avoided. Each country should deal with its own waste on land and therefore bear the costs and provide the means of monitoring. Sea dumping of radioactive waste is prohibited by Danish law and Denmark would support the amendment of the Annexes to the Convention in line with the proposal of Nauru and Kiribati (LDC 7/7).

4.31 The delegation of the Netherlands stated that sea dumping of radioactive waste was no longer under consideration in the Netherlands and that the land-based option was being pursued. That delegation offered support for proposals to prevent dumping at sea of radioactive wastes provided such proposals were in accordance with the provisions of the London Dumping Convention.

4.32 The delegation of Australia stated that Australia was vigorously opposed to the dumping of radioactive waste at sea. Such an attitude was not confined to the South Pacific Region where Australia is already committed not to dump

any radioactive waste at sea under the South Pacific Nuclear Free Zone Treaty. Australia fully appreciated the reasons that have led Nauru and Kiribati to seek an amendment to the Annexes to the London Dumping Convention in order to prohibit the sea-dumping of all radioactive wastes. Australia, while appreciating the work done by the Expert Panels, is nevertheless of the opinion that the long-term effects of low-level radioactive waste dumping at sea are not sufficiently understood nor documented and also that dumped material cannot be retrieved in cases where the operations go wrong. The objective of Australia under this item is to work for a situation where sea dumping of all radioactive wastes will not be resumed. It would look constructively at all proposals and work closely with other delegations to achieve that end.

4.33 The delegation of Haiti wished to associate itself with those countries opposed to the dumping of radioactive wastes. Haiti stated that it was dependent on tourism, fishing and the sea, and that dumping in the Caribbean would have adverse impacts on these activities. The Government of Haiti supported efforts to combat and reduce pollution due to dumping and was absolutely opposed to the dumping of radioactive waste.

4.34 The delegation of Iceland stated that the policy adopted in Iceland as regards disposal of wastes at sea was to encourage the use of land-based methods, and it was the view of the Icelandic Government that disposal of radioactive wastes in geological formations on land would secure a more adequate isolation from the biosphere than dumping of such wastes at sea and should therefore be pursued.

4.35 Furthermore, the Icelandic delegation expressed its view that it felt the findings of the report of the Expanded Panel Meeting (LDC 9/4) would justify a decision within the context of the Convention to move low-level and medium-level radioactive wastes from Annex II to Annex I and that Iceland would be in favour of such an amendment to the Convention.

4.36 The Japanese delegation restated that Japan had no intention of dumping radioactive wastes into the Pacific Ocean regardless of the concerns expressed by other countries in that region. Japan is dependent on nuclear power because one quarter of its electrical energy stems from nuclear power plants.

Therefore the disposal of radioactive wastes generated is an important problem to be considered. That delegation stated that the option of disposing of low-level radioactive wastes at sea could not be disregarded by a small country such as Japan. Provided that scientific and technical studies show that disposal at sea of wastes would be safe for both humans and the marine environment this option should remain open. The Japanese delegation proposed that any decision to amend the Annexes to the Convention must be taken with due regard to scientific and technical considerations as stated in Article XV of the Convention.

4.37 The delegation of the Federal Republic of Germany noted that its country was neither disposing of radioactive waste into the ocean, nor planning to do so in future. That delegation stated that according to the present state of knowledge the Federal Republic of Germany had found it possible to dispose of radioactive wastes on land without risk to public health and without excessive cost. For these reasons the Federal Republic of Germany felt unable to support other nations in their intention to dump radioactive wastes at sea, but would work towards a consensus on the issue within the Convention.

4.37 The delegation of Spain stated that his country had reservations on the report of the Expanded Panel Meeting (LDC 9/4). Spain did not wish to dump radioactive wastes at sea and did not want other States to engage in such a practice.

4.38 The delegation of Ireland stated that its country was opposed to any recommencement of dumping. That delegation further pointed out that dumping at sea was an irreversible practice, whereas disposal on land would be more controllable and, in principle, reversible. That delegation suggested that there might be a case for the transfer of certain long-lived radionuclides from Annex II to Annex I. Although scientific and technical criteria were important that delegation stated that other considerations, as outlined in Annex III of the Convention, should be taken into account. It also noted that dumping at sea would not necessarily be the best option and that Ireland would support an extension of the suspension of any dumping of radioactive wastes at sea pending the outcome of continuing research (LDC 9/INF.18).

4.40 The delegation of New Zealand stated that its country shared the concerns of Nauru and Kiribati about radioactive waste dumping. That delegation said that there was widespread concern in the Pacific about such dumping, and that that concern was reflected in the provision of the South Pacific Nuclear Free Zone to which the attention of delegations was drawn above (LDC 9/WP.1). The delegation of New Zealand noted that the report of the Expanded Panel Meeting (LDC 9/4) had indicated that dumping could cause consequential harm and had not given such dumping a clean bill of health. Some questions about the safety of such dumping remained. Alternative options for disposal had not been considered. That delegation said that New Zealand was sympathetic to proposals to ban dumping. It noted that amendments to the Annexes to the Convention could only be made if there were scientific and technical grounds to support them and said that those grounds should be fully explored. New Zealand felt that there was scope for further work to be done relating to the safety and comparative merits of disposal at sea, but that it would not wish to see any recommencement of the dumping of low-level radioactive wastes during any such further work.

4.41 The delegation of Chile stated that Chile is a maritime country with more than 5,000 miles of coastline and therefore could not approve the dumping at sea of radioactive wastes. That delegation emphasized that it sincerely hoped that consensus could be reached on this matter.

4.42 The delegation of France noted that there had been a suspension of dumping of radioactive wastes at sea for two and a half years. This had allowed time for the scientific and technical evaluation of dumping required by Article XV as a basis for amendment of the Annexes to the Convention. Considering that the report of the Expanded Panel Meeting (LDC 9/4) had produced no grounds for amendment of the Annexes to the Convention, that delegation expressed the view that the suspension of sea dumping should be ended and the sea disposal option should again be made available. However, for the time being France has no intention to dump radioactive wastes at sea.

4.43 The delegation of Brazil stated that, in view of the scientific and technical information presently available, the Contracting Parties to the Convention should not, for the time being, dump radioactive wastes at sea. The sea does not belong to the Contracting Parties alone, but is the Common Heritage of Mankind. The Expert Panel had not considered all options of

disposal of radioactive wastes and there was not a satisfactory definition for "low-level radioactive wastes".

4.44 The delegation of Argentina stated that its country had never dumped radioactive waste into the ocean nor would Argentina dump radioactive wastes at sea in the immediate or intermediate future. However, it considered that all options for disposal should remain open.

4.45 The delegation of the United Kingdom noted that the report of the Scientific Expert Panel had produced no new evidence to cast doubt on the safety of dumping. It stated that the United Kingdom was concerned that the procedural rules of the Convention should be observed lest its integrity should be diminished. The United Kingdom had no plans to resume dumping at sea pending the results of a study currently being carried out on the best practicable environmental option (BPEO) for disposing of the wastes. However, it was the opinion of the United Kingdom that the available scientific evidence did not exclude sea dumping of radioactive waste as an option and that there was no basis for a change in the Annexes to the Convention.

4.46 The delegation of the United States noted that its country was not dumping radioactive wastes in either the Pacific Ocean, the Caribbean Sea or the Atlantic Ocean or elsewhere at sea, and that it was not proposing to do so. That delegation stated that Article XV was fundamental to the Convention and that, because no scientific grounds had been found to treat ocean dumping differently from other options, there should be no change to the Annexes to the Convention and an end to the suspension of radioactive waste dumping at sea.

4.47 The USSR delegation stated that in the interests of preserving the marine environment for this and future generations the position of the USSR delegations since the First Consultative Meeting was that the amounts of radioactive wastes to be dumped at sea should be gradually diminished until total elimination of such practices carried out in the framework of the Convention was reached. This gradual reduction may be achieved by the tightening of scientific criteria and of the technical requirements concerned; this in fact could provide a necessary scientific and technical basis in accordance with the Convention. Such a position seemed to be

favourable at this state since the scientific report LDC 9/4 does not give grounds for amending the Annexes to the Convention.

4.48 The delegation of Belgium noted that the Scientific Expert Panel had concluded that the risks to man arising from the dumping of radioactive wastes would be very small. That delegation stated that on the basis of the available information, Belgium could not support proposals to change the Annexes to the Convention, and that the option to dump radioactive wastes should remain open. It also stated that Belgium was not considering dumping, but was examining the option of disposal on land.

4.49 The delegation of Switzerland stated Switzerland's support for the objective of the Convention to protect the marine environment. It accepted the conclusions of the Scientific Expert Panel and considered that these did not provide sufficient grounds for amending the Annexes. It stated that Switzerland had for the time being no plans to dump radioactive waste at sea but was exploring disposal on Swiss territory. The Swiss delegation also noted that for certain radionuclides according to scientific expertise sea dumping might be a more adequate option than repositories on land.

4.50 At this point the Chairman noted that there was a spectrum of seven possible outcomes of the debate:

- .1 a return to the status quo before the inception of the suspension of radioactive waste disposal at sea;
- .2 as .1, but reconsideration of the position within a certain time frame;
- .3 encouragement towards more research to improve the assessment and to prepare mechanisms to address obvious deficiencies in present practices and gaps in the scientific knowledge in order to enable satisfactory conclusions to be reached within a given time frame;
- .4 as .3 above, but with a concurrent continuation of the (voluntary) suspension;



- .5 indefinite suspension of all sea dumping with exceptions applicable only for emergencies or internationally agreed circumstances;
- .6 amendment of the Annexes to include all radioactive wastes in Annex I from a given date with continued studies on such matters as "source upper bound", "de minimus" etc. in order to make a complete ban administratively acceptable and possible; and
- .7 amendment of the Annexes with immediate effect and without any further studies to be carried out.

The Chairman invited all delegations to consider the above options with a view to reaching a decision during the Consultative Meeting.

Intersessional activities by IAEA and OECD/NEA

4.51 The observer from the IAEA reported that on 19 September 1985 the Agency's Board of Governors authorized the Director General to transmit the revised Definition and Recommendations to the Ninth Consultative Meeting as Board Document GOV/2218 and GOV/2218/Add.1 (introduced as LDC 9/WP.14). The observer indicated the various issues that arose during its preparation and the resolution of those issues. The observer also stated that this document will be distributed under INFCIRC/205/Add.1/Rev.2, as such superseding INFCIRC/205/Add.1/Rev.1. In addition, the IAEA presented a summary of work done in support of the Convention by the IAEA (LDC 9/WP.13) including work planned for the future.

4.52 The Secretariat informed the Consultative Meeting that IAEA and IMO in co-operation with UNEP had convened a Technical Committee Meeting to consider the nature and content of the environmental assessment required for permit applications for the disposal at sea of low-level radioactive wastes as requested by the Fifth Consultative Meeting. The results of that meeting are now available in published form under IAEA Safety Series No.65. In this context the Meeting recalled that a draft resolution had been tabled by the United States at the Fifth Consultative Meeting, pending the outcome of this exercise (LDC 9/4/6).

4.53 The United States delegation agreed with the Secretariat that its original draft resolution (LDC V/WP.1; LDC 9/4/6, Annex) should be withdrawn, and the matter be reconsidered at the Tenth Consultative Meeting in the light of the IAEA's recently completed work on the revised Definition and Recommendations and on IAEA Safety Series No.65.

Intersessional activities by OECD/NEA

4.54 The observer from the OECD/NEA stated that the Review of the Suitability of the Dumping Site in the North-East Atlantic had been completed and published. This review was required quinquennially by the OECD 1977 Multilateral Consultation and Surveillance Mechanism for the purposes of the London Dumping Convention. The OECD/NEA observer noted that the site had been judged suitable on scientific and radiological grounds for use over the next five years, although the Review did not constitute the complete environmental assessment as described in IAEA Safety Series 65. However, before dumping could take place a comparison of the sea and land disposal options would be required to be carried out by the responsible national administrations. OECD/NEA also noted that the continuation of its Coordinated Research and Environmental Surveillance Programme (CRESP) had been proposed for an additional five years regardless of the outcome of the Expert Panel report (LDC 9/4).

4.55 The delegation of Denmark stated that its Government had reserved its position on the OECD/NEA Site Suitability Review. The North-East Atlantic Dumpsite, in its view, was not safe because there were too many uncertainties in the review.

Draft resolutions concerning the dumping of radioactive wastes at sea

4.56 After detailed discussion of the various options set out in paragraph 4.50 above and after intensive negotiations two draft resolutions concerning the dumping of radioactive wastes at sea had been produced by the delegation of the United States (LDC 9/WP.4) and a group of sixteen Contracting Parties (Australia, Brazil, Chile, Cuba, Denmark, Dominican Republic, Finland, Haiti, Iceland, Mexico, New Zealand, Norway, Panama, Saint Lucia and Sweden) led by the delegation of Spain (LDC 9/WP.5). The Chairman stated that he had gained the impression from the parties involved that

further accomodation might be possible between the two positions represented by the draft resolutions.

