

GENERAL ASSEMBLY

**OFFICIAL RECORDS
TWENTY-THIRD SESSION**

**REPORT
OF
THE AD HOC COMMITTEE
TO STUDY THE PEACEFUL USES OF THE SEA-BED
AND THE OCEAN FLOOR
BEYOND THE LIMITS OF NATIONAL JURISDICTION**



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UNITED NATIONS

New York, 1968

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
Introduction	1 - 10	1
I. Operative paragraph 2 (a) of resolution 2340 (XXII)	11 - 12	3
II. Operative paragraph 2 (b) of resolution 2340 (XXII)	13 - 54	4
III. Operative paragraph 2 (c) of resolution 2340 (XXII)	55 - 83	13
IV. Conclusion	84 - 92	17

ANNEXES

I. Report of the Economic and Technical Working Group	21
II. Report of the Legal Working Group on its first session	42
III. Draft resolutions and amendments submitted to the <u>Ad Hoc</u> Committee	52
IV. List of documents of the <u>Ad Hoc</u> Committee	65

INTRODUCTION

1. The General Assembly established the Ad Hoc Committee by resolution 2340 (XXII) of 18 December 1967 to study the scope and various aspects of the item entitled "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind". In paragraph 2 of the resolution the Assembly requested the Committee, in co-operation with the Secretary-General, to prepare for its consideration at the twenty-third session a study which would include;

(a) A survey of the past and present activities of the United Nations, the specialized agencies, the International Atomic Energy Agency and other inter-governmental bodies with regard to the sea-bed and the ocean floor, and of existing international agreements concerning these areas;

(b) An account of the scientific, technical, economic, legal and other aspects of this item;

(c) An indication regarding practical means to promote international co-operation in the exploration, conservation and use of the sea-bed and the ocean floor, and the subsoil thereof, as contemplated in the title of the item, and of their resources, having regard to the views expressed and the suggestions put forward by Member States during the consideration of this item at the twenty-second session of the General Assembly.

2. The Ad Hoc Committee, as decided by the General Assembly consisted of the following Member States: Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Ceylon, Chile, Czechoslovakia, Ecuador, El Salvador, France, Iceland, India, Italy, Japan, Kenya, Liberia, Libya, Malta, Norway, Pakistan, Peru, Poland, Romania, Senegal, Somalia, Thailand, Union of Soviet Socialist Republics, United Arab Republic, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America and Yugoslavia.

3. The Ad Hoc Committee held three sessions. The first two were held at United Nations Headquarters, the first from 18-27 March and the second from 17 June-9 July 1968. The third session was held by invitation of the Government of Brazil at Rio de Janeiro from 19-30 August 1968.

4. At its first session, the Ad Hoc Committee established two working groups of the whole, one to deal with the economic and technical aspects of the item and the other with the legal aspects. The Committee retained for itself discussion of the remaining matters, that is, consideration of the scientific and other aspects of the item, in accordance with paragraph 2 (b) of the resolution, and an indication regarding practical means to promote international co-operation in the exploration, conservation and use of the ocean floor and the subsoil thereof, in accordance with paragraph 2 (c) of the resolution. It was also agreed that the two working groups would be free to refer to other aspects of the question having a relevance to their respective mandates.

5. The officers of the Ad Hoc Committee and of its two working groups, elected by the Ad Hoc Committee at its second meeting on 19 March 1968, were as follows:

Ad Hoc Committee

Chairman: Mr. Hamilton Shirley Amerasinghe (Ceylon)

Vice-Chairmen: Poland (Mr. Bohdan Tomorowicz - first two sessions;
Mr. Aleksander Krajewski - third session)

United Republic of Tanzania (Mr. Waldo E. Waldron-Ramsey - first
two sessions; Mr. Akili B.C. Danieli - third session)

Chile (Mr. José Piñera - first two sessions;
Mr. Fernando Zegers - third session)

Norway (Mr. Jens Evensen - first two sessions;
Mr. Einar-Frederik Ofstad - third session)

Rapporteur: Mr. Victor J. Gauci (Malta)

Economic and Technical Working Group

Chairman: Mr. Roger Denorme (Belgium)

Vice-Chairman: Mr. R.C. Arora (India)

Rapporteur: Mr. Anton Prohaska (Austria)

Legal Working Group

Chairman: Mr. Leopoldo Benites (Ecuador)

Vice-Chairman: Mr. Alexander Yankov (Bulgaria)

Rapporteur: Mr. Shaffie Abdel-Hamid (United Arab Republic)

6. The first session of the Ad Hoc Committee, during which it held nine meetings, was devoted to organizational matters and to consideration of the Committee's programme of work. Following suggestions made during the discussions, the Chairman on 27 March listed various papers as those requested from the Secretariat. These were prepared by the Secretariat and issued as documents of the Committee. ^{1/}

1/ See documents A/AC.135/7 (transmitting documents E/4449 and Add.1 and 2, prepared under Economic and Social Council resolution 1112 (XL)), A/AC.135/9 (transmitting document E/4487, prepared under General Assembly resolution 2172 (XXI)), A/AC.135/10 and Rev.1, A/AC.135/11 and Corr.1 and Add.1, A/AC.135/12, A/AC.135/13, A/AC.135/14, A/AC.135/15, A/AC.135/19 and Add.1 and 2, A/AC.135/23; and A/AC.135/17, prepared by the secretariat of the Intergovernmental Oceanographic Commission of UNESCO. A list of the documents of the Committee is annexed to the present report (annex IV).

7. The second session of the Ad Hoc Committee was largely devoted to meetings of the two Working Groups. The Ad Hoc Committee itself held three meetings during the session, the Economic and Technical Working Group eleven meetings and the Legal Working Group fourteen meetings. Some of the meetings of the Working Groups were informal and no records were kept.

8. During the third session, the Ad Hoc Committee discussed the scientific aspects of the item, its military, political and other aspects, and the indication of practical means for international co-operation as provided for in paragraph 2 (c) of resolution 2340 (XXII). It held fourteen meetings. The Economic and Technical Working Group completed its programme of work with consideration of those aspects of paragraph 2 (c) falling within that Working Group's mandate. It held four meetings. At the outset of its third session, the Ad Hoc Committee decided that all draft resolutions and other formal proposals should be considered directly by the Committee itself in connexion with the indication of practical means under paragraph 2 (c). The Legal Working Group, which had held a preliminary discussion of some of these proposals during its meetings in June, held no further meetings during the third session. The reports of the Economic and Technical Working Group and of the Legal Working Group are annexed to the present report (annexes I and II).

9. Meetings of the Ad Hoc Committee were attended by representatives of the United Nations Educational, Scientific and Cultural Organization, the Inter-Governmental Maritime Consultative Organization, the Food and Agriculture Organization of the United Nations, the World Meteorological Organization, the World Health Organization, and the International Atomic Energy Agency. Statements were made by the representatives of UNESCO, IMCO, FAO and IAEA. The Chairman of the Intergovernmental Oceanographic Commission (IOC) of UNESCO also addressed the Ad Hoc Committee.

10. The work of the Ad Hoc Committee is described below under the relevant sub-paragraphs of resolution 2340 (XXII).

I. COOPERATIVE PARAGRAPH 2 (a) OF RESOLUTION 2340 (XXII)

11. In accordance with its mandate under paragraph 2 (a) of resolution 2340 (XXII), the Ad Hoc Committee had before it information relating to the activities of the United Nations, the specialized agencies, IAEA and other inter-governmental bodies with regard to the sea-bed and the ocean floor. In this connexion, the Ad Hoc Committee draws to the attention of the General Assembly as relevant to a survey of these activities the information contained in annexes XI and XII to document E/4487 which contain a survey of the activities of the organizations of the United Nations system and of other inter-governmental organizations in relation to marine science and technology. Additional documentation pertinent to this item was received from these agencies and was made available to the Ad Hoc Committee. This comprises material received from UNESCO and its Intergovernmental Oceanographic Commission (A/AC.135/2 and A/AC.135/22 transmitting various documents), from the World Meteorological Organization (A/AC.135/8 and Corr.1) and from the Inter-Governmental Maritime Consultative Organization (A/AC.135/23).

12. The study requested from the Ad Hoc Committee by the General Assembly under paragraph 2 (a) of resolution 2340 (XXII) also included a survey of existing international agreements concerning the sea-bed and the ocean floor. In this connexion, the Ad Hoc Committee had before it a survey prepared by the Secretariat (A/AC.135/10), which was subsequently revised in the light of various comments made during the meetings of the Legal Working Group (A/AC.135/10/Rev.1). As suggested by the Legal Working Group (annex II, para. 42), the Ad Hoc Committee draws the attention of the General Assembly to this revised survey.

II. OPERATIVE PARAGRAPH 2 (b) OF RESOLUTION 2340 (XXII)

Scientific aspects

13. At its first session, the Ad Hoc Committee decided that the scientific aspects of the question would be considered by the Committee itself. On 25 March 1968 an outline of relevant scientific aspects, prepared by the secretariat of the Intergovernmental Oceanographic Commission of UNESCO (A/AC.135/4) was circulated to the members of the Committee. At the ninth meeting on 27 March, the Chairman of the Ad Hoc Committee requested from IOC a paper on the scientific aspects of the item. This paper, entitled "Scientific Aspects of Peaceful Uses of the Ocean Floor" (A/AC.135/17), was submitted on 18 June 1968. The Committee also had before it the views submitted by member Governments (A/AC.135/1 and Corr. 1 (English only) and Add.1-10).

14. The Ad Hoc Committee discussed the scientific aspects of the question in the course of two meetings at its third session. At the first of these meetings document A/AC.135/17 was introduced by the Chairman of IOC, who emphasized that the document did not purport to be exhaustive. He suggested that the Ad Hoc Committee should support the Secretary-General's proposal to broaden the basis of IOC in order to enable it to formulate and co-ordinate the expanded programme of oceanic research. The Chairman of IOC also suggested the establishment of machinery necessary to secure close collaboration between the secretariats of IOC, the United Nations, and relevant subsidiary bodies; that IOC should be considered a marine scientific advisory body for any United Nations committee engaged in legal, political or economic matters related to the marine environment, and that the United Nations join with other organizations of the United Nations family in giving financial support to the activities of IOC. The suggestions made by the Chairman of IOC received support. Some delegations pointed out that the problems of agency cross-funding would require further consideration. Some delegations drew the attention of the Committee to the fact that the programmes relevant to the functions of IOC were also discussed by the Economic and Technical Working Group.

15. Delegations took note of the fact that in his report on marine science and technology (E/4437) the Secretary-General submitted a proposal for an expanded programme of international co-operation to assist in a better understanding of the marine environment through science, and that the Economic and Social Council, having considered that report, invited the General Assembly to endorse the concept of a co-ordinated long-term programme of oceanographic research designed to increase, in the interests of world economic development, the resources available to all people of the world, taking also into account such initiatives as the

proposal for an International Decade of Ocean Exploration and several international programmes already considered, approved and adopted by the Intergovernmental Oceanographic Commission for implementation, in some cases, in co-operation with other specialized agencies.

16. The representative of the United States dealt extensively with his Government's proposal that the 1970's be declared an International Decade of Ocean Exploration, outlining the programme of work involved. He emphasized that the Decade was one element in the long-term programme to be undertaken under the aegis of the United Nations and was not intended to be an alternative to other efforts, and the Decade was thus not the only means, although an important one, of stimulating investigation, fostering co-operation, and providing nations with the necessary knowledge for the exploration and use of the resources of the sea-bed.

17. Concerning the kind of activities to be undertaken as part of the Decade, the representative of the United States noted that participating nations would be expected to formulate plans, the essence of which would be exploration designed to reveal the character of some of the sea floor resources of which little was yet known. However, the task was so extensive, it could only be initiated and not completed within the Decade. With respect to organization and finance, participating nations would be expected to formulate specific plans and arrange the necessary finance. The IOC, in co-operation with other interested agencies, would play an important role in stimulating investigation in certain areas, co-ordinating related projects and arranging for exchange of information and data. Although the burden of work of IOC would be increased and its staff would need to be strengthened, its competence would not need to be materially broadened.

18. Continuing, the representative of the United States said that the nationalists of countries unable independently to organize ocean exploration projects could participate in the studies undertaken by other nations. Developing countries might arrange for selected areas of their continental shelves to be mapped and the developed nations concerned could provide the equipment and the technical and financial support required. Technical assistance funds might be expected to be available through the usual channels. The benefits to be expected from the Decade were: expansion of knowledge of ocean resources; the improvement of instruments and methods of exploration and exploitation of minerals and other activities; the fruits of the experience gained in co-operating towards a common goal; the opportunity afforded developing nations of acquiring technical capability in marine science and technology, and acquiring information that will assist them in developing resources under their own national jurisdiction.

19. During the discussion on this item, there was agreement that the activities of all bodies (international, national, regional, governmental or non-governmental), within or outside the United Nations, engaged in scientific research into the ocean floor and its resources, should be co-ordinated to avoid overlapping and promote efficiency. It was stated by some delegations that IOC should play an important role in the organization and development of international co-operation in the study of the sea-bed and ocean floor and their natural resources.

20. The basic principle to be observed was that of freedom of scientific research and exploration. Several delegations also stated that scientific research could not create rights of exploitation in the sea-bed and the ocean floor, and the

subsoil thereof, beyond the limits of national jurisdiction. On this basis it was suggested that the Ad Hoc Committee should commend to the General Assembly the importance of full international co-operation and, more specifically: improved arrangements for dissemination of all information derived from scientific research; provision of facilities for training, research and other programmes for developing countries and any other countries that may need such assistance; and measures to stimulate public interest in and support for such work.

21. Note was taken of the programme of scientific research set out in document A/AC.135/17 entitled "Scientific Aspects of Peaceful Uses of the Ocean Floor". It was suggested that scientific research should be concentrated in some major fields, and priorities established. The fields suggested were: study of the geology and geophysics of the ocean floor and preparation of more accurate bathymetric maps; improvement of the International Data Exchange System and standardization of procedures; promotion of international co-operation in the prevention of pollution resulting from exploration and exploitation. Other examples falling within the objectives of the proposed International Decade, and mentioned by delegations, were: determination of the geological structure of the continental margin and its potential resources; preparation of topographical, geological and geophysical maps of selected regions of the ocean floor; selective coring and drilling of the continental margins and floor of the deep sea; preparation of maps of selected regions of the continental shelf of developing countries.

22. The Secretary-General's proposal that IOC be instructed to formulate an expanded programme of international co-operation was widely endorsed. It was suggested that this programme should take into account the proposal for an International Decade of Scientific Exploration. A number of observations and reservations concerning the financial implications of such an expanded programme were made. Many speakers commended the report of IOC, as a whole, to the General Assembly.

23. The Chairman of IOC explained that the broadening of the Commission's base could relate to: (a) its structure; (b) its programme; and (c) its field of competence. The IOC would not be concerned with exploitation although pure scientific research might have commercial side effects; it was also emphasized that IOC was aware of its limitations and field of competence and would not infringe on the competence of other bodies. As regards the broadening of the base of IOC, however, reservations were expressed by certain delegations.

24. Some delegations expressed the view that the United Nations should assume a central role in co-ordinating activities in the field of scientific research and that there should be adequate supervision by the United Nations over programming and planning. Other delegations stressed the point that IOC should assume an important role in promoting, assisting and co-ordinating international co-operative efforts in this field. The view was also expressed by some delegations that the relevant agencies of the United Nations should have an important role and there should be increased co-operation between international agencies, governmental and non-governmental, to ensure adequate supervision for programming and planning.

25. The proposal of an International Decade was welcomed as a useful initiative, and widely supported. The suggestion that IOC, in preparing a programme for expanded co-operation, should utilize the proposal of the Secretary-General and take into consideration the proposed Decade was also supported. It was appreciated that a long-term programme would extend beyond a decade and would vary for different programmes. With respect to Economic and Social Council resolution 1381 (XLV), what was envisaged in the proposal for an International Decade was a dovetailing of approaches rather than a conflict.

26. The representative of UNESCO stated that inter-agency co-operation was already taking place and cited a number of examples.

27. The proposal for an expanded programme as indicated by the Secretary-General received general support so far as it fell within the limits of the competence of the Ad Hoc Committee. It was observed by some delegations that the work of IOC and the concept of the Decade were designed to ensure the more effective uses of the ocean as a whole while the task of the Committee was strictly limited to the ocean floor beyond the limits of national jurisdiction.

28. The Ad Hoc Committee expressed unanimous appreciation of the work done by IOC.

Economic and technical aspects

29. In order to consider the economic and technical aspects of the question and in accordance with operative paragraph 2 (b) of General Assembly resolution 2340 (XXII), the Ad Hoc Committee, as mentioned above, established an Economic and Technical Working Group as a committee of the whole.

30. It had before it the following documents prepared by the Secretariat: the views submitted by Member Governments (A/AC.135/1 and Corr.1 (English only) and Add.1-10); the report prepared by the Secretary-General according to Economic and Social Council resolution 1112 (XL) on mineral resources of the sea beyond the continental shelf (E/4449/Add.1); the report prepared by the Secretary-General according to General Assembly resolution 2172 (XXI) on marine science and technology (survey and proposals) (E/4487); an information note on the economic implications of the exploitation of mineral resources on and underlying the sea-bed and ocean floor and its subsoil with particular reference to world trade and prices (A/AC.135/14); and an information note on the effect of exploitation of mineral resources on superjacent waters and on other uses of the marine environment (A/AC.135/15). Resolutions 1380 and 1381 (XLV) adopted by the Economic and Social Council on 2 August 1963 were brought to the attention of the Working Group. The Working Group also had before it other documents and available authoritative sources of information.

31. The Economic and Technical Working Group held eleven meetings during the second session of the Ad Hoc Committee and four meetings during the third session, and unanimously adopted its report to the Committee (A/AC.135/L.3 and Corr.1).

32. As decided by the Ad Hoc Committee, the Working Group adopted its own programme of work (A/AC.135/WG.2/R.2). It discussed and reported on the economic and technical aspects of the item under the following headings: assessment of the

extent of the mineral resources of the ocean floor and their geographical distribution; the present stage and foreseeable development of technology in the field of exploration evaluation and exploitation of the mineral resources of the ocean floor; the possibility of exploiting the mineral resources from the standpoint of technological progress and the profitability and soundness of investments; possible economic implications of the exploitation of marine mineral resources on world market and prices; possible repercussions of the exploitation of marine mineral resources on other uses of the sea; possibility of exploiting marine mineral resources for the benefit of mankind as a whole; and the prospects for international co-operation in the development and exploitation of the resources of the ocean floor.

33. In view of the detailed consideration and discussion that went into the preparation and adoption of the report of the Technical and Economic Working Group, it is annexed in full to the present report (annex I).

Legal aspects

34. In connexion with operative paragraph 2 (b) of resolution 2340 (XXII) the Ad Hoc Committee draws the attention of the General Assembly to the study prepared by the Secretariat entitled "Legal aspects of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind" issued in three parts under the symbols A/AC.135/19 and Add.1 and 2. As a related matter a "Survey of national legislation concerning the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction" was also prepared by the Secretariat and is contained in documents A/AC.135/11 and Add. 1. The Committee also had before it the views submitted by Member Governments (A/AC.135/1 and Corr.1 (English only) and Add.1-10).

35. In order to consider the various legal aspects of the question the Ad Hoc Committee, as mentioned above, established at its first session a Legal Working Group, as a committee of the whole.

36. This Working Group met during the second session of the Ad Hoc Committee, holding fourteen meetings. As decided by the Ad Hoc Committee it adopted its own programme of work (A/AC.135/WG.1/R.4). The Working Group had before it the above-mentioned studies, concerning the legal aspects of the item, as well as other documents (see annex II, appendix).

37. Within the limits expressed in the terms of resolution 2340 (XXII) the Working Group discussed in particular legal problems connected with the legal status of the sea-bed and the ocean floor and subsoil thereof; the reservation of the sea-bed and ocean floor and the subsoil thereof exclusively for peaceful purposes; use of the resources of the sea-bed and ocean floor and the subsoil thereof in the interests of mankind; freedom of scientific research and exploration of the sea-bed and the ocean floor and the subsoil thereof; the question of reasonable regard to the interests of other States in their exercise of the freedoms of the high seas; the question of pollution and other hazards. It also discussed other questions, including the question of a definition of the

sea-bed and the ocean floor underlying the high seas beyond present national jurisdiction, the question of a moratorium or freezing of national claims over the sea-bed and the ocean floor beyond the limits of present national jurisdiction and the question of a statement of principles, in the form of a declaration, to be adopted by the General Assembly. These principles, some of which received wide support, are contained in paragraph 43 of the report of the Legal Working Group, and observations concerning the timing for the adoption of a declaration of principles are contained in paragraph 44 of the report (see annex II). Some delegations suggested that other statements of legal principles should also be considered in this connexion.

38. The report of the Working Group covering its first session containing the observations of members on these topics is annexed to the present report (annex II). The report noted that, owing to the shortage of time, the Working Group had not been able to complete its programme of work, but that the preliminary exploration of problems might provide the basis for further consideration of the issues involved.

39. For the same reasons as those given in paragraph 33 above, the report of the Legal Working Group is annexed to the present report (annex II).

40. At its third session, the Ad Hoc Committee agreed to consider all draft resolutions and other formal proposals in plenary meetings, in relation particularly to its mandate under paragraph 2 (c) of resolution 2340 (XXII) with a view to indicating practical means of promoting international co-operation in the exploration, conservation and use of the sea-bed and ocean floor beyond the limits of present national jurisdiction.

Other aspects

41. The "other aspects" mentioned in paragraph 2 (b) of resolution 2340 (XXII) were considered by the Ad Hoc Committee at its third session under the heading "Consideration of the political, military and other aspects of the item". Reference to these subjects had also been made by various delegations at the earlier sessions of the Committee and in the views submitted by Governments (A/AC.135/1 and Corr.1 (English only) and Add.1-10). In response to a request made at the second session, the Secretariat submitted a working document (A/AC.135/29) regarding possible military uses of the sea-bed and the ocean floor beyond the limits of present national jurisdiction.

42. Many of the speakers referred to this Secretariat document as well as to other sources of information in the course of the discussion at the third session, to which the Ad Hoc Committee devoted a total of three meetings (A/AC.135/SR.14, 16 and 17). Some delegations emphasized that the document was based on published material only and stated that important and relevant aspects might still be unknown or not generally appreciated. At the third of these meetings, the Chairman summarized the discussion in a statement which was circulated as a document of the Committee (A/AC.135/32). Some delegations expressed reservations with regard to the summary.