4.57 The delegation of the United Kingdom said that its Government attached great importance to the London Dumping Convention and would continue to do so. The Government of the United Kingdom had undertaken not to reach a decision on dumping prior to the completion of the study of the best practicable environmental option (BPEO), probably towards the end of 1985. Support was offered for the resolution submitted by the United States (LDC 9/WP.4). The delegation of the United Kingdom was as sure as reasonably possible at this stage that ocean dumping of radioactive waste could take place without significant harm to man or the environment. That delegation considered the report of the Expanded Panel to be a thorough analysis of the consequences of dumping although the importance of continuing research into the scientific and technical aspects was recognized. The programme of work included in the United States resolution (LDC 9/WP.4) would be supported. That delegation noted in this context that there were similarities in the two proposed resolutions which might profitably be developed in the search for a consensus position. The United Kingdom delegation considered that a great many of the concerns of those Contracting Parties opposed to dumping had already been addressed in the draft resolution proposed by the United States or had been submitted for consideration by the IAEA. That delegation expressed a desire to move towards a consensus position on which all Contracting Parties could agree. Finally, the delegation of the United Kingdom noted that divisions between the Contracting Parties had been expected when the Convention had been developed. For this reason Article XV made provision for decisions concerning the amendment of the Annexes to be taken by means of a two-thirds majority vote, and for declarations of objections to be lodged by those Contracting Parties which did not wish to be bowed by such votes.

4.58 The delegation of the United States summarized the points of similarity between the actions in the two proposed resolutions as a basis for a move toward consensus.

4.59 The delegation of Australia noted that a motion to ban dumping (LDC 7/7) remained on the table but considered that the resolution proposed by the group

led by the delegation of Spain (LDC 9/WP.5) offered a compromise on which consensus could be sought.

4.60 The delegation of Brazil stated that the position was quite simple: the resolution proposed by the United States would permit the recommencement of dumping while that of the group led by Spain would continue the suspension of dumping. In the view of the delegation of Brazil there would be majority support, to which Brazil would contribute, for the compromise reflected in the resolution proposed by the group led by Spain, which is a compromise between the complete ban of dumping radioactive wastes at sea and the recommencement of such dumping.

4.61 The Chairman stated his view that, on the basis of the discussion so far, the only possible further compromise would be on the timescale of a future suspension of radioactive waste dumping.

4.62 The delegation of Belgium stated its support of the position adopted by the United Kingdom. The resolution proposed by the group led by Spain was ambiguous as it allowed the possibility of an indefinite suspension. In the view of the Belgian delegation this did not represent a compromise although it would be prepared to use it as a basis for the search for a consensus. Failing that, support would be given to the resolution proposed by the United States.

4.63 The delegation of Argentina stated that a consensus must be reached, and that the resolution proposed by the group led by Spain offered the best hope of progress in that direction.

4.64 The delegation of South Africa noted that there were many points in common between the two resolutions, and expressed the desire that consensus be reached. As the resolutions stood, however, that proposed by the United States (LDC 9/WP.4) was to be preferred. The main problems encountered with the resolution proposed by the group led by Spain were the non-technical studies required by paragraph 2 and the burden of proof implicit in paragraph 4 of that resolution (LDC 9/WP.5).

4.65 The delegation of Ireland noted that many of the concerns of its country were taken into account in both resolutions but it could not support the



possibility of a resumption of dumping while the agreed further work was continuing. With the addition of a time-limit on the work, and thus on the suspension of dumping, the resolution proposed by the group led by Spain, although it contained some difficult points for Ireland, would meet most of Ireland's objectives. The delegation of Ireland also reiterated its wish that agreement be reached by consensus.

4.66 The delegation of New Zealand stated its support for an amendment of the Annexes to the Convention but saw value in moving forward with consensus if that was possible. That delegation considered that a suspension of dumping while additional studies were carried out would be an acceptable basis for such consensus but said that a sufficient period of time would need to be allowed to facilitate due consideration of such studies following their completion. Referring to the resolution proposed by the United States, the New Zealand delegation commented that it failed to meet New Zealand's wish for, at the very least, a continuation of the suspension. With respect to the studies to be undertaken, that delegation also expressed difficulty with those proposals in the United States resolution which were directed toward a resumption of dumping and which would prejudice the outcome of the further studies. The resolution proposed by the group led by Spain was the result of a concerted effort to find a position which might attract consensus and the delegation of New Zealand hoped that it might do so, and that discussions might be undertaken for that purpose.

4.67 The delegation of Norway stated its desire for a total ban, but in a spirit of compromise and to reach a consensus it had worked to develop the resolution proposed by the group led by Spain. In that delegation's opinion it did not see any possibility of merging the two proposed resolutions.

4.68 The delegation of the Netherlands expressed the view that a suspension of dumping was essential while additional research was carried out to determine whether it would be necessary to amend the Annexes to the Convention. It considered that consensus should be possible on the basis of the resolution proposed by the group led by Spain if a time-limit was imposed on the suspension and if paragraph 4 concerning the burden of proof was deleted.

4.69 The delegation of Saint Lucia indicated its sympathy with the position of Nauru and Kiribati (i.e. the proposed amendments to the Annexes (LDC 7/7)).

4.70 The delegation of Honduras expressed its support for the resolution proposed by the group led by Spain.

4.71 The delegation of France expressed its support for the position adopted by Belgium. That delegation considered that the discussion was distorting the Convention in which scientific and technical considerations should be paramount. It could not support a compromise which consisted of a confused mixture of emotion, politics and scientific and technical considerations. It considered that the resolution proposed by the group led by Spain implicitly altered the provisions of the Convention in respect of radioactive waste dumping.

4.72 The Canadian delegation stated that it could support many of the points in the resolution proposed by the group led by Spain (LDC 9/WP.5), and acknowledged that it represented the results of considerable effort on the part of a significant number of delegations working toward a consensus. The Canadian delegation could also support the essence of the operative provisions as set out in the resolution proposed by the United States (LDC 9/WP.4). At the same time it was sympathetic with the views of Ireland, and others who had expressed their concern about the resumption of dumping before the additional scientific findings called for are available - assuming these can be completed in a reasonable time-frame. It is for this reason that the Canadian delegation felt that three of the conditional statements in the text of the resolution proposed by the group led by Spain might unreasonably delay resolution of this issue. The paragraphs of concern were paragraphs 2, 4 and 5(3) of LDC 9/WP.5. That delegation expressed its interest in working towards consensus between the two resolutions, based on these factors.

4.73 The delegation of USSR supported the search for consensus. It suggested a possible amendment of paragraph 1 of the resolution proposed by the group led by Spain, to the effect that there should be a gradual reduction in the quantity of waste dumped towards a total ban rather than a suspension.

4.74 The delegation of Japan expressed support of the position adopted by Canada.



4.75 The delegation of the Federal Republic of Germany stated that it could support the major part of the resolution proposed by the group led by Spain. However, it considered that a time limit should be put on the suspension and that paragraph 4 should be deleted. This proposed resolution was the only one which could provide a basis for consensus.

4.76 The delegation of Portugal expressed support for the position adopted by Argentina, Ireland and Canada.

4.77 The delegation of the Philippines expressed support for the resolution proposed by the group led by Spain. It considered that the imposition of a time limit for additional scientific studies would not be helpful.

4.78 The delegation of the United States suggested amendments to its proposed resolution in an effort to achieve a consensus. The amendments were as follows:

operative paragraph 1), line 5:

"... to the Contracting Parties 90 days prior to their Tenth Consultative Meeting proposals for the establishment of a ..."

additional final paragraph:

"FURTHER CALLS UPON Contracting Parties to refrain voluntarily from sea dumping of low-level radioactive waste until the date envisaged above for the receipt by the Contracting Parties of the IAEA proposals for the establishment of a consultation mechanism relating to radioactive waste dumping as requested above."

4.79 The delegations of Japan and Italy supported the United States in attempting to reach a compromise.

#### Voting on draft resolutions

4.80 The delegation of Spain expressed the opinion that there was no possibility of a consensus and that a vote should be taken.

4.81 The delegation of Denmark seconded this motion.

4.82 The Chairman expressed the wish that some consideration be given to the redrafting of certain paragraphs of the Spanish resolution in order to clarify their intent. The Australian delegation requested that Dr. Beninson, in his capacity as Chairman of the Independent Panel of Experts, comment on the paragraphs concerned, and outline any difficulties from a scientific and technical point of view. Due to the subsequent developments within the debate, however, this request could not be carried out.

4.83 The delegation of Spain stated that although some progress had perhaps been made no firm proposals for change had been made. A request for a roll call vote on its resolution was made.

4.84 The delegations of Mexico, the Dominican Republic and Cuba supported the proposal for a roll call vote.

4.85 The delegation of the United States requested a ruling concerning the priority of voting on duplicate resolutions.

4.86 The Chairman ruled that the resolution proposed by the group led by Spain (LDC 9/WP.5) should have priority in light of the formal proposal by Spain (and seconded by Denmark) (see paragraphs 4.80 and 4.81 above). Noting that the Rules of Procedure (Rule 40) provide that a Meeting, unless it decides otherwise, shall vote on the proposals in the order in which they have been submitted, the Chairman, however, asked the Meeting to indicate by show of hands on which resolution a first vote should be made. The Meeting decided to vote first on the resolution proposed by the group led by Spain (LDC 9/WP.5).

4.87 The delegation of Canada proposed three amendments to the text of the resolution which would have the effect of deleting paragraphs 2, 4 and 5.3.

4.88 Each of these three proposed amendments were defeated by a show of hands.

4.89 The delegation of the United States made a proposal to amend paragraph 1 of the Spanish resolution by inserting a time limit "not later than 1 September, 1986" on the suspension of dumping. This proposal was defeated by a show of hands.

4.90 The delegation of the Federal Republic of Germany made a proposal to amend paragraph 1 of the Spanish resolution by inserting a time limit "not later than 1 September 1988" on the suspension of dumping. This proposal was also defeated by a show of hands.

Result of vote

4.91 The roll call vote requested by the Spanish delegation on the draft resolution as set out in document LDC 9/WP.5 was taken with the following result:

In favour:

Australia	Mexico
Brazil	Nauru
Chile	Netherlands
Cuba	New Zealand
Denmark	Norway
Dominican Republic	Oman
Finland	Panama
Federal Republic of Germany	Papua New Guinea
Haiti	Philippines
Honduras	Saint Lucia
Iceland	Spain
Ireland	Sweden
Kiribati	

Against:

Canada	Switzerland
France	United Kingdom
South Africa	United States

Abstentions:

Argentina	Italy
Belgium	Japan
Greece	Portugal
	USSR

4.92 Resolution LDC.21(9) as adopted is shown at Annex 4.

Draft resolution submitted jointly by Kiribati and Nauru to the Seventh Consultative Meeting (LDC 7/7)

4.93 The delegations of Kiribati and Nauru requested that action on their jointly-sponsored proposed amendment to the Annexes to the Convention (LDC 7/7) be deferred until the appropriate time at a future Consultative Meeting of the Convention.

Statements in explanation of vote

4.94 Statements in explanation of vote were made by the delegations of Argentina, Canada, France, Japan, Nauru, Portugal, South Africa, Switzerland, the USSR, the United Kingdom and the United States. The delegation of Gabon made a general statement concerning the position of its country with regard to radioactive waste dumping at sea. These statements, as made available to the Secretariat, are set out in document LDC 9/INF.22 and are reproduced in Annex 5. to this report. Summaries of statements in explanation of vote are shown in the following paragraphs.

Argentina

4.95 The Argentinian delegation stated that its objection was due to the fact that neither of the tabled draft resolutions included essential provisions for the achievement of consensus. It added that the Argentinian delegation had worked on a draft resolution that could be the basis for bridging the gap between both tabled draft resolutions but that due to the timing of the vote it could not be formally presented. The text of the draft resolution is included in the full statement set out at Annex 5.

Canada

4.96 The Canadian delegation was disappointed that delegations opposing the continuation of the suspension had earlier indicated willingness to work towards a consensus text and that a vote had been prematurely called for. It had favoured amendments to overcome the open-endedness of the suspension which it supported in principle, and only reluctantly opposed the resolution because as phrased it would indefinitely prevent a decision on the prohibition of radioactive waste dumping at sea.

France

4.97 The delegation of France stated that it was impossible for France to vote in favour of the above resolution. That resolution was in contradiction to the terms, spirit and letter of the London Dumping Convention. Advice provided by a group of independent scientists of worldwide reputation had been disregarded and this would have undeniable consequences for the future development of the London Dumping Convention.

Japan

4.98 The delegation of Japan abstained from the voting on the draft resolution prepared by a group of countries led by Spain (LDC 9/WP.5) for the following reasons:

- .1 the voting had been pushed forward very hastily before any serious attempts had been made to find consensus with regard to certain alternatives contained in the draft resolution proposed by the United States (LDC 9/WP.4); and
- .2 the proposed resolution required the completion of studies and assessments of the wider political, legal, economic and social aspects of dumping as a condition for lifting a suspension of dumping. Such a broad nature of the required studies goes beyond the purpose of the London Dumping Convention and would lead to an indefinite suspension of dumping of low-level radioactive wastes at sea.

Nauru

4.99 The delegation from Nauru casted its vote in favour of the resolution proposed by the group led by Spain because it is not fully convinced that the dumping of radioactive wastes at sea is absolutely safe. It nevertheless emphasized that this should not be interpreted to mean that Nauru has changed its position concerning the need to amend the Annexes to the Convention with a view to globally prohibiting all radioactive waste disposal at sea (LDC 7/7).

Portugal

4.100 The Portuguese delegation abstained from the above vote because it had felt that more efforts should have been made to bridge the gap between the two groups presenting the different major opinions. Portugal was basically in favour of a suspension of radioactive waste dumping at sea pending the development and implementation of a prior consultation mechanism between those countries that might be affected by any proposed radioactive waste disposal at sea. Portugal, as a matter of principle, is against the dumping at sea of radioactive wastes and considers it to be a duty of each country to dispose of its waste on its own territory rather than at sea. Portugal will continue in the effort of supporting all effective ways attained through consensus in order to achieve the aim of protecting the marine environment within the framework of the London Dumping Convention.

South Africa

4.101 The delegation of South Africa noted with concern that the Meeting could not reach consensus and that the issue in question was put to the vote. South Africa considered that the introduction of issues besides scientific and technical ones was an arbitrary extension and interpretation of the Convention. Moreover, paragraph 4 of the resolution was regarded as inappropriate. For these reasons South Africa had no option but to vote against that resolution. South Africa wished to reiterate, however, that it is pursuing land-based disposal options for low-level radioactive wastes.

Switzerland

4.102 The Swiss delegation stressed its strong commitment to a constructive consensus based on scientific and technical evidence, as provided for by the Convention, and supported the amendment to the draft resolution aimed at making possible such a consensus. The resolution as carried is not likely to speed up the necessary research and might even be detrimental to the future efficiency of the Convention. Also, it raises doubts from a scientific point of view. While rejecting the resolution on the above grounds, Switzerland, which is engaged in a vast national research programme on land disposal, stated that it has at present no concrete plans to resume dumping at sea.



USSR

4.103 The USSR delegation abstained from voting because it felt that the resolution put forward for vote does not correspond to a necessary extent to the letter of the Convention which stresses the need for basing decisions on reliable scientific and technical considerations. That delegation also believed that the fact of voting itself to a certain extent violates the spirit of the Convention, presuming that its decisions are taken by a consensus.

United Kingdom

4.104 The United Kingdom delegation voted against the resolution because it contained proposals for studies which, on the advice of the Chairman's own advisers, looked to be incapable of accomplishment.

United States

4.105 In the view of the United States, there has been no articulated scientific or technical justification to support the open-ended voluntary suspension of dumping called for in the resolution and for some of the other actions requested. Therefore the United States voted against the draft resolution\*.

5 DISPOSAL INTO THE SEA-BED OF HIGH-LEVEL RADIOACTIVE WASTES AND MATTER

5.1 The Consultative Meeting had two documents before it under this agenda item. Firstly, a Note by the Secretariat summarizing the outcome of the Seventh and Eighth Consultative Meetings on this topic (LDC 9/5) and secondly an information paper on the concept of disposing of high-level radioactive waste in the stable geological formations underlying the ocean floor (LDC 9/INF.3), the latter being a co-ordinated feasibility study by member countries of the OECD/NEA.

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\* Note by the Secretariat: the proposed draft resolution prepared by the United States (LDC 9/WP.4) and considered at length above, for sake of clarification and easy reference has been reproduced after the text of the full statement made by the United States as shown in Annex 5 to this report.

5.2 The Meeting, when briefly discussing the content of LDC 9/5, was informed that the last paragraph of page 3 of this document should quote Article III (1)(b)(ii) of the Convention, referring to the "placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of the Convention".

5.3 In presenting LDC 9/INF.3 the observer of OECD/NEA informed the Meeting that research to assess the feasibility of disposing of high-level radioactive waste beneath the ocean floor was continuing and that the first phase of this work was scheduled for completion in 1988. There had thus been no basic change in the situation as reported to the Eighth Consultative Meeting and there was no plan whatsoever for the time being to carry out any experiment involving the emplacement of high-level radioactive waste into the sea-bed.

5.4 The delegation of Spain commented that substantive discussion of the matter in the future would first require a decision on two highly important issues:

- .1 whether or not the disposal of high-level radioactive wastes into the sea-bed is compatible with the provisions of the London Dumping Convention; and
- .2 the distinction between marine scientific research into this concept, which is permissible; and the experimental emplacement of high-level radioactive material into the sea-bed, which should not be permitted.

The Spanish delegation realized the need for considerable intersessional consideration by Contracting Parties on this issue in order that future discussions may be useful.

5.5 The delegation of the Netherlands commented that any experiments involving radioactive waste material must be done with extreme care, including provision for the retrieval of the radioactive material used in the experiments. This delegation also suggested that no such experiments should be performed without prior consultation with Contracting Parties, in particular those which are adjacent to the sea area where the experiments are carried out.

5.6 The delegation of New Zealand stated its view that sub-sea-bed emplacement of high-level radioactive wastes is prohibited by the Convention and that it would be opposed to any experimentation with this form of disposal.

5.7 The delegation of Nauru agreed with the delegation of New Zealand and reiterated Nauru's stand on this matter. That country disagreed with the view that such disposal for research purposes was permitted by the Convention. Nauru submitted a document reflecting its position (LDC 9/INF.21).

5.8 The delegation of the USSR commented that the consideration of the disposal of high-level radioactive wastes into the sea-bed may not practically be made unless there is clear scientific evidence that such disposal is harmless and that a related regulatory framework has been established under the Convention.

5.9 In view of time limitations the Meeting agreed to defer further considerations of this matter to the Tenth Consultative Meeting.

## 6 PROBLEMS RELATING TO THE IMPORT/EXPORT OF WASTES FOR DISPOSAL AT SEA

6.1 As agreed at the Eighth Consultative Meeting, following a recommendation from the LDC Task Team 2000 (LDC 8/4) the Meeting considered problems related to transfrontier movement of wastes for the purpose of dumping or incineration at sea. The Meeting had before it the following documents:

- .1 LDC 9/6 - Secretariat: Background paper, analysis of the problem;
- .2 LDC 9/6/1 - Secretariat: The OECD Council Decision and Recommendations on Transfontier Movements of Hazardous Wastes;
- .3 LDC 9/6/1/Add.1 - Secretariat: Draft OECD Guidelines on Transfontier Movements of Hazardous Wastes Comprising a Sea Crossing;
- .4 LDC 9/6/2 - Federal Republic of Germany: Transfontier Movements of Industrial Wastes; and
- .5 LDC 9/6/3 - EEC: Directive on the Supervision and Control within the European Community of the Transfontier Shipment of Hazardous Wastes

6.2 The Meeting also recognized that the UNEP draft Guidelines and Principles for Environmentally Sound Management of Hazardous Wastes (LDC 9/9) provided useful guidance.

6.3 The Meeting further recognized the significance of this issue for the effective implementation of the Convention and the need for Contracting Parties to develop additional guidance.

6.4 It was generally recognized that the most effective means towards preventing the disposal at sea of "hazardous" material was the increase of States becoming Contracting Parties to the London Dumping Convention. In this regard the Meeting reiterated its plea to the Secretary-General to continue his efforts to encourage the wider acceptance of the London Dumping Convention.

6.5 The Meeting noted the legal and technical complexity of the issue, especially as it is related to the transfrontier shipment of hazardous waste on land. It was agreed that the inter-relationship between national laws and regulations applying to activities on land and those at sea should be carefully studied in order to avoid unnecessary duplication of effort and to ensure the smooth functioning of any necessary regulatory measures.

6.6 The Meeting considered the initiatives of other international organizations in this area, and especially those activities carried out by UNEP, OECD, the EEC and the Oslo Commission. A great deal of this work has much broader application than the immediate question of sea disposal; it was considered desirable that the overall question of the transfrontier shipment of hazardous wastes be carefully evaluated to identify those areas that have direct relevance to dumping.

6.7 The Meeting noted the desirability of having Contracting Parties develop specific guidance on problems related to the export/import of hazardous waste for sea disposal, within the framework of national laws and policies. This may include measures to further control and to provide needed information on transfrontier shipments. The Meeting noted various national approaches to this problem, as well as those cited in the review documents provided by the Secretariat.

6.8 With a view to developing additional guidance required in this area, the United States agreed to serve as lead country in co-ordinating intersessional work. Contracting Parties are invited to provide comments on those documents submitted under this agenda item and any other relevant material they may have on this issue to the United States\* by 1 January 1986. The United States would then prepare a summary report for consideration by the Tenth Consultative Meeting. It was also agreed that an expert meeting should be held in conjunction with the Tenth Consultative Meeting to consider in detail the comments and material received.

7 ENVIRONMENTAL HAZARDS CAUSED BY THE DISPOSAL AT SEA OF PERSISTENT PLASTICS AND OTHER PERSISTENT SYNTHETIC MATERIALS (INCLUDING FISHING NETS)

7.1 The Consultative Meeting noted with pleasure that the Workshop on the Fate and Impact of Marine Debris, as announced at the Eighth Consultative Meeting, had been held from 27 to 29 November 1984 in Honolulu, Hawaii, United States. The Meeting received an executive summary of the outcome of that Workshop from the Secretariat as provided through FAO (LDC 9/INF.4) and the proceedings of the Workshop from the United States (LDC 9/INF.10), which provided useful information particularly on the source and quantification of marine debris and its impact on marine resources. The Meeting also noted the submissions from Greenpeace International (LDC 9/7/1) and from Friends of the Earth International (LDC 9/7/2) providing additional information on the problem of marine debris and particularly persistent plastics, including fishing nets.

7.2 The Meeting recognized again that living resources and marine life may be harmed by interaction, e.g. entanglement and ingestion, with persistent plastics and other synthetic materials such as fishing nets, plastic bags, packing cases. In addition, legitimate uses of the sea may be impaired by the presence of such wastes.

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7.3 The Meeting noted that discharge into the sea of plastics, in wastes generated on board a ship, is prohibited under the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) and that unfortunately, however, Annex V of MARPOL 73/78 was not yet in force because of a lack of ratification or accession by States. So far ratification or accession have been received from 22 States representing some 41% of the world merchant fleet and that further ratification by countries whose merchant fleet covers 9% of the world fleet were needed for the entry into force of MARPOL 73/78, Annex V. The Meeting also noted the efforts made by IMO in promoting ratification of that Annex. The Meeting was aware of the importance of continuing efforts to bring into force Annex V of MARPOL 73/78 in order to protect the marine environment from this type of pollution. The Meeting welcomed the statements of the United States and the USSR that they were working towards the ratification of that Annex.

7.4 The observers from Greenpeace International and Friends of the Earth International recommended that non-accidental discard of fishing gear be explicitly defined as "dumping" under the terms of Article III(1) of the Convention, so that greater co-operation with the IMO Marine Environment Protection Committee (MEPC), responsible for the administration of MARPOL 73/78, and with other competent international bodies could be attained to mitigate hazards caused by the disposal at sea of persistent plastics and other synthetic materials (including fishing nets).

7.5 The Meeting felt that the deliberate disposal of ship-generated persistent plastic and synthetic material, including fishing nets, whether or not such deliberate disposal is covered by Annex V of MARPOL 73/78 or constitutes dumping under the Convention, is a source of marine pollution which the Convention calls upon all Contracting Parties to control.

7.6 The Meeting also noted that FAO was aware of the problem and that actions were being taken by the FAO Committee on Fisheries, as well as its Regional Fisheries Commissions, in particular with regard to the "by-catch" of mammals in normal fishing operations, the recovery of lost fishing gear, and the provision of public information on intentional discarding of fishing gear and debris as well as the consequences of using the sea as a disposal ground.



7.7 The Meeting welcomed the announcement made by the United States that the Sixth International Ocean Disposal Symposium will be held from 21 to 25 April 1986 at the Asilomar Conference Center, Pacific Grove, California, United States, and that the disposal of persistent plastics and fishing nets and their effects on living resources and marine transportation would be an important theme of the Symposium.

7.8 Considering that the matter requires concerted action by the competent international bodies concerned, the Meeting requested the Secretariat to bring to the attention of the IMO Marine Environment Protection Committee and of FAO and other competent international bodies the information currently made available to the Secretariat by Contracting Parties on harm to living resources and marine life caused by disposal at sea of persistent plastics and persistent synthetic materials (including fishing nets). The Secretariat was also requested to report any actions taken by those bodies to the Tenth Consultative Meeting.

7.9 The Meeting considered a draft resolution proposed by the United States concerning the environmental hazards caused by the disposal at sea of persistent plastics and other synthetic materials (including fishing nets). After detailed discussion and the inclusion of minor amendments to the draft, the Meeting adopted resolution LDC.22(9) as shown in Annex 6.

## 8 PROMOTION OF TECHNICAL ASSISTANCE

### Roster of Experts

8.1 The Consultative Meeting took note of the problems met by the Secretariat in keeping an updated Roster of Experts on Waste Disposal at Sea in accordance with the form agreed by the First Consultative Meeting (LDC I/16, paragraph 71), for the purpose of providing technical assistance under Article IX of the Convention (LDC 9/8, LDC 9/8/1).

8.2 The Meeting recalled that since the above decision was made in 1976 to establish such a roster, quite a number of meetings of expert groups on various aspects related to the implementation of the London Dumping Convention had been organized within the framework of the London Dumping Convention. It

was therefore felt that the Secretariat should now have available an informal list of experts with specialized expertise in the various fields concerned and that there was no longer a need to keep a Roster of Experts based on formal submissions to be made by the Contracting Parties.

8.3 In view of the above, the Meeting agreed that the Secretariat should make no more efforts regarding the review and update of a formal Roster of Experts, but that in cases where assistance was needed the Secretariat should draw upon those experts who actually contributed actively at meetings which had been organized with a view to the effective implementation of the provisions of the London Dumping Convention.

8.4 Attention was also drawn to the IMO Roster of Experts which includes a list of marine pollution experts. Contracting Parties wishing to do so may nominate experts on dumping for inclusion in the IMO Roster. Information on that Roster could be provided by the Secretariat upon request.