43. The political, military and other aspects of the question were also, at least in part, the subject of various draft resolutions and other concrete

proposals. In view of the agreement of the Ad Hoc Committee to deal with these under the heading of paragraph 2 (c) of resolution 2340 (XXII), (the indication of practical means of international co-operation) however, these proposals will be reviewed in section III below.

44. In discussing this matter, some delegations differentiated between political and military aspects, whereas others speaking under this heading referred mainly or entirely to military aspects, and one view identified the two as being essentially the same.

45. During the debate, it was stressed by several delegations that the interests of all nations required them to give urgent attention to the trends and possibilities regarding the potential future use of the sea-bed and ocean floor for military purposes and that efforts should be made to arrest these trends before they were too advanced for effective control.

46. It was widely recognized that the sea-bed and ocean floor beyond the limits of national jurisdiction should be used exclusively for peaceful purposes. The view was, however, expressed that the principle of peaceful use should apply to the sea-bed and the ocean floor beyond the limits of the territorial waters of the coastal States. This view received wide support. Various proposals were made regarding the manner in which international agreement on the exclusive use of the sea-bed and ocean floor for peaceful purposes could be attained. The exclusive use of the sea-bed and ocean floor for peaceful purposes, it was said, necessarily meant that effective measures be taken to prevent its being used for military purposes. One suggestion was that the Ad Hoc Committee should point out to the General Assembly in its report that an immediate decision was necessary to the effect that the use of the sea-bed and ocean floor for military purposes was prohibited. A proposal was made that the Committee should recommend to the General Assembly the adoption of a resolution calling on all States to use the sea-bed and ocean floor beyond the limits of the territorial waters of coastal States exclusively for peaceful purposes and requesting the Eighteen-Nation Committee on Disarmament (ENDC) to consider as an urgent matter the question of prohibiting the use of the same area for military purposes. It was also stated that ENDC should as a matter of urgency consider the question of banning the use of the sea-bed and ocean floor beyond the limits of national jurisdiction by nuclear submarines and banning all military fortifications and missile bases on the sea-bed and ocean floor. Yet another proposal was made to the effect that, considering that the term "peaceful purposes" does not preclude military activities generally, specific limitations on certain military activities with regard to the sea-bed and ocean floor would require the negotiation of a detailed arms control agreement. It was noted that the question was on the agenda of the ENDC.

47. A large number of delegates emphasized that all military activities in the area contemplated in the item should be barred. Two views were expressed on the military aspects of this item and on the concept of exclusive reservation of the area for peaceful purposes. One was that peaceful use completely excluded all military use. The other was that a positive approach required the affirmation and acceptance of the principle that the area be used exclusively for peaceful purposes and that military activities in pursuit of peaceful aims or in fulfilment of peaceful intents, consistent with the United Nations Charter and the obligations of international law, should not be banned. The general aim should be to stop the spread of the armaments race to the sea-bed and ocean floor.

48. Certain delegations expressed the view that the interpretation of "peaceful uses" as excluding all military activities beyond the limits of national jurisdiction would not prove acceptable to all nations. Attention was drawn to the existence of large submarine fleets which gave nations a justifiable interest in the development of defensive systems, including surveillance devices. Such an interpretation also ignored the interrelationship between the sea-bed and the high seas above it. According to this view, there was no general prohibition of military activities in the high seas, nor even any proposal for such a prohibition. Consequently, to give but one example, it would be both impracticable and illogical to seek to prevent submarines, which were free to use superjacent high seas, from resting on the sea-bed itself. Research by naval vessels and military use of submarine cables were also mentioned as examples of military uses of the sea-bed which should not be prohibited.

49. An internationally acceptable definition of the precise limits of the area under consideration was regarded by several delegations as central to the whole question and one which required careful study as it was highly complex. The view was, however, expressed by certain delegations that it went beyond the Ad Hoc Committee's terms of reference. Various delegations concurred in the view that appropriate steps had to be taken to define the limits of the area beyond national jurisdiction. The opinion was expressed that until there had been a fuller study of the complex legal issues involved - issues which were inseparable from the other aspects, especially the economic and technical aspects of the question - it was premature to attempt to draft a set of legal principles applicable to the activities of States in the use of the sea-bed and ocean floor.

50. One view was that the great merit of applying the concept of peaceful uses to the area "beyond the limits of the territorial waters of States" was that it brought within the realm of this principle the continental shelf which was the area most likely to be used for military purposes in the immediate future. In support of the proposition that military use of the continental shelf be banned, it was held that articles 2, 3, 4 and 5 of the Geneva Convention on the Continental Shelf limited the coastal States' right to exploration and exploitation of the natural resources of the shelf and did not give the coastal States unlimited jurisdiction over it. According to this view, the military use of the sea-bed underlying the high seas, beyond territorial waters, in the area of the continental shelf would inevitably affect the peaceful exploration and use of the sea-bed and the ocean floor beyond the limits of national jurisdiction. It was further pointed out that the greater the area of demilitarization the better it would be for the peaceful uses of the sea-bed beyond national jurisdiction. Certain delegations doubted the appropriateness of a debate in this Committee on the right of the coastal State to use its continental shelf for military purposes.

51. Some delegates drew attention to the fact that the term "territorial waters" involved the problem that limits of territorial waters varied from State to State. It was also pointed out by some delegations that the boundaries of the area to be kept free from military use should be clearly defined.

52. There was a clear difference of opinion in the Committee regarding the procedure for dealing with the military aspects of the item - whether they be described as disarmament or non-armament. It was noted that the question had already been submitted to ENDC. Some speakers considered that ENDC was the appropriate and competent body to deal with these aspects of the question. The

ENDC was specially created to work out measures for ending the arms race and achieving disarmament. The question of the use of the sea-bed and ocean floor exclusively for peaceful purposes, according to these speakers, is definitely an urgent measure towards the cessation of the arms race and towards disarmament. One delegation proposed that ENDC examine the question whether a viable international agreement might be achieved in which each party would agree not to emplace or fix weapons of mass destruction on the sea-bed. Another delegation proposed that the ENDC should consider the question of the prohibition of the use for military purposes of the sea-bed and ocean floor beyond the limits of territorial waters of coastal States as an urgent matter. Yet another delegation stated that ENDC should as a matter of urgency consider the question of banning the use of the sea-bed and ocean floor beyond the limits of national jurisdiction by nuclear submarines and banning all military fortifications and missile bases on the sea-bed and ocean floor. Some were of opinion that the General Assembly should refer the military aspects to ENDC under a specific mandate to be discharged under the General Assembly's supervision. It was also said that whatever body was entrusted with the examination of the proposal, all nations should be kept fully informed of every stage in its consideration and of the outcome of such consideration.

53. Other speakers did not agree with the proposal that the military aspects be referred exclusively to ENDC. It was said that the whole item was one and indivisible and that its dissection into its various aspects and the assignment of these aspects to different organs and bodies would destroy its unity and would be an obstacle to effective action in pursuit of the objectives of the item. They were of opinion that this was not primarily a disarmament question but rather one of preventing and restraining military activity in the area. It was also felt that ENDC already had a heavy programme of work, although there could be no objection to the disarmament aspects being referred to ENDC by the General Assembly to determine priorities, identify general concepts in their relationship to the whole problem of disarmament and to tender advice to the committee which it was hoped would be established at the next session of the General Assembly to pursue further action in this matter. Certain delegations raised a constitutional objection in regard to the ENDC's status in the matter, namely: that it was only a negotiating organ. It was competent to initiate a study of the military problems of the sea-bed as part of the wider study of general and complete disarmament. It was held that ENDC was not, however, debarred from considering this aspect whether it be called disarmament or non-armament.

54. It was suggested that the attention of the International Labour Organisation and other concerned organizations be drawn to the human and social aspects of the question, in particular, conditions of work as well as protection and training of manpower engaged in the new environment.

III. OPERATIVE PARAGRAPH 2 (c) OF RESOLUTION 2340 (XXII)

55. Paragraph 2 (c) of General Assembly resolution 2340 (XXII) provides that the Ad Hoc Committee is to include in the study to be prepared for the General Assembly an indication regarding practical means of promoting international co-operation in the exploration, conservation and use of the sea-bed and ocean floor, and the subsoil thereof, as contemplated in the title of the item, and of their resources, having regard to the views expressed and the suggestions put forward by Member States during the consideration of this item at the twenty-second session of the General Assembly. The views of Member States communicated to the Secretary-General in accordance with operative paragraph 3 (a) of resolution 2340 (XXII) were before the Ad Hoc Committee in documents A/AC.135/1 and Corr.1 (English only) and Add.1-10, and the Committee also had before it, in connexion with this portion of its mandate, a summary of views of Member States prepared by the Secretariat (A/AC.135/12). A statement was made by the Chairman reviewing the proposals and suggestions discussed in the Committee under paragraph 2 (c) of resolution 2340 (XXII) (A/AC.135/35).

56. At its third session, the Ad Hoc Committee agreed that it would treat all draft resolutions or declarations submitted as falling within the ambit of paragraph 2 (c).

57. In considering practical means of promoting international co-operation in the field of exploration, conservation and use, the Ad Hoc Committee discussed two sets of proposals before it. The first set applies to proposals for the promotion of international co-operation to assist in a better understanding of the marine environment through science as presented by the Secretary-General in his report on marine science and technology, and the United States proposal concerning the international decade of ocean exploration. Reference to the discussion of these proposals has been made in the section on scientific aspects (see paragraphs 13-28 above). The representative of the United States introduced a resolution on the international decade of ocean exploration (A/AC.135/33) (see annex III). Both proposals were welcomed and received wide support. The important role of IOC was re-emphasized.

58. The other proposal concerned international co-operation in the development and exploitation of marine mineral resources. Several delegations stressed the essential role to be assigned to the United Nations in this field. In this context they strongly supported the relevant proposal of the Secretary-General in his report on marine science and technology.

59. The importance of regional co-operation was also stressed and it was mentioned that the coastal States bordering on marginal and internal seas had many problems and objectives in common. It was also emphasized that the views of the countries directly concerned were of great importance for establishing successful and workable regional arrangements.

60. Members were in agreement that international co-operation in this field on a world-wide level should be promoted and that the fostering of regional arrangements would appear to be the best means at the local level. It was suggested that the

proposals should be commended to the General Assembly in this report along with the various observations made by delegations.

61. With respect to conservation, a specific proposal was introduced contained in the draft resolution of the representative of Iceland (A/AC.135/31) concerning a study of means for minimizing the danger of pollution of the marine environment which might arise from the exploration and exploitation of the sea-bed and ocean floor and the subsoil thereof. The proposal was widely welcomed and supported as one of the practical means which might be commended for the consideration of the General Assembly. The text of the draft resolution will be found in annex III to the present report.

62. It was stressed that the danger of pollution and other hazardous and harmful effects arose not only from the discharge of oil as well as chemical and radio-active waste products in the waters and on the surface of the high seas, but could also arise from other activities connected with the exploration or exploitation of the sea-bed and ocean floor resources.

63. It was emphasized that there should be respect for the traditional freedoms of the high seas such as navigation, fishing, the laying of submarine cables and pipelines, and any other freedoms recognized by the law and practice of the sea, and that measures for the conservation of marine resources should be intensified. Certain delegations emphasized that there should also be respect for freedom of research.