#### Symposium on specific waste issues

8.5 The Meeting, recalling that Task Team 2000 in its report (LDC 8/4) had recommended the calling of special scientific conferences or symposia to periodically review specific waste or waste treatment and disposal technologies, considered the various possibilities to implement such a recommendation. In this connection the Meeting noted these possibilities as outlined by the Secretariat (LDC 9/8).

8.6 The Meeting agreed that the International Ocean Disposal Symposia organized for many years by the United States (and supported by the International Maritime Organization) constituted a suitable mechanism for the periodic review of waste disposal options and agreed that such reviews were important and necessary to ensure progress of work carried out by the Scientific Group on Dumping.

8.7 In light of the above, the Meeting requested the Secretariat to promote the International Ocean Disposal Symposia, seeking co-operation and support for the continuation of such symposia from the appropriate international and national agencies and organizations.

8.8 The United States delegation, recalling the original purpose of the International Ocean Disposal Symposia, namely to periodically review the "state of knowledge concerning waste disposal at sea", appreciated and welcomed the interest of the Meeting in the Symposia, indicating that suggestions for the inclusion of additional topics could be considered, if necessary by making provision for special sessions on such matters. In this context the Meeting noted that a call for papers for the Sixth International Ocean Disposal Symposium (Pacific Grove, California, United States, 21-25 April 1986) has been distributed (see also paragraph 7.7 above).

8.9 The Meeting agreed that future inputs of the London Dumping Convention to the programme of future International Ocean Disposal Symposia could be best achieved by requesting its Scientific Group on Dumping to identify those topics which should be included as a matter of priority in such symposia and to explore, with the assistance of the Secretariat, methods by which the Scientific Group might have an input to the Symposia.

8.10 The Meeting noted the views of the Oslo Commission observer that global symposia on waste disposal issues, particularly on alternative disposal techniques, would be of great interest to that Commission. It was noted in this context that the Oslo Commission, subject to the availability of funding, would welcome the opportunity to consider the co-sponsorship of such events.

Proposed IMO/UNEP Regional Seminar on the Control of Waste Disposal at Sea, 1986

8.11 The Meeting welcomed information provided by the Secretariat (LDC 9/8) on preparations for the above Seminar, which it was envisaged would be open to participation by countries in East Asia and the West Pacific.

8.12 The observer of the People's Republic of China reiterated the willingness of her Government to provide host facilities for the Seminar, the location having been provisionally identified as Qingdao.

8.13 Believing that the Seminar would provide a valuable opportunity for developing countries to learn more about techniques, procedures and regulatory mechanisms for the control of waste, the Meeting expressed appreciation to

SIDA for the support it would be providing through IMO's Technical Assistance Programme, and to UNEP which would provide the necessary additional financial support for allowing of the Seminar to proceed.

Possible role of the World Maritime University in promoting greater awareness of the London Dumping Convention

8.14 The Chilean delegation reminded the Meeting that the World Maritime University had been established with the assistance of IMO in Malmö, Sweden, since July 1983 and requested that the possibility of utilizing the University as a means of promoting the London Dumping Convention should be kept in mind by Consultative Meetings.

9 RELATIONS WITH OTHER ORGANIZATIONS

United Nations

9.1 The United Nations representative presented the compliments of the Secretary-General of the United Nations to the Contracting Parties, emphasizing the importance of the London Dumping Convention in ensuring the effective application of the relevant provisions of the 1982 United Nations Convention on the Law of the Sea. That Convention has received the overwhelming support of the international community: 159 States and entities had signed the Convention by December 1984 and there have been 23 ratifications so far.

9.2 The United Nations representative then drew the attention of the Consultative Meeting to the UN Secretary-General's reports to the General Assembly on the Law of the Sea, informing Member States, inter alia, of important developments within the context of the London Dumping Convention, in view of their significance for the Law of the Sea. Thus, in last year's report (Doc. A/39/647) a brief account was given of actions taken at the Eighth Consultative Meeting, including those concerning the jurisdictional aspects of possible future disposal of high-level radioactive wastes and matter into the sea bed. In this year's report to the 40th session of the General Assembly, appropriate reference will be made to legislative and institutional developments in 1985 within the London Dumping Convention

context. This will be done, as previously, in consultation with the IMO and IAEA Secretariats.

Intergovernmental Oceanographic Commission (IOC)

9.3 The representative of the Intergovernmental Oceanographic Commission (IOC), referring to document LDC 9/INF.8 explained that the scientific work of IOC which might be of particular interest to Consultative Meetings is taking place within the programme for the Global Investigation of Pollution of the Marine Environment (GIPME). The associated monitoring programme is carried out through two Groups of Experts, namely that on Methods, Standards and Intercalibration (GEMSI), which is now co-sponsored by UNEP, and that on Effects of Pollutants (GEEP).

9.4 Outlining the main activities of GEMSI the IOC representative informed the Consultative Meeting that plans were being developed for a baseline study of levels of selected metals in parts of the Atlantic Ocean, to be carried out in 1986. Periodic studies of this kind will provide data for evaluation of the health of the ocean as far as contamination levels are concerned. Information on inputs of contaminants, in combination with data on contaminant levels in water, biota and sediments, will make assessments of mass balance and flux calculations possible.

9.5 The Group of Experts on the Effects of Pollutants (GEEP) will evaluate promising techniques for effects measurements through a practical workshop to be held in Oslo in September 1986. Based on its results, regional training workshops will be arranged where the recommended methods will be introduced and adopted to the regional needs. Associated with this scientific work, guidelines for determining sensitivity of specific areas to marine pollution are being developed.

9.6 One of the aims of the GIPME programme is to obtain the means of assessing the global effects of marine pollution, using a regional component approach. A closer interaction between the above-mentioned IOC programmes and the scientific work carried out within the framework of the London Dumping Convention would seem appropriate, as would the promotion of discussions



between the Secretariats with a view to identifying specific areas where close co-operation and interaction would be mutually beneficial, for instance in relation to monitoring.

9.7 The Consultative Meeting noted with satisfaction the existing plans to arrange an intersecretariat consultation between the IMO Secretariat and that of IOC with a view to exploring how to streamline and intensify their co-operation. Such discussions, could cover, inter alia, items such as pollution monitoring and its requirements, effects studies, development of internationally accepted methods for pollutant analysis and assessment of the health of the oceans and of vulnerability of coastal areas.

9.8 The Meeting agreed that in view of the many items of common interest and the desirability of avoiding duplication of work, the Chairman of the Scientific Group on Dumping should be invited to participate in the intersecretariat consultation.

#### United Nations Environment Programme

9.9 The representative of the United Nations Environment Programme (UNEP) conveyed to the Meeting the greetings and good wishes of the Executive Director of UNP. He expressed UNEP's great satisfaction with the longstanding and fruitful co-operation with IMO on matters related to the prevention and control of marine pollution, as reflected in the Secretariat documents LDC 9/9 and LDC 9/9/1.

9.10 UNEP is involved in a number of activities relevant to the London Dumping Convention; notably, UNEP convenes intergovernmental meetings under its Regional Seas Programme which, inter alia, regularly consider the provisions of the London Dumping Convention and the outcome of Consultative Meetings with a view to passing additional resolutions, as appropriate, thus strengthening the aim and purpose of the London Dumping Convention. Several joint UNEP/IMO training seminars and workshops have been organized worldwide to train national experts in the application of conventions for the prevention and control of marine pollution. In this context UNEP will also support the seminar on the control of waste disposal at sea to be held in China 1986 as proposed by the Consultative Meeting (see paragraphs 8.11-8.13 above).



Furthermore, in co-operation with IMO, specific regional protocols controlling pollution from dumping have been developed. Such protocols have been signed by the Mediterranean, West and Central Africa, Kuwait Action Plan, Caribbean and recently in the Eastern African Regions. A dumping protocol is also being negotiated in the South Pacific Region.

9.11 Some problems relevant to the London Dumping Convention are analyzed in UNEP publications, e.g. on storage and disposal of hazardous waste and on problems connected with radionuclides in the South Pacific. Further, document LDC 9/9 contains the UNEP draft guidelines and principles for the environmentally sound management of hazardous wastes.

9.12 The Meeting expressed its great appreciation to UNEP for its continued support for IMO activities relevant to the London Dumping Convention and commended the excellent co-operation through the IMO Secretariat.

9.12 With reference to the resolution on dumping and incineration of hazardous wastes and toxic substances in the Wider Caribbean Sea, adopted by the third Intergovernmental Meeting of the Action Plan for the Caribbean Environment Programme organized by UNEP (LDC 9/9/1), the Mexican delegation stated that this resolution reflects the concern of the Caribbean countries with regard to detrimental effects that might occur in cases of pollution caused by dumping and incineration at sea of hazardous wastes and toxic substances in that region, which was to a very large extent dependent upon tourism and marine life. The Meeting was also informed that Mexico in co-operation with the UNEP Regional Office for Latin America and the Caribbean is organizing a high-level expert meeting on dumping and incineration of wastes at sea to be held in 1986. That meeting will evaluate and discuss studies and research required to regulate dumping and incineration in the Caribbean and the Gulf of Mexico. The Mexican delegation requested Contracting Parties to abstain from dumping and incineration of wastes and other hazardous materials in these areas until the results from the above mentioned meeting become available.

GESAMP

9.14 Noting the various activities under GESAMP the Meeting felt that, in relation to the Working Group on the Review of Potentially Harmful Substances, the work on the impact of carcinogenic and mutagenic substances on marine organisms should, if possible, be accelerated so that an in-depth review could be tabled for review by GESAMP XVI in April 1986. Another important task of this Working Group in relation to the concerns of the London Dumping Convention is the evaluation of organosilicons.

9.15 The Secretariat stated that the Scientific Group on Dumping could be provided with the GESAMP working group report on organosilicons. It was further noted that another study on the impact of organosilicons on the marine environment performed under the Oslo Convention is being prepared by France acting as lead country and that this would also be transmitted to the Scientific Group.

9.16 The delegation of Canada also emphasized the importance of the work being carried out by GESAMP on the evaluation of the transport of contaminants from land to the ocean through river runoff. This work should ultimately facilitate improved comparisons between the input of contaminants through ocean dumping and inputs from other sources.

Oslo Commission

9.17 The observer from the Oslo Commission introduced the report of the Commission's activities in the past two years as summarized in document LDC 9/9/2. He referred in particular to the Commission's discussions on the implications of the UN Law of the Sea Convention for the Oslo Convention and the related problem of the disposal of redundant offshore platforms. The Oslo Commission has adopted guidelines for allocation of substances to the Annexes similar to those adopted by the Consultative Meeting and has decided to amend the Annexes to the Oslo Convention (which will have the effect of bringing them in some respects more into line with those of the London Dumping Convention). The Commission also has discussed the future of incineration at sea of organochlorine wastes as opposed to land-based methods of treatment or disposal. Further, the Commission has decided to review, in 1987, the

potential problems caused by the transfrontier movement of wastes destined for ultimate disposal at sea. Finally, the observer informed the Meeting about the Oslo Commission's decision concerning the requirements for chemical analyses for different categories of dumped wastes, of the decision to require prior notification of intended special permits and of the discussions concerning the installation of automatic recording devices on board dumping vessels.

International Council for the Exploration of the Sea (ICES)

9.18 The representative of the International Council for the Exploration of the Sea (ICES) pointed out that a considerable part of the work carried out in the various committees and working groups of ICES is relevant to the interests of the London Dumping Convention, and especially to those of the Scientific Group on Dumping. He outlined relevant activities of ICES mentioning mainly work on various aspects of baseline and monitoring studies, including intercalibration of methods, studies on biological effects techniques, and regional assessments of the state of the marine environment.

9.19 Furthermore, the ICES representative mentioned the intense work of ICES on different problems related to marine sediments in relation to pollution. This work includes, for example, elaboration of sampling techniques, intercalibration of methods, and also consideration of the bio-availability of contaminants in sediments.

9.20 The representative of ICES further noted the great parallelism in the work needed for the implementation of the London Dumping Convention and in that needed for the Oslo Convention, and stated that inasmuch as ICES is providing scientific advice in a regional context to the Oslo Commission, such results would also be applicable in the framework of the London Dumping Convention.

9.21 Finally, ICES expressed the hope that the interaction and flow of information between the Secretariats of ICES and IMO would continue to grow.

## 10 FUTURE WORK PROGRAMME AND DATE OF NEXT SESSION

Action Plan for the Consultative Meeting

10.1 The Meeting took note of the updated Action Plan for the Consultative Meeting prepared by the Secretariat (LDC 9/10) and requested the Secretariat to revise the Action Plan in the light of the progress made at the present Meeting. Contracting Parties were invited to submit comments on the updated Action Plan (LDC 9/10) to assist the Secretariat in the preparation of a revised version.

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

10.2 The Consultative Meeting, in the light of its Action Plan and the work accomplished during the current Meeting, agreed on substantive items to be included in the provisional agenda for the Tenth Consultative Meeting, and in the provisional agenda for the ninth meeting of the Scientific Group on Dumping, as shown at Annex 7.