64. Reference was also made to the hazards of radio-active material and the need to devise immediate safeguards concerning the danger of pollution. The view was expressed that damage caused by pollution should entail liability.

65. The view was expressed that the study proposed in the Icelandic draft resolution might be undertaken by the appropriate organs such as IMCO, IAEA and IOC.

66. The role of IMCO with respect to pollution was emphasized and the view expressed that the work of existing bodies should be taken into account and should not be duplicated.

67. The representative of IMCO referred to the availability of expertise in the field of the prevention and control of marine pollution. He also referred to inter-agency co-operation concerning marine pollution.

68. In the course of its work, the Ad Hoc Committee discussed various proposals, including draft resolutions, concerning general principles which, in one view, could be proposed for consideration by the General Assembly, or, according to another view, could be listed in the Committee's report to the Assembly. Such proposals were discussed at successive stages of the Committee's work; an account of an earlier phase of discussion has been given, in particular in paragraphs 43 and 44 of the report of the Legal Working Group. The discussion of principles was continued during the third session of the Ad Hoc Committee. The text of draft resolutions and declarations submitted to the Committee will be found in annex III to the present report:

(a) A "draft declaration of legal principles governing the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction and the uses of their resources in the interests of mankind" was submitted by India (A/AC.135/21).

(b) A draft resolution containing a statement of principles concerning the deep ocean floor was submitted by the United States (A/AC.135/25). (The United States explained that the term "deep ocean floor" was used for the sake of conciseness and meant "the area of the sea-bed and the ocean floor underlying the high seas beyond the limits of national jurisdiction", or the area whose boundaries would become clearer when the limits of national jurisdiction were more precisely defined.)

(c) A working paper on the draft declaration of general principles was proposed by Argentina, Brazil, Ceylon, Chile, Ecuador, El Salvador, India, Kenya, Liberia, Libya, Pakistan, Peru, Thailand, United Arab Republic and United Republic of Tanzania (A/AC.135/36).

69. Some delegations suggested that the General Assembly should be asked to adopt a set of principles which, in their opinion, could constitute the initial step towards the establishment of an international legal régime for the area under consideration. Other delegations were of the opinion that the Ad Hoc Committee had only been called upon to indicate practical means for international co-operation and that recommendations to the General Assembly or even suggestions on future courses of action went beyond the Ad Hoc Committee's terms of reference. Some delegations thought that the formulation of principles would be premature and that more detailed consideration by all Member States was necessary. Another view was that a list of principles commanding unanimous support would in itself constitute practical means to promote international co-operation.

70. Some delegations made suggestions to serve as a frame of reference for principles concerning the exploration and use of the resources of the sea-bed and ocean floor, to be considered and adopted at the appropriate time. It was stated that there was and there would be an area of the sea-bed and ocean floor beyond national jurisdiction. Certain delegations suggested that the boundaries of such an area would have to be more precisely defined. Some delegations restated their views that the Ad Hoc Committee had no competence to discuss the limits of national jurisdiction, in particular with respect to the continental shelf. It was suggested that exploitation and use of the natural resources of the sea-bed and the ocean floor prior to the establishment of a boundary should be understood not to prejudice its location. Certain delegations also suggested that a third conference on the law of the sea be convened to consider a generally acceptable legal régime for the sea-bed and the ocean floor including rules for the determination of the limits of this area.

71. In this connexion, a number of delegations pointed out that what has been done at the national level in legislation concerning the continental shelf could not be ignored, especially in view of the fact that a number of States were parties to the Geneva Convention of 1958 and national legislation of these States had been based on that Convention. Other delegations suggested that the Convention should be reviewed.

72. It was also suggested that there should be established, as soon as practicable, internationally agreed arrangements governing the exploitation of resources of the area under discussion. Some delegates observed that such arrangements must take into account the interest of mankind as a whole, including the developing countries.

73. Proposals concerning military aspects of the question were also considered by the Ad Hoc Committee in connexion with the general principle of the reservation of the area exclusively for peaceful purposes. The texts of these proposals will be found in annex III to the present report.

74. The Union of Soviet Socialist Republics submitted a draft resolution on the prohibition of the use of the sea-bed and the ocean floor beyond the limits of territorial waters for military purposes (A/AC.135/20).

75. The United States of America submitted a draft resolution on preventing the emplacement of weapons of mass destruction on the sea-bed and ocean floor (A/AC.135/24).

76. Amendments (A/AC.135/26 and A/AC.135/27) to each of the above draft resolutions were submitted by the United Republic of Tanzania.

77. Both the above-mentioned proposals and the amendments thereto included requests for consideration by the Eighteen-Nation Committee on Disarmament.

78. All delegations were agreed that the item as a whole required further study and that institutional arrangements should be made by the General Assembly for this purpose.

79. In this connexion, the Commission had before it a working paper submitted by Belgium (A/AC.135/29) proposing that the Ad Hoc Committee commend to the General Assembly the establishment of a standing committee with terms of reference which would permit it to explore solutions to the numerous problems which have appeared.

80. In deference to suggestions that it was preferable to consider the composition of the proposed standing committee at a later stage, the representative of Belgium withdrew the proposals contained in paragraph 5 of the Belgian working paper and submitted a revised draft of his working paper (A/AC.135/29/Rev.1) (see annex III).

81. A very large number of delegations agreed that the General Assembly during its twenty-third session should establish a standing committee and strongly expressed the hope that the terms of reference of such a committee would be worked out during that session. The idea of the continuation of the Ad Hoc Committee was also raised by a few delegations although they indicated that they would be prepared to consider the idea of a standing committee if it had general support.

82. It was emphasized by many delegations that a standing committee of the General Assembly should not replace any of the existing specialized agencies nor duplicate their activities.

83. It was also emphasized that such a committee should be a focal point for study of the various related aspects of the item, and to provide direction and purpose to activities in regard to the sea-bed and the ocean floor.

IV. CONCLUSION

84. The Ad Hoc Committee completed its consideration of the item at its meeting in Rio de Janeiro on 30 August 1968.

85. Within the limits of the time available, the Ad Hoc Committee studied in a comprehensive manner the various aspects of the item and identified the main problems. The Ad Hoc Committee recognizes the need for further study and has made suggestions for this purpose.

86. As was implied in the terms of resolution 2340 (XXII) the Ad Hoc Committee recognized the existence of an area of the sea-bed and the ocean floor underlying the high seas beyond the limits of national jurisdiction.

87. The members of the Ad Hoc Committee felt that certain considerations relating to the exploration, exploitation and use of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of national jurisdiction appeared to commend themselves with varying degrees of acceptance. These considerations could be brought to the attention of the General Assembly as an indication of practical means on which a measure of agreement existed within the Ad Hoc Committee.

88. In the course of the final session at Rio de Janeiro, consultations took place between the various groups in an effort to find an acceptable formulation which would command unanimous support. The efforts persisted until the end of the session and considerable progress was made, but final agreement could not be reached in time. The following sets of proposals contain an indication of the support that the various ideas received:

- (a) Draft declaration of general principles proposed for submission to the General Assembly;
- (b) Draft statement of agreed principles proposed for submission to the General Assembly.

The draft declaration of general principles referred to above as (a) comprised the following:

(1) The sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, are the common heritage of mankind and no State may claim or exercise sovereignty over any part of the area mentioned in resolution 2340 (XXII);

(2) The exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, shall be carried on exclusively for peaceful purposes;

(3) The exploration, use and exploitation of this area, and the subsoil thereof, as referred to in the title of the item, shall be carried out for the benefit and in the interest of mankind;

(4) The exploration and use of the sea-bed and ocean floor and the subsoil thereof, as referred to in the title of the item, and the exploitation of their resources shall be carried on in accordance with the principles and purposes of the Charter of the United Nations and an international régime to be established with the purpose of contributing to the maintenance of international peace and security, the respect for the territorial integrity of States and the interests of the coastal States, and the promotion of economic development, particularly that of the developing countries, whether coastal or land-locked;

(5) The international régime to be established shall also consider the way for the most appropriate and equitable application of benefits obtained from the exploration, use and exploitation of the sea-bed and ocean floor and the subsoil thereof, as referred to in the title of the item, through a suitable international machinery, for the economic, social, scientific and technological progress of the developing countries;

(6) All activities in the sea-bed and ocean floor and the subsoil thereof, as referred to in the title of the item, shall conform to the following guidelines, aimed at protecting the rightful interests of other States:

- (a) No impediment shall be created to navigation and fishing nor shall there be undue interference with the laying and the maintenance of submarine cables and pipelines;
- (b) Coastal States closest to the area in which any activities occur shall be consulted lest their rightful interests be harmed;
- (c) Any such activity must take into account the economic interests of the developing countries so as not to be detrimental in particular, to the activities undertaken within the national jurisdiction of those countries;
- (d) Appropriate safety measures shall be adopted in all activities of exploration, use and exploitation of the area and international co-operation for assistance in case of mishap shall be facilitated;
- (e) Pollution of the waters of the marine environment, specially radio-active contamination, shall be avoided by means of international co-operation;
- (f) No damage shall be caused to animal and plant life in the marine environment;
- (g) Damages caused by any such activities entail liability.

(7) The sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, shall be open to scientific investigation, without discrimination, and States shall foster international co-operation

in this investigation so as to enable all States to have access to it, disseminate its results and provide technical assistance to the developing countries;

(8) The United Nations, in co-operation with the specialized agencies and IAEA, shall take adequate measures to ensure the observance of these general principles and guidelines and the implementation of the objectives set forth in this declaration with the aim of promoting international co-operation in this field.

The draft statement of agreed principles referred to above as (b) comprised the following:

(1) There is an area of the sea-bed and ocean floor and the subsoil thereof, underlying the high seas, which lies beyond the limits of national jurisdiction (hereinafter described as "this area");

(2) Taking into account relevant dispositions of international law, there should be agreed a precise boundary for this area;

(3) There should be agreed, as soon as practicable, an international régime governing the exploitation of resources of this area;

(4) No State may claim or exercise sovereign rights over any part of this area, and no part of it is subject to national appropriation by claim of sovereignty, by use or occupation, or by any other means;

(5) Exploration and use of this area shall be carried on for the benefit and in the interests of all mankind, taking into account the special needs of the developing countries;

(6) This area shall be reserved exclusively for peaceful purposes;

(7) Activities in this area shall be conducted in accordance with international law, including the Charter of the United Nations. Activities in this area shall not infringe upon the freedoms of the high seas.

89. It was pointed out that the terms of reference of General Assembly resolution 2340 (XXII) did not provide for the elaboration by the Ad Hoc Committee of a scheme for the legal regulation of the status of the sea-bed and ocean floor and of the activities of States with regard to the sea-bed and ocean floor. It was emphasized that the question of the elaboration of a set of principles needed further consideration and study and that at the present time this would be premature.

90. It is believed that the progress so far achieved would be most useful in facilitating the attainment of final agreement on more positive action by the General Assembly at its twenty-third session.

91. The Ad Hoc Committee unanimously expressed the wish to place on record its appreciation for the warm hospitality extended by the Government of Brazil during the final session.