Law of the Sea Convention

10.3 During consideration of the future work programme the observer from the United Nations drew particular attention to a suggestion made by the Secretariat (LDC 9/1/1, Annex 1) that a clarification of the relationship between the requirements of the London Dumping Convention and the Law of the Sea Convention (LOSC) was needed. Such an exercise would serve the important purpose of promoting uniform and consistent application of established principles and rules governing the prevention, reduction and control of marine pollution by dumping. The Meeting noted further that the UN Office for the Law of the Sea is currently working on annotations to the provisions of LOSC on a subject basis, beginning with dumping at sea and that the annotations will include the current legislature and institutional situation, at global and regional levels. This project will be completed by the end of 1985 and assistance would be given by the UN to the Consultative Meeting when considering this important item. In the light of the above information, the Meeting agreed to include this subject item in the Provisional Agenda for the Tenth Consultative Meeting (Annex 7).

Additional studies called for by resolution LDC.21(9)

10.4 The Consultative Meeting noted the suggestion made by the delegation of Spain that the terms of reference of the studies referred to in paragraphs 2 to 4 of resolution LDC.21(9) be clarified and that a mechanism for carrying out these studies should be established at the Tenth Consultative Meeting. The Meeting further noted the suggestion of that delegation that Contracting Parties give consideration to this question during the intersessional period and to communicate any proposals pertaining thereto to the Secretariat for circulation to all Contracting Parties.

10.5 The United Kingdom delegation expressed its view that some of the studies referred to in resolution LDC.21(9) were extremely difficult to interpret, particularly paragraph 4, which was logically flawed and that no purpose could therefore be served in attempting to clarify the terms of reference of such a study. This view was supported by several other delegations.

10.6 Referring to the possible financial implications of implementing such studies, the delegations of the United States and France stressed that the resources required for such studies would also have to be clearly defined.

10.7 The Spanish delegation reiterated its view that the studies were both feasible and important to the future consideration of this matter by the Consultative Meeting.

10.8 Additional comments from the floor led the Chairman to restate that, as already emphasized at the Seventh Consultative Meeting, resolutions adopted by the Meeting were not legally binding, but that nevertheless all Contracting Parties have an obligation to further the objectives of the Convention in any manner they can.

10.9 The Meeting deferred consideration of the terms of reference of the studies and the mechanism for their conduct to the Tenth Consultative Meeting. Contracting Parties were invited to submit any suggestions they may have to the Secretariat during the intersessional period as to how they believed the matter could be progressed. The Secretariat would prepare a summary of the various suggestions for consideration at the Tenth Consultative Meeting.

Dates of next meetings

10.10 The Consultative Meeting agreed to hold its Tenth Meeting from 13 to 17 October 1986 and the ninth meeting of the Scientific Group on Dumping from 28 April to 2 May 1986.

Meetings of subsidiary bodies

10.11 The Meeting noted that the intersessional ad hoc Working Group on Dredged Materials which would be held jointly with the Oslo Commission as referred to in paragraph 3.16 above would be convened at IMO Headquarters from 28 to 30 October 1985. The meeting of the ad hoc Working Group on Incineration at Sea could be arranged in October 1986, if possible jointly with the Oslo Commission, after the preparation of the necessary terms of reference for that working group by the Scientific Group on Dumping.

10.12 The Meeting also recalled that it had agreed to convene a group of experts on the Problems related to the import/export of wastes during its Tenth Consultative Meeting (see paragraph 6.8 above).

Budgetary provisions for the biennium 1986/1987

10.13 The Meeting welcomed the information that the IMO Council has made budgetary provisions for two meeting weeks during the biennium 1986/1987. This will enable the Consultative Meeting to meet at intervals of twelve months during that biennium.

10.14 The Meeting very much appreciated the efforts made by the Secretary-General in having provided during the intersessional period all the support necessary for carrying out the Secretariat duties with regard to the London Dumping Convention. Realizing the increasing workload of IMO staff responsible for such duties, the Meeting expressed its wish that the Secretary-General would continue to support those activities to be carried out within the framework of the London Dumping Convention. In that context the Meeting requested the Secretary-General to assure that the necessary provisions be included in the budget for the Marine Environment Protection Fund. This would include the advisory services provided by GESAMP on many issues related to waste disposal at sea.



11 OTHER BUSINESS

Change of IMO officers responsible for the London Dumping Convention

11.1 The Consultative Meeting noted that Mr. Y. Sasamura had recently taken up the post of Director of the Maritime Safety Division of IMO and that Mr. A. Morozov had subsequently been appointed as Director of the Marine Environment Division of the Organization. In drawing the Consultative Meeting's attention to Mr. Sasamura's new appointment, the Chairman recalled that Mr. Sasamura had been very actively involved in the work of the London Dumping Convention. In expressing appreciation for Mr. Sasamura's valuable contribution to previous Consultative Meetings, the Chairman, on behalf of the Meeting, wished Mr. Sasamura every success in his new post.

Guidelines for the construction and equipment of ships carrying hazardous liquid wastes in bulk for the purpose of dumping at sea

11.2 The Meeting was informed that upon the request of the Fourth Consultative Meeting (LDC IV/12, paragraph 3.33), the IMO Sub-Committee on Bulk Chemicals (BCH) developed Guidelines for the Construction and Equipment of Ships Carrying Hazardous Liquid Wastes in Bulk for the Purpose of Dumping at Sea and that these are being submitted to the fourteenth IMO Assembly in November 1985 with a view to adoption.

Administrations responsible for the control of dumping at sea

11.3 As agreed at the Eighth Consultative Meeting, the Secretariat had made efforts to collect the addresses of national administrations responsible for the control of dumping and incineration at sea in order to enable the Secretariat to make direct contact with these administrations. These names and addresses of national administrations received so far by the Secretariat were compiled in LDC 9/11/1. The Meeting noted that there are still a considerable number of Contracting Parties which have not yet notified the Secretariat of their "point of contact" and urged them to do so as soon as possible. A form for notifying the Secretariat is set out at Annex 2 of LDC 9/11/1.

Interpretation of Article V(1) of the Convention

11.4 The Consultative Meeting was informed that the Secretariat needs authoritative advice and clarification concerning the interpretation of Article V(1) of the Convention referring to cases of "force majeure" where dumping at sea is necessary to secure human life or the safety of vessels (LDC 9/11/2). Such advice had been sought in regard to many cases where, due to bad weather, cargo had to be jettisoned overboard in order to save the lives of the crew and the vessel.

11.5 The Meeting agreed that the questions raised by the Secretariat (LDC 9/11/2) would have to be resolved as soon as possible and in recognizing that "force majeure" provisions concerning the disposal into the sea of ships' cargo were also covered by MARPOL 73/78, the Meeting agreed that advice should be sought on this matter from the Marine Environment Protection Committee of IMO. The Meeting agreed that during the intersessional period Contracting Parties should study LDC 9/11/2 with a view to providing comments to the Secretariat. These would be discussed in detail at the Tenth Consultative Meeting.

Dissemination of intersessional information

11.6 The Swedish delegation expressed a concern over the ever increasing intersessional work taking place under the auspices of the London Dumping Convention or relating to its work. In the view of Sweden it would be of extreme benefit to all Contracting Parties if a quarterly review in the form of an "LDC Newsletter" could be distributed covering activities carried out within the framework of the London Dumping Convention as well as within other international global and regional agreements on the control and prevention of marine pollution. The Meeting welcomed this suggestion and requested the Secretariat to investigate the possibility of preparing and distributing such information in the form of a quarterly IMO LDC Newsletter to all countries.

Comprehensive document on the London Dumping Convention

11.7 The Secretariat in introducing document LDC 9/INF.2, explained that this document was a revision of document LDC 7/INF.3, which had originally been

prepared at the request of the Fifth Consultative Meeting. The updated document contained all the provisions of the London Dumping Convention and a complete listing of the decisions made by Consultative Meetings to the year 1984.

11.8 The Chairman complimented the Secretariat on the preparation of this document and invited the views of the Meeting, particularly with regard to the possible publication of that document.

11.8 The Meeting expressed the opinion that the document was a valuable contribution and would be widely used by national administrations, other international agencies and research institutions. The Meeting firmly endorsed the suggestion that the document should be published and that the Secretariat should investigate the possibility of producing the document in a format suitable for regular updating. The Secretariat advised the Meeting that this would probably involve an initial printing of 1,500 to 2,000 copies in English and that it would be most economical to issue two supplements before preparing a revised version.

11.9 The Meeting nevertheless felt that for publication a loose-leaf binder form was appropriate and that the document would have to be updated after each Consultative Meeting. It was also pointed out that efforts should be made to prepare the publication in all the official languages of the Consultative Meeting (English, French, Spanish and Russian).

11.10 The Meeting agreed that the Secretariat should seek editorial assistance from Contracting Parties and invite the present and past Chairmen of the Consultative Meeting to write a suitable preface. The document should also be given a title in keeping with the ten year history of the Convention.

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ANNEX 1

## AGENDA FOR THE NINTH CONSULTATIVE MEETING

1 Adoption of the Agenda

LDC 9/1	-	Secretariat
LDC 9/1/1	-	Secretariat

2 Status of the London Dumping Convention

LDC 9/2	-	Secretariat
LDC 9/2/1	-	Secretariat

3 Report of the Scientific Group on Dumping

LDC 9/3	-	Report of the Scientific Group on Dumping (LDC/SG.8/12)
LDC 9/3/1	-	PIANC
LDC 9/3/2	-	United States
LDC 9/3/3	-	Secretariat
LDC 9/INF.5	-	Finland
LDC 9/INF.7	-	United States
LDC 9/INF.11	-	IAPH (informal note on dredged material)
LDC 9/WP.2	-	United States
LDC 9/WP.3	-	Scientific Group on Dumping

4 Report of intersessional activities relating to the disposal of radioactive wastes at sea, including the final report of the scientific review

LDC 9/4	-	Report of the Expanded Panel Meeting
LDC 9/4/Corr.1 (English only)	-	Report of the Expanded Panel Meeting
LDC 9/4/Corr.2 (Spanish only)	-	Report of the Expanded Panel Meeting
LDC 9/4/1	-	Secretariat
LDC 9/4/2	-	Secretariat
LDC 9/4/3	-	Nauru
LDC 9/4/4	-	Spain
LDC 9/4/5	-	Nauru
LDC 9/4/6	-	Secretariat
LDC 9/4/7	-	Friends of the Earth International
LDC 9/INF.6	-	OECD/NEA
LDC 9/INF.9	-	Greenpeace International
LDC 9/INF.12	-	Denmark
LDC 9/INF.13	-	IAEA
LDC 9/INF.14	-	IAEA
LDC 9/INF.15	-	Greenpeace International
LDC 9/INF.16	-	Portugal
LDC 9/INF.17	-	South Africa
LDC 9/INF.18	-	Ireland
LDC 9/INF.19	-	Saint Lucia
LDC 9/INF.20	-	Nauru

LDC 9/INF.21	-	Nauru
LDC 9/INF.22	-	Statements in explanation of vote
LDC 9/WP.1	-	Kiribati
LDC 9/WP.4	-	United States
LDC 9/WP.5	-	Spain, Australia, Brazil, Chile, Cuba, Denmark, Dominican Republic, Finland, Haiti, Iceland, Mexico, New Zealand, Norway, Panama, Saint Lucia and Sweden

5 Disposal into the sea-bed of high-level radioactive wastes and matter

LDC 9/5	-	Secretariat
LDC 9/INF.3	-	Secretariat (OECD/NEA)

6 Problems related to the import/export of wastes for disposal at sea

LDC 9/6	-	Secretariat
LDC 9/6/1	-	Secretariat
LDC 9/6/1/Add.1	-	Secretariat (OECD)
LDC 9/6/2	-	Federal Republic of Germany
LDC 9/6/3	-	Secretariat (EEC)

7 Environmental hazards caused by the loss or disposal at sea of fishing nets and other marine debris

LDC 9/7	-	Secretariat
LDC 9/7/1	-	Greenpeace International
LDC 9/7/2	-	Friends of the Earth International
LDC 9/INF.4	-	Secretariat
LDC 9/INF.10	-	United States
LDC 9/WP.2	-	United States

8 Promotion of Technical Assistance

LDC 9/8	-	Secretariat
LDC 9/8/1	-	Secretariat

9 Relations with other organizations

LDC 9/9	-	Secretariat (UNEP)
LDC 9/9/1	-	Secretariat (UNEP)
LDC 9/9/2	-	Oslo Commission Secretariat
LDC 9/9/3	-	Secretariat (IOC)
LDC 9/9/4	-	Secretariat (GESAMP)
LDC 9/INF.8	-	IOC

10 Future work programme and date of next session

LDC 9/10	-	Secretariat
LDC 9/10/1	-	Secretariat



11 Any other business

LDC 9/11	-	Secretariat
LDC 9/11/1	-	Secretariat
LDC 9/11/2	-	Secretariat
LDC 9/INF.2	-	Secretariat

12 Consideration and adoption of the report

LDC 9/WP.6	-	Secretariat
LDC 9/WP.6/Add.1	-	Secretariat
LDC 9/WP.6/Add.2	-	Secretariat
LDC 9/12	-	Report

LDC 9/INF.1	-	List of participants
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ANNEX 2

RESOLUTION LDC 19(9)

CRITERIA FOR THE ALLOCATION OF SUBSTANCES TO THE ANNEXES

THE NINTH CONSULTATIVE MEETING,

RECALLING Article XIV(4)(b) of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter which emphasizes the importance of scientific and technical advice for Consultative Meetings when considering the review of the Annexes to the Convention,

RECALLING FURTHER that the Guidelines for Classification of Substances to Annexes I and II to the Convention adopted by the Fourth Consultative Meeting of Contracting Parties to the Convention call for a continuing review of the Guidelines for the purpose of ensuring their revision as and when appropriate,

RECOGNIZING the role of the Scientific Group on Dumping as the scientific body responsible for keeping under review the provisions of the Annexes to the Convention,

RECOGNIZING FURTHER the problems encountered so far by the Scientific Group on Dumping when considering proposals for the amendment of the lists of substances contained in the Annexes,

NOTING the proposals made by the Scientific Group on Dumping regarding the review of the General Guidelines for Classification of Substances to Annexes I and II to the Convention,

1. ADOPTS a new set of Guidelines containing criteria for assigning substances to Annexes I and II to the Convention as shown in the Annex to this resolution;
2. REQUESTS its Scientific Group on Dumping to consider any proposals from Contracting Parties for additions or amendments to the Annexes in light of the new guidelines.