2. In accordance with the terms of resolution 2340 (XXII), the Ad Hoc Committee submits its report, together with the reports of the Economic and Technical and the Legal Working Groups (annexes I and II), the draft resolutions and other proposals (annex III) and a list of committee documents (annex IV). The report was adopted by the Committee on 30 August 1968.

ANNEX I

REPORT OF THE ECONOMIC AND TECHNICAL WORKING GROUP

1. The Economic and Technical Working Group was established by the Ad Hoc Committee to study the peaceful uses of the sea-bed and the ocean floor beyond the limits of national jurisdiction in order to consider the economic and technical aspects involved in the study which the Ad Hoc Committee was requested to submit to the General Assembly pursuant to resolution 2340 (XXII). The bureau of the Economic and Technical Working Group was composed of the following members:

Chairman:	Mr. Roger Denorme (Belgium)
Vice-Chairman:	Mr. R.C. Arora (India)
Rapporteur:	Mr. Anton Prohaska (Austria)

The Working Group held eleven meetings in New York from 18 June to 3 July 1968 and four meetings in Rio de Janeiro from 19 to 23 August 1968. Some of these meetings were held informally and no record was kept. The meetings were attended by the representatives of the thirty-five member countries of the Ad Hoc Committee as well as by representatives of UNESCO-IOC, WMO and IMCO. At the end of its fifteenth meeting held on 23 August 1968, the Working Group adopted unanimously its report to the Ad Hoc Committee.

2. As a background for discussion, the Economic and Technical Working Group had at its disposal various working documents: the report prepared by the Secretary-General according to Economic and Social Council resolution 1112 (XL) on Mineral Resources of the Sea beyond the Continental Shelf (E/4449/Add.1); the report prepared by the Secretary-General according to General Assembly resolution 2172 (XXI) on Marine Science and Technology (Survey and Proposals) (E/4487); an information note on "the economic implications of the exploitation of mineral resources on and underlying the sea-bed and ocean floor and its subsoil with particular reference to world trade and prices" (A/AC.135/14); and an information note on "the effect of exploitation of mineral resources on superjacent waters and on other uses of the marine environment" (A/AC.135/15); and also other documents and available authoritative sources of information.

3. The Economic and Technical Working Group gave consideration to the following problems: assessment of the extent of the mineral resources of the ocean floor and their geographical distribution; present state and foreseeable development of technology in the field of the exploration, evaluation and exploitation of such resources; possibility of exploiting such resources from the standpoint of technological progress and the profitability and soundness of investments; possible consequences of the exploitation of such resources: (a) economic implications on the world market; (b) possible repercussions on other uses of the sea; (c) possibility of exploiting such resources for the benefit of mankind as a whole; prospects for international co-operation in the development and exploitation of the resources of the ocean floor

Assessment of the extent of the mineral resources of the ocean floor and their geographical distribution

4. During its meetings on 18 and 19 June 1968, the Economic and Technical Working Group gave consideration to the question of "the assessment of the extent of the mineral resources of the ocean floor and their geographical distribution". The Working Group had before it the report of the Secretary-General on Mineral Resources of the Sea beyond the Continental Shelf (E/4449/Add.1) as a background for discussion. In its deliberations the Working Group also took into account other documents presented (E/4487) and available authoritative sources of information.

5. For the purpose of the exchange of views on the economic and technical aspects of the problem, the following working concepts were considered useful. They are related to the geological and topographic descriptions of the sea floor and in no way prejudice any legal connotation which some of them may have in other contexts: a/

(a) Continental shelf: The area of the ocean floor between the mean low water line and that change in the inclination of the floor, from about one eighth of one degree to more than three degrees, that marks the beginning of the continental slope which occurs at various depths usually between 130 and 200 metres, but exceptionally as shallow as 50 metres or as deep as 500 metres. The width of the shelf ranges from less than one mile up to 800 miles. When the increase in slope is very gradual, the point of maximum rate of change of slope is considered to be the edge of the shelf.

(b) Continental slope: Area of the ocean floor extending from the outer edge of the continental shelf to the abyssal ocean floor, usually from ten to twenty miles wide. The inclination of the slope varies widely from as little as three degrees to over forty-five degrees. Geologically it marks the rather abrupt transition from continental or siliac crust to oceanic or simatic crust.

(c) Continental terrace: Sometimes used to refer to the geological formation consisting of both the continental shelf and slope.

(d) Continental rise: Apron of clastic sediments, wherever deep sea trenches are absent, that slopes gently oceanward from the base of the continental slope, usually in 2,000 to 5,000 metres of water. b/

a/ The Delegation of Argentina reserved its opinion with regard to the working concepts enumerated in point 5 on the ground that they were not sufficiently compatible with the present state of oceanological knowledge, considering in particular:

(1) That the description of the working concepts was technically incomplete and required further elaboration;

(2) That the enumeration did not include all the geological and topographic factors. It should be supplemented by a description of other geomorphological irregularities existing in the sea-bed and ocean floor.

b/ In the USSR the oceanographic term to which the description of paragraph 5 (d) corresponds is "abyssal slope".

(e) Continental margin: That region of the earth's crust where the continental silic rocks are covered by the sea.

(f) Oceanic basin: That region of the earth's crust covered by water where the silic rocks are thin or completely absent and underlain by simatic rocks.

(g) The abyss or deep-ocean floor: A rolling plain from 3,300 to 5,500 metres below the surface of the sea; it is scarred by deep gorges called trenches and studded with sea-mounts and guyots.

(h) Sea-mounts: Isolated elevations of the deep sea floor, varying from relatively small peaks to massive structures; sea-mounts deeper than 200 metres, the top of which is a comparatively small platform, are called guyots.

(i) Banks: Elevations of either the shelf or the deep sea floor to depths of less than 200 metres; conventionally banks taken as 11 metres or less at mean low water tides are called shoals. They are rather numerous and sometimes cover considerable surface.

(j) Mid-ocean ridges: Broad mountain chains, rising from the abyssal plains, and extending for many thousands of miles. The genesis of the mid-ocean ridges is still unclear.

(k) Abyssal or hadal depths: Flat area at the bottom of highly localized submarine gashes or rifts in the earth's crust - the Mariana and Tonga trenches are respectively the deepest in the Northern and Southern Hemispheres (circa 11,000 metres). The Working Group noted that it is often difficult to distinguish the exact area covered by each concept. The importance was stressed of considering in a separate context the internal and/or marginal seas because of the marked oceanographic, geographic and geologic differences they present in comparison with the oceans in general.

6. Substantial mineral resources exist on and beyond the continental shelf. The general picture appears to be as follows:

(a) Known offshore placer deposits, among which might be mentioned gold, ilmenite, diamonds and other industrial minerals, are generally restricted to scattered areas along the coasts. Commercial concentrations are very localized, and are likely to be found only in the shallower parts of the continental shelf where submerged beaches and deltas occur, and may be expected to be scarce or absent on the deeper parts of the shelf, the slope, and abyssal depths.

Exceptions to this may be the large deltaic fans off some of the world's major rivers, where sediments have spread out and subsided under their own weight to depths of many hundreds or even a few thousand metres. Commercial concentrations of sand, gravel, oyster shell, and lime mud are generally restricted to shallow coastal regions.

(b) Those parts of the continental slope which contain thick sedimentary deposits may be regarded as potential reservoirs of hydrocarbons. Geophysical and geological observations suggest that the sediments of the continental rise are thick enough in places to contain accumulations of petroleum, and the same

may be said about some of the small ocean basins, such as the Gulf of Mexico. Other evidence suggests that there is little chance that petroleum occurs over large areas of the abyssal plain, but some parts of the ocean floor may have an important potential.

(c) There are extensive deposits of manganese nodules on the deep ocean floor uneven in distribution and concentration, but richer in their content of other metals (cobalt, nickel, copper, etc.) than those in shallower water. The chemical composition of nodules varies considerably, with characteristic differences noted in Pacific, Atlantic and Indian Ocean occurrences.

(d) Phosphorite occurs on the sea floor in the form of blankets of nodules, flat slabs, pellets and rock-coatings, mostly on the outer continental shelf, upper continental slope and submarine banks. Of the known and potentially favourable areas - off southern California (United States of America), Baja California (Mexico), eastern United States of America, western South America, Australia, north-west Africa, Japan, etc., only the first three are being investigated in any systematic manner.

(e) Metalliferous muds, rich in copper, zinc and other metals, have been found recently in some of the deeps of the Red Sea, associated with hot brines, and possibly occur elsewhere as well. Deposits in solution as well as geothermal energy associated with these hot brines may also be resources for the future.

7. Present knowledge of the mineral resources of the ocean appears to be more or less satisfactory only for a small part of the continental shelf. Knowledge of potential marine mineral resources at this stage is scant and depends in a large part on extrapolation of knowledge and experience gained on land.

8. While present knowledge of marine mineral resources beyond the continental shelf is very incomplete, it was noted that potentially valuable resources exist, that some exploration is already taking place and that leases have already been issued for evaluation and exploitation of such resources. From the various sources of information, it appeared that the potentially valuable minerals likely to be exploited economically are essentially petroleum and gas, manganese deposits, submarine phosphate deposits and metalliferous muds.

9. In these circumstances, the Economic and Technical Working Group emphasized the importance of fostering research and exploration in order to improve our knowledge of the nature, occurrence and concentration of sea-bed minerals, and to encourage development of new devices and techniques for exploration and exploitation.

10. Summing up the debate, the Chairman made the following points:

(a) It appears certain that substantial resources exist beyond the continental shelf;

(b) Present knowledge of the extent of these resources and their distribution is still limited and incomplete;

(c) It appears most appropriate to foster research and exploration activities in order to fill the extensive gaps in present knowledge.

The present stage and foreseeable development of technology in the field of exploration, evaluation and exploitation of the mineral resources of the ocean floor

11. During its meeting on 21 June 1968, the Economic and Technical Working Group gave consideration to the question of "the present stage and foreseeable development of technology in the field of exploration, evaluation and exploitation of the mineral resources of the ocean floor". The Working Group had before it the report of the Secretary-General on Mineral Resources of the Sea beyond the Continental Shelf (E/4449/Add.1) as a background for discussion. In its deliberations the Working Group took also into account other authoritative sources of information.

12. The following working concepts, which refer to the stages of the economic process in the field of development of marine mineral resources, were considered useful for the purposes of the discussion of this item:

(a) Exploration: The broadly based survey using all available methods, generally of large areas in the first instance, leading by progressively narrowing the search to the location of mineral occurrences of possible economic importance. c/

(b) Evaluation: The detailed investigation of mineral occurrence or deposits using all appropriate techniques in order to discover their nature and origin, establish the quantity and tenor of the contained economic minerals, determine how best they may be exploited and generally consider all other factors affecting their economic development.

(c) Exploitation: The practical and economic development of minerals based on the appropriate application of various techniques in order to obtain an economically valuable product.

13. The present status of technology with respect to mineral exploration and evaluation in the ocean environment appears as follows:

(a) As far as exploration of mineral fuels and soluble minerals is concerned, some of the techniques required can be used in water of any depth; the necessary combinations of capabilities required to discover specific deposits of hydrocarbons, however, are more limited. As at June 1968 the deepest water in which exploratory wells were being drilled was approximately 200 metres. New equipment was expected to advance this capability to 400 metres by the end of 1968 and to 500 metres in 1969. It should be noted that the technology necessary to complete and bring a well into production is more complex and not as far advanced as for exploratory drilling.

c/ In other contexts than the economic one exploration has the meaning of search of geographical or scientific information.

(b) With regard to surficial deposits, e.g., manganese and phosphorite nodules, preliminary evaluations to depths of about 1,000 metres have been carried out. More advanced submersibles which are being developed will within five to ten years permit similar limited evaluations to depths of 5,000 metres.

(c) Technology necessary to find and evaluate sub-surface deposits, such as coal, oil-shales, etc., in water depths of more than a few tens of metres is virtually non-existent at the present time.

14. In exploiting mineral resources of the deep sea, three main techniques are used in relation to the types of minerals mentioned in paragraph 13: drilling, dredging and mining.

(a) As far as the exploitation of minerals by drilling is concerned, production has now reached depths of about 110 metres and is expected to reach depths of 200 metres by the end of this year; depths of as much as 500 metres (in relatively protected water near the coast) in three to five years. Beyond this depth, exploitation from drill holes will require the development of new technical concepts.

(b) Present exploitation through dredging is limited to the depths of 30 to 60 metres, according to the minerals mined. Hydraulic dredging will almost certainly prevail over other dredging methods in deep sea mineral recovery. Using this technique, preliminary designs have been made for recovery of sea floor nodules deposits at depths greater than 1,200 metres.

(c) If large and rich sub-surface deposits are found, the technology to mine them beneath shallow waters might be developed within a few years; technology for mining bedrock deposits in water deeper than 100 metres is at present not in sight.

15. Remarkable progress has already been made in developing the ability to explore the ocean floor and its mineral resources. Much further progress will be required, however, to permit evaluation and exploitation of mineral resources at depths greater than a few hundred metres. This is in part dependent on increased incentives to seek mineral resources in the ocean.

16. In the past, the rate of technological progress was as follows:

(a) Experimental penetration drilling for scientific purposes (and without re-entry capability) had reached 3,500 metres in 1961 and has now been carried out in water depths of 6,000 metres.

(b) Experimental drilling by commercial operators was possible down to 450 metres in the late 1950's and it is predicted that it will be possible before long down to 1,000 metres water depth with hole re-entry.

(c) Serious evaluation drilling (wildcatting) was possible in 30 metres in 1954 and is now being done in depths of approximately 200 metres water depth.

(d) Production drilling, including ancillary operations, has increased in depths from 21 metres in 1947 to about 120 metres water depths in 1963.

(e) Production dredging for certain minerals (tin, gold, etc.) has increased in depths from 10 metres in 1947 to 60 metres in 1967. These examples show that an average of nine to ten years has been necessary to develop techniques to double the depths at which they could be operated. Extrapolation of these figures would imply that another decade will be necessary to double again the depths reached at present, but it is no doubt hazardous to anticipate the rate of further progress of technology since major breakthroughs cannot be excluded particularly under the stimulus of the discovery of some very high-grade deposits or of minerals in short supply. New techniques might be developed which would considerably reduce this time lag. This would certainly necessitate massive financial investment and human ingenuity.

17. Summing up the debate, the Chairman made the following points:

(a) It is important for the Working Group to provide the Ad Hoc Committee with the most accurate and up-to-date information and projections available concerning the rate of technical progress in the development of marine mineral resources.

(b) In view of the above-mentioned forecasts, sufficient time would seem to be available for the study of all aspects involved in the development of marine resources. However, it would certainly be unwise to procrastinate their consideration.

(c) Breakthroughs in technology are possible and new experiments are already under way. Certainly, considerable financial and human resources will be required to this end. A balanced view suggested that a cautious optimism is appropriate as to the technical achievements that may be expected.

The possibility of exploiting the mineral resources from the standpoint of technological progress and the profitability and soundness of investments

18. During its meetings on 24 and 25 June 1968, the Economic and Technical Working Group gave consideration to the question of "the possibility of exploiting the mineral resources from the standpoint of technological progress and the profitability and soundness of investments". The Working Group had before it the report of the Secretary-General on mineral resources of the sea (E/4449/Add.1) as a background for discussion. It also took into account other authoritative sources of information.

19. In the process of mineral development, four stages can be distinguished:

(a) The acquisition of the basic knowledge through systematic area surveys and research in geology, geophysics and geochemistry, necessary to understand the character, distribution and variation of the mineral resources;

(b) The identification of target areas for exploration and location of specific mineral deposits;

(c) The technical evaluation of the extent and quality of the deposits and on methodology and cost of extraction from the natural environment;

(d) The economic decision based on capital investment, pay-out period, pending costs and cash flow, leading eventually to commercial exploitation. For the last two stages of activity, determining factors are, amongst others, consideration of the depth of the water column, depth of deposit beneath the ocean floor, distance from shore, size and quality of the deposits, and the environment of the specific area containing the deposits under examination.

20. Profitability and soundness of investments with respect to the development of the potentially valuable marine minerals previously identified (hydrocarbons, manganese, phosphate and other metals) appear to be as follows:

(a) The recent discovery on all continents of phosphorite deposits has removed the urgency of exploitation of phosphorite deposits on the sea floor for some years, except near agricultural regions that are far removed from low-cost land resources.

(b) The potential value of manganese nodules is enhanced because they contain, in addition to manganese, appreciable amounts of nickel, copper and cobalt. Due to the costly beneficiation processes needed for up-grading marine manganese, these additional minerals would constitute the main incentive for the recovery of manganese nodules. However, new discoveries of nickel deposits have been made on land, lower-grade copper deposits can now be up-graded at reasonable cost, and land reserves of cobalt are large. Hence, the exploitation of widely-distributed discrete nodules does not appear economically feasible for some time.

(c) Sulphur is exploited on the continental shelf. Its development beyond the continental shelf is in process of investigation.

(d) Metal-bearing muds (containing copper, zinc and other metals) of a type recently found in Red Sea deeps also pose as yet unsolved technical problems but may prove to be recoverable in the not too distant future.

(e) In the case of petroleum and gas, development in water depths greater than approximately 500 metres is likely to require a breakthrough in technology. Investments required for platforms and operating procedures at such depths will markedly increase.

21. It appears that many of the costs involved in marine mineral development are much higher than the cost of operations conducted on land. It was mentioned, for example, that even in the shallow water areas of the continental shelf, daily average operational costs of under-water oil drilling are four times those of comparable land operations. And if oil is found, installation of production facilities make a completed well two or three times more costly than a hole on land. It therefore appears that appropriate conditions must be established to make investments profitable and the necessary incentives must not be impaired by prohibitive licence fees.

22. Since costs for the development of marine mineral resources rise rapidly with progression into deeper water, economic reasons suggest that marginal

resources on land under present circumstances may be given preference over marine mineral deposits. Moreover, in the opinion of some delegations, any entrepreneur must be assured that the area considered for development of marine mineral resources be larger than that normally necessary on land and that he must be assured of security of tenure over this area.

23. A stable régime providing for orderly progress and security of title in the exploration, evaluation and exploitation of marine mineral resources would favourably influence the decision to develop these resources.

24. Minerals mined on the ocean floor would also have to compete with minerals mined on land, where new discoveries are still being made and extraction technology is still advancing. Future land technology may be able to exploit resources which for present-day technology are not accessible or are too low-grade to be economical, due primarily to still lacking beneficiation processes. Finally, the position of the different minerals on the world market will also be influenced by progress in the development and use of substitutes.

25. Under particular circumstances, it may seem desirable to exploit deposits which are clearly unprofitable on a purely financial basis. The desire to be independent of foreign supplies, for example, is conducive to the exploitation of off-shore deposits which would otherwise be deemed uneconomic. Among the motives for such a decision may be mentioned the balance-of-trade position, as well as the desire to ensure stability of production in times of crisis and to control the volume of production and prices. Another reason for exploitation of less economic marine deposits may be concern for conservation of resources for periods of down-turn in world trade, fluctuations of prices or more serious emergencies.

26. In spite of the factors that seem now to diminish prospects for early exploitation of ocean floor resources, the accelerating growth of technology and the widening interest of potential investors justify cautious optimism concerning their future development.

27. It should be noted that banks and shoals occur at moderate depths, from a few metres to 200 metres; it is already possible to exploit the natural wealth to be found there with existing means. This is also true for a few of the accessible summits of the great oceanic mountain ridges.

28. It was pointed out that potential future use of the tremendous resources hidden beneath the oceanic crust might also be considered. Indeed the potential harnessing of thermal energy and recovery of elements contained in the magma or molten rocks through drilling unto the Mohorovicic discontinuity could well add a new dimension to the exploitation presently discussed. In spite of the technical difficulties of drilling at depths of more than 6,000 metres in hadal zones, one cannot exclude that this potentiality may one day materialize.

29. Summing up the debate, the Chairman made the following points:

(a) The need for greater efforts in the fields of basic research, detailed exploration and the development of new techniques to carry out successfully these tasks deserves greater emphasis;

(b) It is important to distinguish between the technological capacity for the development of marine resources and the economic feasibility or the

commercial viability of such operations. Before beginning to exploit mineral resources, all economic factors which have a bearing on the development of these resources should be taken realistically into account;

(.) One important factor is the ratio at which costs of exploration and exploitation increase as greater depths are reached;

(1) Another factor is the considerable reserves of certain minerals existing on land which might be exploited if need arises, in the first place before drawing on the mineral resources of the sea;

(e) Newly discovered land reserves will inevitably compete with marine operations for investment capital. The decision to exploit marine reserves will, however, also be affected by the desire to be independent of foreign supplies and to conserve deposits on land which might be exploited if circumstances so require;

(f) Considerable investments will be needed; therefore sufficient incentives must exist if States or their nationals are to be encouraged in this venture;

(g) Among favourable conditions required there will have to be suitable arrangements for assuring the appropriate returns of the investments and their security through adequate international arrangements.

Terrible economic implications of the exploitation of marine mineral resources on world market and prices

10. At its meetings on 25 and 26 June 1968, the Economic and Technical Working Group gave consideration to the question of the "possible economic implications of the exploitation of marine mineral resources on world market and prices". The Working Group had before it, inter alia, a paper prepared by the Secretariat (A/AC.135/14).

11. Some experience is already available with reference to the effects of present off-shore production of petroleum, in both the world market at large and in some local markets. In the two decades since off-shore production began, it has come to make up about 16 per cent of total world production and 6 per cent of the world's natural gas production and this proportion is expected to increase significantly with time. The new off-shore reserves and production have helped maintain a ceiling on prices which so far have generally been relatively stable. There has been a slight but rather steady downward trend in prices over the years. Considerable excess production capacity has developed, but its possible disruptive effects have been mitigated, if not altogether prevented, by artificial controls and other measures. Production beyond the continental shelf is likely to take place within a decade but production beyond the 500-metre isobath may not take place for a considerable time. Because costs will increase with increasing depth, new production will be limited to that which can enter the market at existing prices. If the total off-shore sources prove large, however, they may help maintain a ceiling on prices of petroleum from other sources.

32. It seems unlikely that manganese nodules will be exploited for many years to come and when marine manganese production starts, it will probably enter the market gradually just as petroleum has done, for at first it will have to compete with existing land sources. Present indications are that the first use of the nodules may be as a source of copper, nickel, and possibly cobalt, and that the manganese will not necessarily be recovered. In the beginning, most production would probably serve to meet new demand, but when it becomes feasible to reduce production costs, deep sea producers might be able to lower prices and hence displace high-cost production from other sources. Because cobalt occurs in the nodule deposits in ratios to nickel and copper which are much higher than their ratios in the market, a high cobalt recovery as a part of the whole process might at some stage lead to surpluses that would substantially reduce the world price.