## ANNEX

### GUIDELINES FOR ALLOCATION OF SUBSTANCES TO THE ANNEXES TO THE LONDON DUMPING CONVENTION

These guidelines are intended to allow the Scientific Group on Dumping to take into account the best available scientific and technical information, recognizing that an element of further interpretation and judgement will enter the final deliberations and decisions of the Consultative Meeting. These guidelines are not intended for use as rigid rules but should nevertheless be used as the basis for the considerations of the Scientific Group and be experimented with and adapted as necessary.

#### 1 Criteria of relevance to risk evaluation

1.1 In the evaluation of the risks arising from the disposal of any substance, the criteria listed in paragraph 2.2 below are relevant in considering the allocation of substances to the Annexes. It should also be noted that matters related to radioactivity do not fall within the terms of reference of the Scientific Group on Dumping and were referred by agreement to other fora, bodies or organizations (e.g. the IAEA). They are not considered further in these Guidelines.

#### 2 Classification of substances

2.1 The Annexes classify defined substances or groups of substances rather than wastes. In evaluating the risks from sea dumping of substances for the purpose of classification to or between the Annexes the following steps are required:

- .1 evaluation of hazard potential;
- .2 evaluation of environmental exposure; and
- .3 conclusions on potential scale of effects and decision on classification.

2.2 In evaluating hazard potential the following factors must be taken into account:

.1 Persistence/degradability:

persistence is a property of a substance which reflects the degree to which it will remain in a particular state or form. In this regard elements are of course persistent but will occur in the environment in many different forms and in compounds of differing persistence and biological properties. For elements, therefore, information is needed only on the formation and transformation of bio-available and toxic forms. The term "degradable" applies only to organic compounds and refers to the breakdown of a substance by physical, chemical or biological means. While it is possible in a laboratory to assess the intrinsic degradability of a substance by means of standardized tests, it is necessary for the purposes of the Convention to carry out additional tests which more adequately reflect the physical and chemical conditions likely to pertain in the sea. In particular, the concentration of test substances, and conditions related to organic materials and bacterial inoculum require special attention. Tests should be carried out with respect to all relevant environmental compartments;

.2 Bioaccumulation potential:

Bioaccumulation potential is generally determined by a comparison between uptake and elimination of a substance by an organism under controlled test conditions or through field observations. Bioaccumulation potential can provide a useful estimate of whether or not body burdens might reach levels that may present a hazard, either to the organism itself or to its predators. Bioaccumulation per se is however not necessarily harmful to the organism and is, for example, necessary in the uptake of essential elements by organisms;

.3 Toxicity to marine life:

toxicity testing is the measurement of deleterious biological effects of a substance under acute or under chronic exposure conditions (the latter resulting from either a continuous input of a non-persistent substance or a single input of a persistent substance). As a minimum, to assess the potential hazard of a substance to marine life, data on lethal toxicity under chronic (or at least long term) exposure conditions are needed. Preferably data on sub-lethal effects (including effects on reproduction) should also be considered, especially if chronic exposure may occur. A second minimum requirement is that these data should refer to representative organisms from at least three trophic levels (e.g. algae, crustacea and fish). Harmful effects to marine life may result from chemical and physical factors other than toxicity, and should also be considered, e.g. effects on photosynthesis, exchange of nutrients, gas, etc.;

.4 Toxicity to man, domestic animals, marine mammals and birds preying on marine organisms:

where persistent and bioaccumulative substances are concerned, information on toxicity to man, domestic animals or marine mammals is of relevance where a significant pathway through the marine environment exists. "Significance" in this respect may be related to a contribution to the acceptable daily intake (ADI) as recommended by WHO/FAO and other international organizations and agencies;

.5 Carcinogenicity and mutagenicity:

the state-of-the-art does not yet permit testing of carcinogenicity or mutagenicity to marine organisms; there is no hard evidence that these factors play a significant role in the marine environment.

These factors are therefore for the moment considered to be relevant primarily in terms of possible marine pathways for the transfer to man of substances demonstrating mammalian carcinogenicity or mutagenicity;

.6 Ability to interfere with other legitimate uses of the sea:

substances may exert such effects not only through physical interference with legitimate uses of the sea but also may have aesthetic effects. This interference includes the tainting of fish and shellfish.

2.3 The factors described under points .2 to .4 above (bioaccumulation potential and toxicity to marine life, marine mammals, domestic animals and man) apply to the original compound as well as to the persistent metabolites or other products of organic substances and to the different forms in which elements are present. Where tests are used to evaluate bioaccumulation, bioavailability and toxicity to marine life (points .2 and .3 above), these tests must have been undertaken using realistic concentrations, and test conditions must have adequately reflected the physical and chemical condition pertaining in the sea, especially in so far as these affect bio-availability. The chemical state and physical form of substances have an important effect on their bioavailability, toxicity, persistence and bioaccumulation potential.

2.4 Whether or not a substance is of non-natural origin is not in itself a criterion for designation to the Annexes. However, in combination with a very low degree of (bio) degradability, extra caution may be required. This extra caution is warranted in light of the fact that substances which do not naturally occur by definition cannot be dispersed or diluted to natural background levels in the environment. Such alien substances might impose unexpected stress on marine biota and should therefore be subjected to adequate testing.

2.5 By "evaluation of environmental exposure" as referred to in paragraph 2.1.2 above, is meant the measurement or estimation of actual or

potential distribution and concentration (including trends in these factors) of a substance in all relevant ecological and geographical compartments and the estimation of actual or potential contribution of dumping to local, regional or global flux. There has been a degree of confusion in earlier discussions on the relative significance of concentration, quantity or flux (that is the rate of throughput of a substance, defined as mass per unit area per unit time). For the purposes of these Guidelines the contribution by dumping to local, regional or global flux is a relevant criterion. Measurement of concentration is required for estimating exposure, which together with a knowledge of the relationship between effects and concentration, enable a hazard assessment to be made;

2.6 On the basis of these considerations, the potential scale of effects of dumping of a substance can be determined and decisions can be taken as to whether such substances should be included in the Annexes and to which Annex they should be designated. The criteria for making these distinctions are addressed in the following paragraphs. In taking these decisions, several elements should be borne in mind in determining the appropriate safety margin to be applied. Firstly, there is a time lag between the introduction of controls and the effects of these controls becoming evident in the environment. Secondly, there are limitations to current ability to fully predict the consequences of any disposal to the sea. Thirdly, as noted in paragraph 2.4 above, the synthetic origin of a substance may indicate the need for a more cautious approach.

### 3 Allocation to Annexes I and II

3.1 Substances should be allocated to the Annexes if:

- .1 they are, or are proposed to be, dumped; and if
- .2 significant environmental exposure may result; and if
- .3 they possess any combination of the properties listed in paragraph 2.2 above in significant degree.



3.2 Annex I substances will be those for which dumping will or may result in, or contribute significantly to environmental exposure on a wide scale, extending far beyond the original location and time of disposal. They will also result in significant adverse environmental effects. Such substances will have in common a high degree of persistence coupled with:

- .1 the ability to accumulate to levels significant in terms of toxicity to marine organisms and their predators, to domestic animals or to man; or
- .2 the ability to accumulate through marine pathways to levels significant in terms of carcinogenicity or mutagenicity to domestic animals or to man; or
- .3 the ability to cause a high degree of interference with fisheries, amenities or other legitimate uses of the sea.

3.3 Annex II substances will be all those considered suitable for inclusion in the Annexes except for those allocated to Annex I.

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ANNEX 3

RESOLUTION LDC.20(9)

INTERIM PROVISIONS FOR THE SURVEILLANCE OF CLEANING OPERATIONS  
CARRIED OUT AT SEA ON BOARD INCINERATION VESSELS

THE NINTH CONSULTATIVE MEETING,

RECALLING Article I of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, which provides that Contracting Parties shall individually and collectively promote the effective control of all sources of pollution in the marine environment,

RECALLING FURTHER that Regulations for the Control of Incineration of Wastes and Other Matter had been adopted at its Third Meeting as set forth in an Addendum to Annex I to the Convention and that this constitutes an integral part of that Annex,

RECOGNIZING that in issuing permits for incineration at sea Contracting Parties shall take account of Technical Guidelines on the Control of Incineration of Wastes and Other Matter at Sea,

BEING AWARE that cleaning operations of incineration systems and of tanks of incineration vessels may have to take place at sea,

RECOGNIZING that the Technical Guidelines on the Control of Incineration of Wastes and Other Matter at Sea provide that:

- (a) tank washings and pump room bilges contaminated with wastes should be incinerated at sea in accordance with the Regulations for the Control of Incineration of Wastes and Other Matter at Sea and with the Technical Guidelines, or discharged to port facilities; and that
- (b) residues remaining in the incinerator should not be dumped at sea except in accordance with the provisions of the Convention,

RECOGNIZING FURTHER that the Marine Environment Protection Committee of the International Maritime Organization is currently preparing requirements for the effective implementation of MARPOL 73/78, Annex II, and that there should be consistency on surveillance procedures developed under the London Dumping Convention and MARPOL 73/78,

CONSIDERING however that immediate action concerning the control of cleaning operations at sea is needed and that this can best be achieved by the presence of an inspector on board the incineration vessel during the whole operation of cleaning and disposal of residues,

NOTING that, in accordance with Article VII, paragraph 1(a) of the London Dumping Convention, each Contracting Party shall apply the measures required to implement the Convention to all vessels registered in its territory or flying its flag,

1. ADOPTS on a preliminary basis the interim provisions on the surveillance of cleaning operations carried out at sea on board incineration vessels as described in the Annex to the present resolution,
2. RESOLVES that Contracting Parties to the Convention should take full account of the interim provisions on the surveillance of cleaning operations carried out at sea on board incineration vessels,
3. REQUESTS the Secretariat to inform the Marine Environment Protection Committee of the International Maritime Organization of this resolution and to invite it to provide any advice it may have on this matter to the Contracting Parties to the London Dumping Convention,
4. AGREES to reconsider the interim provisions on the surveillance of cleaning operations carried out at sea on board incineration vessels in light of the advice given to it by the Marine Environment Protection Committee with a view to adopting formal requirements.

ANNEX

INTERIM PROVISIONS FOR THE SURVEILLANCE OF CLEANING OPERATIONS  
CARRIED OUT AT SEA ON BOARD INCINERATION VESSELS

1 A Contracting Party to the London Dumping Convention should, when issuing a Form of Approval in accordance with Regulation 3 of the Regulations for the Control of Incineration of Wastes and Other Matter at Sea (Addendum to Annex I to the Convention), ensure that the Form of Approval contains conditions for cases of cleaning operations carried out at sea (including the disposal of residues) such that:

- if residues are to be disposed of at sea a permit for such disposal is issued by the appropriate national authority of a Contracting Party;
- an inspector designated by the flag State of the incineration vessel is present on board during the whole operation of cleaning and disposal;
- in the case that the flag State is not a Contracting Party to the Convention, the supervision is carried out by the Contracting Party from whose port an incineration vessel departs in order to carry out a cleaning operation at sea;
- the shipowner co-operates with the competent authorities in order to safeguard adequate surveillance of cleaning operations;
- the shipowner pays the costs of such surveillance.

2 If a Contracting Party to the London Dumping Convention which pursuant to these interim provisions should supervise a cleaning operation at sea, needs assistance in meeting this interim provision, the Contracting Party which carried out the last survey for the issue of a Form of Approval should, at the request of the former, endeavour to co-operate with it in this regard.

3 The Contracting Party responsible in accordance with these interim provisions for the supervision of the cleaning operation at sea should determine the site of the operation in accordance with the "Regulations for the Control of Incineration of Wastes and Other Matter at Sea".

4 The Contracting Party responsible for the supervision of the cleaning operation should prepare a report on the operation and forward it to the Secretariat which will circulate it to the Contracting Parties to the London Dumping Convention.