33. Likewise, marine phosphate production is not likely for the foreseeable future, for land resources are large, of a higher grade and cheaper to mine. If phosphate is produced it will probably have an impact only in local areas where land-based sources are not available inasmuch as world demand is increasing; such production for local use probably will not displace production from existing sources.

34. Present knowledge is insufficient to assess with enough reliability the potential effects of marine mineral production on world market and prices. The various studies which have been made on this subject and the conclusion reached by their authors can only be considered as educated estimates.

35. There has been speculation about the possible loss of markets for developing countries that depend on mineral exports, particularly manganese, for much of their income. Indeed, some of the highly industrialized countries have to import most of their present consumption of manganese from certain developing countries. These produce manganese, phosphate and other minerals and export most, if not all, of their production.

36. There is, however, no reason to be unduly concerned at this stage about possible adverse or disruptive economic effects on world markets or world prices from the development of marine mineral resources:

(a) Until recovery processes are developed and production begins, such consequences are entirely speculative;

(b) By the time the relevant marine mineral resources are quantitatively important on the market, it may be hoped that the economies of the developing countries will be more diversified and consequently less dependent on raw materials exports;

(c) Moreover, world demand for these resources may be expected to grow with general industrial and economic development. None the less, the consequences of possible over-supply should be kept in mind.

37. All projections as mentioned above are of a very speculative nature. The interest of the world community would, however, suggest the need for arrangements for the exploitation of mineral resources beyond the continental

shelf that will avoid adverse consequences for the world market in general and the economy of developing countries in particular.

39. Summing up the debate, the Chairman made the following points:

(a) The economies of certain developing countries depend heavily on their exports of certain raw materials such as manganese or phosphates;

(b) There seems, however, to be no reason for undue concern about the adverse effects on the world market which might occur;

(c) Nevertheless, the possibility of prices being adversely affected and of the world market being disrupted by the exploitation of marine minerals cannot be excluded;

(d) Thus, future international arrangements concerning the production of marine mineral resources might prove very useful; it has been suggested that this could be dealt with by international agreements and co-operation.

Possible repercussions of the exploitation of marine mineral resources on other uses of the sea

39. During its meetings on 25, 26 and 27 June 1968, the Economic and Technical Working Group gave consideration to the question of the "possible repercussions of the exploitation of marine mineral resources on other uses of the sea". The Working Group had before it a note prepared by the Secretariat (A/AC.135/14) as well as a note prepared by IMCO (A/AC.135/23) and a document prepared by ICC secretariat (A/AC.135/17).

40. Any exploration, evaluation and exploitation of marine mineral resources is likely to lead to some interference with the rights of enjoyment of the high seas, i.e. freedom of navigation, fishing and scientific research activities.

41. Generally, it has been possible to conciliate divergent interests of the various conventional uses of the sea. The task of reconciling marine mineral development with the existing rights of navigation, fishing research and others is already under study in the interested international organizations and must command increasing attention.

42. If the use of drilling rigs, production platforms and other devices for the development of marine mineral resources is not brought into harmony with existing regulatory régimes applied on the seas, they may constitute a hazard to navigation. In this context, the importance was also noted of ensuring the safe operation of craft used for marine mineral development and the safety of persons working on them.

43. Pollution caused by oil and chemical wastes represents a great hazard for the marine environment. The International Convention for the Prevention of Pollution of the Sea by Oil, formulated in 1954 and amended in 1962, is under constant review by IMCO, which has also extended its studies to other agents of pollution.

44. Radioactivity produced either by dumping wastes or by the use of nuclear devices in the recovery of marine minerals constitutes another pollution hazard. Studies to prevent these hazards have been undertaken by IAEA following the 1958 United Nations Conference on the Law of the Sea. It was emphasized that these efforts should result in the drafting and eventual adoption of internationally binding provisions.

45. The turbidity resulting from intense exploitation of marine sediments by the use of dredging techniques and by the employment of explosives and chemicals in the process of recovering and enriching minerals at sea might cause bottom-dwelling organisms to be buried and have harmful effects on the other living resources of the sea. Another danger to be feared is the escape of petroleum from the deposits which are being exploited.

46. Mineral exploitation operations in the ocean, dredging in particular, may also have hazardous effects on submarine cables if one does not know their location.

47. It will be necessary to take appropriate measures in order to prevent effectively any deleterious effects on the marine environment that may be caused by the extension of human activity in the ocean. These measures, however, should not tend to discourage advancement in this field.

48. Summing up, the Chairman made the following points:

(a) The interest witnessed in the possible exploitation of mineral resources of the sea should not make us lose sight of the importance of traditional marine activities such as navigation and fishing; exploitation must not result in unjustified interference with the conventional uses of the sea and the means of exploitation must themselves be safe;

(b) It is extremely important to develop present knowledge in order to be in a position to assess correctly possible effects of marine mineral development on other uses of the sea; in particular, effective means of preventing all forms of pollution should be assured;

(c) These considerations should not discourage the development of marine mineral resources, but rather bring about efforts to reconcile the conflicting interests in the regulatory framework to be set up for the purpose of mineral development.

Possibility of exploiting marine mineral resources for the benefit of mankind as a whole

49. At its meetings on 27 and 28 June 1968, the Economic and Technical Working Group gave consideration to the question of "the possibility of exploiting marine mineral resources for the benefit of mankind as a whole". It had before it, among other documents, the report of the Secretary-General (E/4449/Add.1, chapter V).

50. The need for intensive and expanded international co-operation in the field of marine mineral development was unanimously expressed. As regards the ways of organizing such a co-operation, different views were taken. Some delegations

insisted that this co-operation take place in the scientific and technical field. Some others saw this co-operation in the establishment of an international régime to exploit the mineral resources of the sea.

51. It was noted that the sea-bed and ocean floor beyond the limits of national jurisdiction are the legacy of all human beings.

52. In considering the development of marine mineral resources, the Economic and Technical Working Group kept in mind its paramount purpose, which has been set forth in General Assembly resolution 2340 (XXII), that "the exploration and use of the sea-bed and the ocean floor and the subsoil thereof should be conducted ... for the benefit of all mankind"; it was pointed out that this concept should not be interpreted as referring only to the immediate profits made by leasing claims or granting licences. "Benefit of all mankind" should rather be understood in terms of the larger value of international output, in particular of the increase in value at stages subsequent to the primary production including the distribution and consumption phases.

53. The great majority of countries are, for technical, financial and other reasons, not in a position to participate in the exploitation of these resources. The developing and the land-locked countries were specifically mentioned in this respect. In fact, only a few highly industrialized countries possess the technical know-how and the investment capital necessary to start any development of these resources. Many delegations stated that this would accentuate the economic imbalance existing between developed and developing countries, and that it would also be an incentive for the former to grab and hold the areas which are most promising.

54. Failure to reach agreement on some principles to govern exploration and exploitation of these resources might lead to new forms of colonial appropriations. Some delegations thought this aspect falls beyond the purview of the Economic and Technical Working Group because of its political connotations. Others felt compelled, nevertheless, to point out the importance of this aspect, emphasizing that a scramble would develop among the highly industrialized countries themselves, thus creating international tension and resulting in conflicts.

55. The need for some internationally agreed upon arrangements which would govern operations for exploring and exploiting ocean floor minerals has been generally recognized. So far, there has, however, been no sufficiently detailed study of the merits and demerits of differing forms of arrangements which might be possible. The Economic and Technical Working Group discussed the question and a large number of representatives indicated in this connexion that internationally agreed upon arrangements should satisfy certain requirements including the following:

(a) Feasibility and acceptability to the international community of any such arrangements;

(b) Efficient and equitable means to ensure orderly exploration, evaluation, exploitation and conservation of the resources in accordance with the rules of international law of the sea and the protection of the rights of all States;

(c) Means to prevent, or reduce to acceptable limits, damage to living resources and to the environment as a whole and interference with other legitimate activities;

(d) Means to assure the practice of appropriate conservation and safety measures that will avoid resource waste and ensure safe working conditions;

(e) Means to prevent or at least mitigate to acceptable limits economic and social dislocations that may arise from exploitation of sea-bed resources;

(f) Provision of social overhead-type services such as aids to navigation, maps and charts, weather information, rescue capability and other services required to encourage and support exploration and development.

In this way, the Working Group wanted to indicate what characteristics any régime must have and provide guidelines which might be helpful in formulating and evaluating specific proposals.

56. Agreeing that an area of the ocean floor beyond the limits of present national jurisdiction does exist, the Economic and Technical Working Group stressed the need for an internationally agreed boundary between the area over which coastal States exercise jurisdiction and the one in which humanity as a whole has a stake. It suggested that further detailed examination of this matter should be undertaken.

57. Various possible régimes can be conceived to regulate the exploitation of mineral resources of the sea-bed and ocean floor beyond the limits of national jurisdiction. An international régime under the auspices of the United Nations was recommended by some delegations, but this represents only one among several possibilities. These delegations pointed out that by its very nature the United Nations is the most comprehensive world-wide Organization and thus in the best position to fulfil the various requirements and meet the aspirations of humanity.

58. Some delegations referred to the possibility of creating a new agency within the system of the United Nations or in some relationship with it. Without entering into the details of the structure of such an agency they mentioned some existing bodies as examples of the type of administration which might be envisaged. Some delegations opposed the creation of any agency with administrative functions and pointed out the necessity at this stage to develop research and exploration of the mineral resources of the sea-bed and the ocean floor and the subsoil thereof on the basis of international co-operation through co-ordination by ICC.

59. In the context of the discussion of a possible international machinery to supervise and govern "exploitation for the benefit of mankind", attention was drawn to the possible disadvantages of large bureaucratic institutions. Such a machinery if allowed to cause lengthy delays at all stages of its activity would significantly slow down the return on capital invested and thus, in addition to inefficient spending on the administrative machinery itself, stifle progress. Furthermore, it was feared that the creation of such an international machinery would divert government funds at present earmarked for marine research. Some delegations pointed out that such machinery would hinder the development of

co-operation among States in research and exploration of the mineral resources of the sea-bed and the ocean floor. This point of view was strongly controverted by many delegations.

60. However, the opinion prevailed that it was a timely endeavour to consider the possible establishment of a régime to ensure an exploitation for the benefit of all mankind.