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ANNEX 4

RESOLUTION LDC.21(9)

DUMPING OF RADIOACTIVE WASTES AT SEA

THE NINTH CONSULTATIVE MEETING,

RECOGNIZING that the marine environment and the living resources of the sea are of vital importance to all nations and that the objective of the London Dumping Convention is to prevent the pollution of the seas by dumping,

CONSIDERING that the Convention should continue to provide an effective global forum for the Contracting Parties in which to pool the advances of science and technology in their effort to combat marine pollution,

TAKING NOTE of the increasing concern of a growing body of public opinion, and in particular among the populations living near present or potential dumping sites, with regard to the dumping of radioactive wastes at sea,

RECOGNIZING that dumping of radioactive wastes at sea may adversely affect the environment of other nations and of regions located beyond the limits of national jurisdiction in contravention with Principle 21 of the UN Declaration on the Human Environment adopted in Stockholm in June 1972,

RECOGNIZING that, under Article 1 of the Convention, Contracting Parties have pledged themselves specially to take all practicable steps to prevent the pollution of the seas by the dumping of wastes 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,

RECALLING that the Seventh Consultative Meeting in February 1983 adopted resolution LDC.14(7) which called for the suspension of all dumping at sea of radioactive materials pending the presentation to the Contracting Parties of the final report of an expert meeting on radioactive matters related to the London Dumping Convention,



RECOGNIZING that the practice of dumping radioactive wastes at sea has been limited to a few States which have halted such dumping since the adoption of resolution LDC.14(7) of February 1983,

NOTING the findings of the Expert Panel on the Disposal at Sea of Radioactive Wastes contained in document LDC 9/4, Annex 2, and expressing its appreciation to the experts involved in the preparation of this report,

NOTING that the Expanded Panel of Experts recognizes deficiencies in scientific information that need to be resolved for a rigorous and precise assessment of the consequences of sea dumping of radioactive wastes,

ACCEPTING that, as noted by the Expert Panel, in the comparison between options, social, economic, scientific and technological factors are difficult to quantify on a common basis, especially where the social factors have international dimensions; and that, as also noted by the Expert Panel, in the final analysis social and related factors may outweigh those of a purely scientific and technical nature.

NOTING also the absence of comparison between land-based and sea dumping options,

1. AGREES to a suspension of all dumping at sea of radioactive wastes and other radioactive matter to permit time for the further consideration of issues which would provide a broader basis for an informed judgement on proposals for the amendment of the Annexes of the Convention. This suspension will continue pending the completion of the studies and assessments referred to in paragraphs 2 to 5 hereunder;
2. REQUESTS that additional studies and assessments of the wider political, legal, economic and social aspects of radioactive waste dumping at sea be undertaken by a panel of experts to complement the existing Expanded Panel Report;
3. REQUESTS that further assessments examine the issue of comparative land-based options and the costs and risks associated with these options;

4. REQUESTS that studies and assessments examine the question of whether it can be proven that any dumping of radioactive wastes and other radioactive matter at sea will not harm human life and/or cause significant damage to the marine environment;
5. REQUESTS the IAEA to advise Contracting Parties with respect to certain outstanding scientific and technical issues relating to the sea dumping of radioactive wastes; specifically:
  - (a) To determine whether additional risks to those considered in the revised IAEA Definition and Recommendations justify re-examination of the definition of radioactive wastes and other radioactive matter unsuitable for dumping at sea for certain individual radionuclides;
  - (b) To establish source (dose) upper bounds appropriate to the practice of radioactive waste dumping under the Convention;
  - (c) To define quantitatively the exempt levels of radionuclides for the purposes of the Convention,
6. REQUESTS the Organization to approach appropriate international agencies to establish and maintain an inventory of radioactive wastes from all sources entering the marine environment;
7. CALLS UPON Contracting Parties to develop, as envisaged in Article X, procedures for the assessment of liability in accordance with the principles of international law regarding State responsibility for damage to the environment of other States or to any other area of the environment resulting from dumping.

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ANNEX 5FULL STATEMENTS IN RELATION TO THE VOTE ON  
THE DISPOSAL AT SEA OF RADIOACTIVE WASTESStatement by Argentina

The Argentine delegation can support points in the Spanish resolution WP.5, and acknowledges that it represents the results of considerable effort on the part of a significant number of delegations in working toward a consensus. However, it cannot agree with the rationale of some of the conditioning clauses as, for example, point 4.

Argentina can also support the essence of the operative provisions as set out in WP.4, as submitted by the United States delegation. But, it was disappointed that it did not provide for a limited extension of the status quo while required action is being undertaken.

At the same time, Argentina is sympathetic to some delegations who have expressed their concerns about the resumption of dumping before adequate mechanisms are set up to implement requirements included in the recently adopted revised Definition and Recommendations of the IAEA and a system of consultation between Parties has been agreed.

This delegation believed - and still believes - in supporting all efforts to attain reasonable consensus in order to preserve the integrity of the Convention. To this end, my delegation had prepared a draft resolution which, in its view, could be the basis to bridge the gap between the two draft resolutions tabled. Its text is the following:

## THE NINTH CONSULTATIVE MEETING,

RECOGNIZING that the marine environment and the living resources of the sea are of vital importance to all nations and that the objective of the London Dumping Convention is to prevent the pollution of the seas by dumping,

CONSIDERING that the Convention should continue to provide an effective global forum for the Contracting Parties in which to pool the advances of science and technology in their effort to combat marine pollution,

TAKING NOTE of the concern of a growing body of public opinion, and in particular among the populations living near present or potential dumping sites, with regard to the dumping of radioactive wastes at sea,

RECALLING that the Seventh Consultative Meeting in February 1983 adopted resolution LDC.14(7) which called for the suspension of all dumping at sea of radioactive materials pending the presentation to the Contracting Parties of the final report of an expert meeting on radioactive matters related to the London Dumping Convention,

NOTING the findings of the Expert Panel on the Disposal at Sea of Radioactive Wastes contained in document LDC 9/4, Annex 2, and expressing its appreciation to the experts involved in the preparation of this report,

NOTING that the Panel of Experts identified areas in which further scientific information is needed to improve assessments of the consequences of sea dumping of radioactive wastes,

RECOGNIZING that criteria and mechanisms need to be implemented to apply the new IAEA Definition and Recommendations,

REQUESTS the Contracting Parties to refrain [voluntarily] from dumping radioactive wastes into the sea for a period of [ ] years,

INVITES the IAEA during that period:

- (a) To establish source (dose) upper bounds appropriate for the practice of radioactive waste dumping under the Convention.
- (b) To establish exemption rules for radionuclides for the purposes of the Convention.

- (c) To prepare and present to the Contracting Parties a proposal for the establishment of mechanisms for notification, consultation, registration and surveillance, as well as criteria for implementing the requirements set forth in the revised IAEA Definition and Recommendations, including optimization and comparison with land-based alternatives, in accordance with the guidelines contained in IAEA Safety Series 65 and other relevant IAEA documents.

FURTHER INVITES the IAEA to:

- (d) To examine the feasibility of segregating radioactive wastes according to factors affecting not only individual risk but also collective detriment, so that the most appropriate regulations can be applied, including evaluation of whether certain radioactive wastes should be treated differently for purposes of ocean disposal.
- (e) To provide, on a regular basis, to the Contracting Parties the results of the IAEA continual studies on the behaviour, fate and effects of radionuclides in the marine environment, with the purpose of assisting periodic re-examinations of the assessment of the consequences of radioactive waste dumping at sea.

Unfortunately, the timing of the vote did not allow this resolution to be formally introduced.

The Argentine delegation noted with satisfaction the fact that no further dumping at sea of radioactive wastes is envisaged in the near future and calls on all Contracting Parties to maintain an open channel of communication which could bring the present divergence of points of view to an end.

Statement by Canada

Mr. Chairman,

This delegation voted against resolution LDC.21(9) for both process-related and substantive reasons.

Canada cannot, on the basis of current information, endorse a resumption of radioactive waste dumping at sea and consequently came to this meeting seeking renewal of the 1983 moratorium. Throughout intensive negotiations outside of the plenary, the Canadian delegation worked long and hard towards reaching a consensus agreement on a resolution to that end. We believe substantial progress had been made in these negotiations and were thus deeply disappointed that delegations, not convinced as we were of the necessity of a renewed moratorium, did not give a concrete indication of their willingness to work towards a compromise earlier in the meeting. We were similarly disappointed, however, when other delegations refused to allow time for further negotiations and in our view prematurely brought resolution LDC.21(9) to a vote.

As to the substance of that resolution, Mr. Chairman, we explained yesterday the elements that remained unacceptable to us and proposed amendments to remove them, in order that the Consultative Meeting of Contracting Parties be able to make an informed decision on proposals to prohibit radioactive waste dumping at sea within a reasonable time frame. When these amendments failed to gain general acceptance, we voted in favour of the amendment proposed by the distinguished representative of the Federal Republic of Germany, thus indicating our willingness to accept the full text of resolution LDC.21(9) providing the moratorium was not an open-ended one. When this too failed to gain general acceptance, although fully supporting the principle of a renewed moratorium, we were reluctantly compelled to vote against resolution LDC.21(9), since as phrased it will indefinitely prevent a decision from being made on the prohibition of radioactive waste at sea.



Statement by Japan

The Japanese delegation abstained from the voting the draft resolution proposed by Spain and other countries.

My delegation wishes to explain the reasons for its position.

Firstly, my delegation regrets very much that the resolution was forced to be put to the vote against the statements of many delegations, including the Japanese, which asked for further efforts to bridge the gap between the two resolutions, and when there was enough time to do so.

This meeting is called the "Consultative Meeting of Contracting Parties", designed to consult in order to work out a consensus on any relevant issue. Disregarding the importance of consensus, and putting the issue to so hasty voting would inevitably change the character of this Organization.

My delegation is wondering how far such a resolution adopted so hastily could commend the support of Contracting Parties. It is feared that such practice should not only undermine the credibility of this body but would discourage the potential signatories to this Convention, when we need much wider participation so as to fulfill effectively the expected function of this Convention.

Secondly, as we are fully aware, it is provided in Article XV of the Convention that amendments to the Annexes should be based on scientific or technical considerations. However, this hastily adopted resolution requires the completion of the studies and assessments of the wider political, legal, economic and social aspects of dumping as a condition of lifting the moratorium. Such broad nature of the required studies goes beyond the purpose of this Convention. This could lead to indefinite suspension of dumping of low-level radioactive wastes at sea, then, this would be close to de facto amendment to the Annexes without scientific or technical grounds.

Mr. Chairman, there is no change in the policy of the Japanese Government not to carry out dumping of low-level radioactive wastes at sea in disregard of the concern of the communities in the region. However, this delegation cannot give its support to the resolution for the reasons explained.

The Japanese delegation sincerely hopes that efforts should soon be resumed to bridge the gap between the two positions through such efforts as defining the quantitative scope of studies and assessment of political and social aspects of dumping so that this Meeting could perform its function provided in its Convention.

Statement by the Republic of Nauru

I am sure that distinguished delegates are aware of Nauru's basic position. I wish to repeat that unless the Republic of Nauru is fully convinced that the dumping of radioactive wastes at sea is absolutely safe we will continue to oppose such dumping, and its resumption. In casting our vote yesterday in favour of the resolution sponsored by Spain and other countries, I would like to make it clear that this should not be interpreted to mean that Nauru has changed its position.

Statement by the Republics of Kiribati and Nauru

The Republics of Kiribati and Nauru request that action on their jointly-sponsored amendment be deferred until the appropriate time in a future Consultative Meeting of the Convention.

Statement by Portugal

In its statement under document LDC 9/INF.16, the Portuguese delegation considered that in order to allow a State which by nature of its geographical situation may be adversely affected by the dumping at sea of wastes and other matter to advise about the location of the site and the acceptability of risk from such a practice, taking into consideration scientific, technical,

economical and social factors, a prior consultation mechanism should be established in the framework of the Convention, to be implemented by the regional dumping conventions. This delegation considered further that all dumping at sea of radioactive wastes listed in Annex II of the Convention should be suspended, pending the implementation at regional level of a prior consultation mechanism established by the Convention.

As the Expanded Panel was unable to draw any overall conclusions on the scientific basis of the proposed amendments to Annexes I and II of the Convention, and not prejudging any of the above-mentioned considerations, this delegation felt that some efforts should be made in an attempt to reach a consensus in order to preserve the integrity of the Convention itself, the effectiveness in the application of its provisions as well as the whole scope of its principles, and allowing that a timed suspension of dumping at sea of radioactive wastes, subject to the resolution of given prerequisites, would be accepted by all the Contracting Parties, to give to such a non-legally binding resolution of the Meeting the adequate strength for implementation by the Parties themselves.

Because an attempt to reach a compromise on the above-mentioned aspects failed, the Portuguese delegation had to abstain from voting on this resolution, being conscious that the Contracting Parties will take full account of the recommendations of the competent international body in this field, at present the International Atomic Energy Agency, namely the guidelines contained in Safety Series 65, as well as the Revised Definition and Recommendations of 1981 Concerning Radioactive Wastes and Other Radioactive Matter, as regards the implementation of a prior consultation mechanism relating to radioactive waste dumping.

This delegation will persist in the effort of supporting all effective ways attained through consensus in order to achieve the aim of protecting the marine environment in the framework of the Convention.

Finally, the Portuguese delegation reiterates its objection, as a matter of principle, to the dumping at sea of radioactive wastes. Therefore, the duty of any country as regards its own wastes is instead to replace such a practice by land-based disposal alternatives.

Statement by the Republic of South Africa

The Republic of South Africa wishes to reiterate that it is pursuing the land-based disposal option for low-level radioactive wastes. In our opinion, however, the findings of the Expert Panel do not support a suspension of the dumping at sea of low-level radioactive wastes.

It is with concern that we note that the Meeting could not reach consensus and that the issue in question was put to the vote.

The introduction of other issues besides scientific and technical ones is regarded by this delegation as an arbitrary extension and interpretation of the Convention. Moreover, we regard paragraph 4 of the operative part of the resolution expressed in LDC 9/WP.5 as inappropriate.

For these reasons, the Republic of South Africa had no option but to vote against the resolution.

Statement by Switzerland

Mr. Chairman,

Thank you for giving the Swiss delegation the opportunity for a brief declaration related to the fact that this delegation felt compelled to cast a negative vote in yesterday's decision about the draft resolution proposed amongst others by the Spanish delegation.

During the whole debate on this Agenda item this delegation has been inspired by the hope for and working in favour of a consensus which should

make it possible to resolve speedily the outstanding questions related to dumping operations as addressed by this Meeting, a consensus based predominantly on scientific and technical considerations as provided for by the Convention and taking into account the legitimate interests of all Contracting Parties.

Mindful of the fact that various Contracting Parties consider that certain questions need further clarification, Switzerland was prepared to accept a temporary suspension of dumping operations, with the understanding that such a suspension would allow for the outstanding problems to be resolved step by step within a reasonable time. In this very spirit, this delegation voted in favour of amendments to the resolution which, by introducing a precise timetable, would have created a further incentive for completing the necessary research in the matter. The delegation also expressed its support for other amendments which in the view of many delegations would have allowed for a broader consensus. It was disappointing for us that none of these amendments were acceptable by a majority.

In our view, the absence of a concrete time frame in the resolution together with the link created between completion of required research and potential resumption of dumping operations presents the danger of slowing down rather than speeding up that research; it is therefore detrimental, in the longer run, to a comprehensive and generally accepted solution of these problems and might eventually even jeopardize the smooth working and efficiency of the London Dumping Convention. We have also noted the Chairman's comment that some scientific experts have expressed reservations as to whether the wording of the resolution is actually in conformity to scientific criteria.

These, then, were the considerations which prevented us, much to our regret, from subscribing to the draft resolution. However, I wish to state that Switzerland remains fully committed to her obligations under the London Dumping Convention and open to any proposal that might improve it. Also, as indicated earlier, my country has embarked on a very large national research

programme designed to explore the possibilities of land-based disposal of radioactive waste on our territory.

Finally, it seems useful to repeat that Switzerland has at present no concrete plans for resuming dumping operations.

Statement by the USSR

The USSR delegation at this and previous Consultative Meetings was in the position that the dumping of radioactive wastes at sea should be gradually diminished until its complete elimination in the framework of the London Dumping Convention. We believe that tightening the scientific criteria and technical standards concerned would provide the necessary basis for such a diminishing.

On the other hand, this delegation feels that the resolution adopted does not correspond to a necessary extent to the letter of the Convention which stresses the need for basing our decisions on reliable scientific and technical considerations.

This delegation also believes that the fact of voting itself to a certain extent violates the spirit of the Convention presuming that our decisions are taken by a consensus.

Therefore the delegation of the USSR has abstained.

Statement by the United Kingdom

The United Kingdom delegation regretted that the issue had been forced to a vote by certain parties which appeared to wish to disregard the offers of compromise from the United Kingdom. It was a matter of grave concern that resort had been made to novel procedures for the resolution of differences which departed markedly from those laid down in the basic Articles of the Convention. Such tactics had brought the Ninth Consultative Meeting very



close to the point at which some Contracting Parties might have to reconsider the terms of their participation in the Convention. The UK Government had voted against the resolution because it contained proposals for studies which, on the advice of the Chairman's own advisers, looked to be incapable of accomplishment. Finally, it reiterated its undertaking to await the completion of the BPEO, scheduled for the end of the year, before taking any decision on the resumption of the sea disposal of radioactive waste.

Statement by the United States

In the view of the United States, there has been no articulated scientific or technical justification to support the open-ended voluntary suspension of dumping called for in the resolution and for some of the other actions requested.

We had been encouraged when many delegations affirmed the importance of basing the work of the London Dumping Convention on consensus. To this end my country offered a resolution on low-level radioactive waste which we hoped would contribute to an agreed outcome. We were prepared to continue working to this end. Some progress was made, and indeed the United States made a further conciliatory proposal from the floor, but unfortunately it seems that many were committed to forcing the issue at any cost.

I would like briefly to comment on the resolution. It sets a very unfortunate precedent for the future cohesiveness and functioning of the LDC system. Similar action in the future on other important issues will not only undermine the fabric and regulatory framework of the London Dumping Convention, but also tend toward its politicization.

We therefore hope that delegates will reflect on the implications of our action yesterday. Perhaps when we return to our respective capitals, we should each ask ourselves whether we are giving appropriate weight to the various factors and influences affecting our work - be they scientific, economic or political.

The text of the resolution proposed by the United States reads as follows:

THE NINTH CONSULTATIVE MEETING,

RECOGNIZING that the marine environment and the living resources of the sea are of vital importance to all nations and that the objective of the London Dumping Convention is to prevent the pollution of the sea by dumping,

RECALLING that the Seventh Consultative Meeting, in February 1983, in response to the concerns expressed by some Contracting Parties, adopted resolution LDC.14(7) which called for the suspension of all dumping at sea of radioactive materials until the presentation to the Contracting Parties of the Final Report of an expert meeting on radioactive matters related to the London Dumping Convention,

NOTING that the Expert Panel on the Disposal at Sea of Radioactive Wastes completed its work and submitted a report, contained in LDC 9/4, Annex 1,

EXPRESSING its appreciation to the experts for their work in the preparation of this report,

CONSIDERING that, under Article 1 of the Convention, Contracting Parties have pledged themselves to take all practicable steps to prevent the pollution of the sea by the dumping of wastes 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,

RECALLING Article XII of the Convention which, inter alia, pledges the Contracting Parties to promote, within the competent specialized agencies and other international bodies, measures to protect the marine environment against pollution caused by radioactive pollutants from all sources,

NOTING the guidelines prepared by the IAEA in Safety Series 65 relating, inter alia, to comparisons between sea and land disposal options,

MINDFUL of the requirement under Article 15(2) of the Convention that "amendments to the Annexes will be based on scientific or technical considerations",

CONSIDERING that the Convention should continue to provide an effective global forum for the Contracting Parties in which to utilize advancements in science and technology in their effort to protect the marine environment from pollution caused by dumping,

CONSIDERING that, based upon a review of available scientific and technical information, it would be inappropriate to amend the Annexes to the Convention with respect to radioactive wastes or other radioactive matter,

RECOGNIZING, however, the importance and desirability of continuing research and investigation into mechanisms and procedures for the safe disposal of low-level radioactive wastes,

INVITES the IAEA, as part of a continuing review, to address and report to the Contracting Parties, as appropriate, on scientific and technical issues relating to sea dumping of radioactive wastes, including:

- (a) Establishment of source upper bounds as appropriate to the practice of radioactive waste dumping under the Convention;
- (b) The behaviour, fate, and effects of radionuclides in the marine environment aimed at improving the reliability of assessments, including such subjects as sampling and radioanalysis of sediment and biota at past dumpsites, and biological and geochemical transport pathways effective in the redistribution of radionuclides in the deep ocean;
- (c) Initiate, in co-operation with competent international bodies, efforts to identify alternative disposal sites which, as a result of their geologic and oceanographic characteristics, would be suitable alternatives to the present Northern Atlantic site;

- (c) Investigate means for further improvement of current techniques for isolation and containment of low-level radioactive waste, such as improved packaging and shallow burial in marine sediments in areas of rapid deep sea sedimentation; and
- (d) Examine the utility and feasibility of segregating radioactive wastes according to factors affecting risk, so that the most appropriate regulation and containment practices can be applied, including evaluation of whether certain radioactive wastes should be treated differently for purposes of ocean disposal.

REQUESTS that

- (a) the IAEA, in conjunction with competent international bodies and taking into account paragraphs 37 and 41 of the Revised IAEA Definition and Recommendations of 1985 Concerning Radioactive Wastes and Other Radioactive Matter (GOV/2218/Add. 1), prepare and present to the Contracting Parties proposals for the establishment of a consultative mechanism relating to radioactive waste dumping;
- (b) the Secretariat approach competent international bodies to establish and maintain an inventory of radioactive wastes entering the marine environment.

CALLS UPON the Contracting Parties to proceed in accordance with the guidelines contained in IAEA Safety Series 65 in establishing comparisons between sea and land disposal options.

Statement by Gabon in relation to the vote

The Gabonese delegation offers its apologies to the Consultative Meeting for having been unable to take part in the deliberations yesterday evening, for reasons outside its control. The delegation is aware of what took place. It is now too late to revert to the matter and it is not for my delegation to

make comments on it. As you know, Gabon has a coastline 800 km in length bordering the Atlantic ocean. Gabon has acceded to the London Convention and also to the Abidjan Convention relating to the protection and development of the marine environment and coastal zones of West and Central Africa. You will appreciate, honourable delegates, that, as a matter of principle, there can be no question of my country accepting any dumping which would cause pollution or nuisance of any kind. The points of view expressed by various speakers, and which my delegation has followed throughout with great attention and interest, are equally valid. Some of these statements give prominence to the social and political aspect; others, on the other hand, are based on purely technical and scientific considerations in accordance with the spirit of the Convention. Who should be considered to be right? The Gabonese delegation nevertheless wishes to emphasize that those who take the decisions should be judiciously guided by reliable scientific findings. In view of the divergent and valid points of view, the path of consensus seems to be indicated. Recognizing the detailed work of the group of experts on this matter, the Gabonese delegation takes this opportunity to congratulate them.

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ANNEX 6

RESOLUTION LDC.22(9)

ENVIRONMENTAL HAZARDS CAUSED BY THE DISPOSAL  
AT SEA OF PERSISTENT PLASTICS AND OTHER  
PERSISTENT SYNTHETIC MATERIALS  
(INCLUDING FISHING NETS)

THE NINTH CONSULTATIVE MEETING,

RECOGNIZING that the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter prohibits the dumping at sea of persistent plastics and other persistent synthetic materials (including fishing nets and ropes) which may float or may remain in suspension in the sea in such a manner as to interfere materially with fishing, navigation or other legitimate uses of the sea;

RECOGNIZING FURTHER that Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the protocol of 1978 relating thereto (MARPOL 73/78), when in force, would prohibit the disposal into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags, derived from the normal operation of vessels;

RECALLING Article I of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter which calls upon Contracting Parties to individually and collectively promote the effective control of all sources of pollution of the marine environment, and which pledges the Contracting Parties to take all practicable steps to prevent the pollution of the sea by 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;

RECALLING Article XII of the Convention which, inter alia, pledges Contracting Parties to promote, within the competent specialized agencies and other international bodies, measures to protect the marine environment against pollution caused by wastes generated in the course of operation of vessels, aircraft, platforms and other man-made structures at sea;



RECOGNIZING the harm from entanglement and ingestion to living resources and marine life caused by disposal at sea of persistent plastics and other persistent synthetic materials (including fishing nets);

BELIEVING that the hazard to living resources and marine life from entanglement and ingestion resulting from the interaction with persistent plastics and other persistent synthetic materials (including fishing nets) requires further attention by competent international bodies;

- 1 REQUESTS the Secretariat to bring to the attention of the Marine Environment Protection Committee (MEPC) of the International Maritime Organization, to the Food and Agricultural Organization and to other competent international bodies this resolution and other information available from Contracting Parties on harm to living resources and marine life caused by disposal at sea of persistent plastics and other persistent synthetic materials (including fishing nets) and to report any actions taken by those bodies to the Tenth Consultative Meeting of the Contracting Parties to this Convention;
- 2 OFFERS to respond to any request for technical assistance from the Marine Environment Protection Committee, the Food and Agricultural Organization and other competent international bodies, concerning harm to living resources and marine life caused by the deliberate disposal of persistent plastics and other persistent synthetic materials (including fishing nets) and on measures to reduce harm to living resources and marine life caused by these materials; and
- 3 PLEDGES to co-ordinate activities with the Marine Environment Protection Committee, the Food and Agricultural Organization and other competent international bodies on the disposal of persistent plastics and other persistent synthetic materials (including fishing nets);

URGES Contracting Parties to consider measures for collecting and disseminating information on the hazards to living resources and marine life caused by the disposal of persistent plastics and other persistent synthetic materials (including fishing nets) and to identify practicable means to reduce these hazards.

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ANNEX 7

SUBSTANTIVE ITEMS TO BE INCLUDED IN THE AGENDA FOR  
THE TENTH CONSULTATIVE MEETING AND FOR THE NINTH  
MEETING OF THE SCIENTIFIC GROUP ON DUMPING

Tenth Consultative Meeting

- Report of the Scientific Group on Dumping
- Disposal into the sea-bed of high-level radioactive wastes and other matter
- Matters relating to the disposal of radioactive wastes at sea
- Problems relating to the import/export of wastes for disposal at sea
- Implications regarding the Law of the Sea Convention for the London Dumping Convention
- Environmental hazards caused by the disposal at sea of persistent plastics and other persistent synthetic materials (including fishing nets)
- Interpretation of Article V(1) with regard to the deliberate disposal at sea of cargo in cases of incidents
- Promotion of technical assistance
- Relations with other organizations

Ninth Meeting of Scientific Group on Dumping

- Selective review of the Annexes to the London Dumping Convention
  - lead and lead compounds
  - organosilicons
  - additional criteria for inclusion in the Annex III guidelines: carcinogenicity/mutagenicity, bio-availability and criteria related to environmental exposure
  - any other substances or related matters on the basis of submissions by Contracting Parties
- Incineration at sea
- Sea disposal of dredged material
- Review of technical information regarding the field verification of laboratory test data

- Monitoring for the purposes of the London Dumping Convention
    - development of an improved reporting procedure on monitoring activities
    - review of detailed reports on innovative monitoring techniques
  - Review of comparative assessments between sea-based disposal and land-based treatment and disposal options
  - Identification of specific wastes or waste treatment and disposal technologies which might be addressed by international symposia
  - Review of dumping reports
-