61. Summing up, the Chairman made the following points:

Generally accepted concepts

(a) With respect to the question of marine mineral development and related aspects, all delegations are in favour of international co-operation;

(b) There is also unanimous agreement that any international co-operation to be established for the exploration, evaluation and exploitation of the resources of the sea-bed and ocean floor and the subsoil thereof beyond the limits of national jurisdiction be for the benefit of mankind as a whole;

Various possible régimes of exploitation

(c) To regulate the exploitation of mineral resources of the sea-bed and ocean floor beyond the limits of national jurisdiction, various régimes can be conceived;

(d) It will be necessary to study carefully the economic merits and demerits of these systems. The requirements which must be met by any possible régime should be spelled out without delay;

Ensuring the benefit of mankind by means of an international régime

(e) Many delegations pointed out that the great majority of countries, in particular developing and land-locked countries, are, for technical, financial and other reasons, not in a position to participate actively in the exploitation of these resources;

(f) These delegations believe that an international régime under the auspices of the United Nations or in relationship with it would ensure that the marine mineral resources would be exploited in the interest of humanity as a whole;

(g) They pointed out that without some international régime a new form of colonial competition would occur which would entail definite risks of oppositions and conflicts;

(h) Some delegations stressed that the questions raised in points (f) and (g) mainly fall under the purview of the Legal Working Group and of the Ad Hoc Committee;

(i) Some delegations emphasized the disadvantages which might result if a bureaucratic administration were to be set up considerably hampering the progress in the development of these resources;

(j) They further emphasized that the interests of all mankind lie in the larger benefit resulting from the broadest possible use of the minerals no matter where they come from rather than in the narrow goal of ensuring profits to the resource owners;

(k) From the examination of the economic and technical aspects of the problems of the sea-bed and ocean floor and the subsoil thereof beyond the limits of national jurisdiction, many delegations drew the conclusion that there was need for an internationally agreed boundary delineating the area which should be subject to a régime for the widest possible international co-operation and exploited for the benefit of all mankind. Other delegations felt that these considerations were of a legal nature and outside the competence of this Working Group;

(l) Finally, a number of delegations believe that the Secretary-General should be requested to undertake a detailed comparative study of mechanisms that could be established for this purpose. This would facilitate the discussion of this question. Some delegations considered that at this stage such a request should be made to Member States.

Prospects for international co-operation in the development and exploitation of the resources of the ocean floor

62. During its meetings of 19 and 20 August 1968, held in Rio de Janeiro, the Economic and Technical Working Group gave consideration to the item "Prospects for international co-operation in the development and exploitation of the resources of the ocean floor". The Working Group had before it the report of the Secretary-General on marine science and technology (E/4487) and other authoritative sources of information.

63. As previously mentioned in the report,^{d/} present knowledge of the extent, location and concentration of mineral resources of the sea-bed and the ocean floor and the subsoil thereof is limited and incomplete. Therefore, the need was stressed to foster research and exploration activities in order to fill the extensive gaps in present knowledge. The best way to reach this objective would be international co-operation in the scientific field. This form of international endeavour is by the same token a prerequisite to increased exploitation on a global scale for the benefit of all mankind.

64. Concerted exploration in its broadest sense, including bathymetric and geologic mapping, sampling, geophysical surveys and other scientific studies, is called for in order to gain knowledge and an understanding of the properties of the ocean floor, of the nature of the marine mineral deposits, and of their distribution. An internationally co-ordinated programme to explore the economic aspects of a few specific areas may be expected to reveal potentially important deposits and stimulate their exploitation.

65. The Working Group noted with satisfaction the recommendations of the Secretary-General for an expanded programme of international co-operation to

^{d/} See document E/4487, paragraphs 4-10.

assist in a better understanding of the marine environment through science, as indicated in his Report on Marine and Science Technology. e/ This programme would provide, among other things, for the scientific foundation of the development and exploitation of mineral resources of the sea-bed and the ocean floor. Responsibility for formulating and co-ordinating this expanded programme is proposed to be entrusted to the ICC in co-operation with the other international organizations concerned. In this context, the necessity of stimulating the widest possible exchange and diffusion of scientific and related knowledge in this field was stressed.

66. Against the existing background of experience in scientific collaboration, the United States has proposed that the nations of the world join together in a concerted long-term co-operative programme of ocean exploration on a world-wide basis. As the initial focus for such an undertaking, a ten-year period of expanded collaborative efforts, designated as the international decade of ocean exploration would be launched. Although this concept is broader in scope than the task assigned by General Assembly resolution 2340 (XXII), sea-bed studies are an integral part of the proposal, and would offer great potential benefits for all countries.

67. The Economic and Technical Working Group noted that the Economic and Social Council:

"Invites the General Assembly to endorse the concept of a co-ordinated long-term programme of oceanographic research designed to increase, in the interests of world economic development, the resources available to all people of the world, taking also into account such initiatives as the proposal for an International Decade of Ocean Exploration and several international programmes already considered, approved and adopted by the Intergovernmental Oceanographic Commission for implementation, in certain cases, in co-operation with other specialized agencies." f/

While some delegations raised some questions and asked for certain clarification, the Working Group expressed appreciation of the proposal for the decade and generally supported the idea of expanded international co-operation in the study of mineral resources of the sea-bed and the ocean floor and the subsoil thereof. It was also noted that ICC considered the proposal for an IDOE as a useful initiative for broadening and accelerating such investigations and for strengthening international co-operation.

68. Some delegations, however, pointed out that both the proposed "expanded programme" and the "Decade of Ocean Exploration" are essentially scientific in character, and therefore held the view that both proposals should more appropriately be discussed in the Ad Hoc Committee. Other delegations, while

e/ See document E/4487, paragraphs 256, 260, 262, 264, 266 and 267.

f/ See Economic and Social Council resolution 1381 (XLV).

welcoming the organization of the decade, expressed the view that the Ad Hoc Committee could only make suggestions or proposals within the framework of General Assembly resolution 2340 (XXII), that is, on the sea-bed and ocean floor and subsoil thereof beyond the limits of present national jurisdiction. Several delegations also stated that scientific research could not create rights of exploitation in the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction.

69. The Working Group recognized that the results of this research should be published and made available to all countries.

70. The Working Group felt that both the proposed "expanded programme" and the "Decade of Ocean Exploration" should include concrete plans aimed at strengthening the research capabilities of developing nations.

71. Some delegations felt that the function of the IOC should be restricted to its scientific organizational scope and not be broadened so as to cover international co-operation in the development and exploitation of mineral resources of the sea-bed and the ocean floor and the subsoil thereof.

72. Some delegations noted that the exploitation of these resources would at any rate progress and would thus contribute substantially to the broadening of scientific knowledge. In its turn, the acquisition of additional knowledge through co-operative endeavours in the scientific field would undoubtedly increase the possibilities of exploiting the mineral resources of the sea-bed and the ocean floor and subsoil thereof beyond the limits of national jurisdiction.

73. The requirement for more information about the nature of the sea and the sea floor is universal, and therefore there is manifest need for greater co-operation in marine scientific exploration and research at a global level. At this stage, the scientific sphere appears to offer the broadest scope for co-operation on a global level. Although the resources of the sea-bed are scattered in limited areas of concentration, many delegations stressed that world-wide international co-operation should also be considered from now on in order to encourage the exploitation of these resources for the benefit of all mankind.

74. At a regional or local level, the possibilities of practical co-operation in economic and other matters seem especially promising. Groups of nations can join together to explore and develop the resources of a limited area of world ocean. By sharing the burden of costs, planned cruises, sharing special expertise and data-processing equipment on shore, great economies can be achieved and faster rates of progress attained.

75. In particular, coastal States bordering on marginal and internal seas have many problems and objectives in common. Thus, it would be desirable to promote co-operation among these countries; this could be done by existing regional and international organizations and by any other means that might be considered feasible and applicable.

76. In connexion with this idea, the Committee of Co-ordination of Joint Prospecting for Mineral Resources in Asian Off-Shore Areas, which was set up under the sponsorship of ECAFE, was mentioned. This Committee is undertaking

various projects of interest to bordering States and has established a form of regional co-operation which might serve as an example for other regional seas and for co-operation on an ocean-wide scale. It was emphasized that the views of the countries directly concerned are of paramount importance for establishing successful and workable regional arrangements.

77. The view was expressed that a clear distinction should be maintained between international co-operation for a better understanding of marine environment through science and international co-operation in the development and exploitation of mineral resources of the sea-bed and the ocean floor and the subsoil thereof beyond the limits of national jurisdiction, each of which may be entrusted to different international bodies.

78. Many delegations felt that the United Nations should play an essential role in promoting and co-ordinating co-operation in development and exploitation of mineral resources of the sea-bed and the ocean floor and the subsoil thereof beyond the limits of national jurisdiction. In particular, they referred to the relevant proposal of the Secretary-General in his report on marine science and technology. g/ Many advocated that the United Nations be given adequate responsibility to increase its technical assistance to developing countries as far as the development of the resources of their continental shelf is concerned. They also stressed the responsibilities which should be assumed by the United Nations aimed towards development of marine mineral resources of the sea-bed and ocean floor beyond the limits of national jurisdiction.

79. Certain delegations mentioned the possibility of increasing international co-operation by considering the concept of international enterprises. Certain delegations also favoured international co-operation in the private sector.

80. Summing up, the Chairman made the following points:

(1) The importance of furthering international co-operation in scientific research by means of concerted efforts was strongly felt. For this reason it was pointed out that the proposal presented by the Secretary-General concerning an expanded programme of international co-operation in the scientific field on a long-term scale, h/ and a proposal of the United States of America calling for an international decade of ocean exploration deserve support, in principle, and should be the object of careful consideration by the General Assembly at its next regular session.

(2) It was felt that, although these proposals deal basically with scientific programmes and therefore ~~appertain~~ pertain to the purview of the Ad Hoc Committee itself, they nevertheless bear on aspects falling within the scope of the Working Group's terms of reference.

(3) With respect to co-ordination of a long-term co-operation programme in the field of scientific research and investigation of the marine environment, including the proposal of the Secretary-General of the United Nations on the

g/ See document E/4437 and Corr.5, paragraph 277.

h/ See document E/4437, paragraphs 252-267.

expanded programme of research and the proposal of the United States on the international decade of ocean exploration (IDOE), the group held the view that this task could be entrusted to the IOC whose scope is essentially scientific in nature and which has already begun activity in this field. It was stressed that the IOC should avail itself of the co-operation of the other international organizations concerned.

(4) Several delegations emphasized the importance of regional endeavours and expressed the wish that activities such as those pursued by the Intergovernmental Committee operating within the ECAFE framework should be increased. It was stressed that the particular form of regional co-operation affecting coastal States on internal and marginal seas, apart from its intrinsic value, might also set an example for co-operation on an ocean-wide scale. The usefulness of further studying this aspect was widely felt.

(5) Many delegations stressed the essential role to be assigned to the United Nations aiming towards international co-operation in the development and exploitation of marine mineral resources. In this context, they strongly supported the relevant proposal of the Secretary-General in his report on marine science and technology. i/

81. At its meeting of 23 August 1968, the Economic and Technical Working Group adopted unanimously its report to the Ad Hoc Committee. In forwarding the present report to the Ad Hoc Committee, the following reservations were made by the representatives of Argentina, Brazil, Chile, Ecuador, El Salvador and Peru in the Economic and Technical Working Group: "In view of the extremely technical nature of the matters dealt with by the Economic and Technical Working Group, the delegations of Argentina, Brazil, Chile, Ecuador, El Salvador and Peru reserve their positions generally with respect to the report of the Working Group. It is their understanding, in particular, that the conclusions reached by the Working Group in no way constitute a prejudgement concerning the legal aspects of the question."

i/ See document E/4437 and Corr.5, paragraph 277.

ANNEX II

REPORT OF THE LEGAL WORKING GROUP ON ITS FIRST SESSION

Rapporteur: Mr. S. Abdel-Hamid (United Arab Republic)

1. By resolution 2340 (XXII) the General Assembly decided to establish an Ad Hoc Committee to study the scope and various aspects of the item entitled "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction and the use of their resources in the interests of mankind". The resolution requested the Ad Hoc Committee, in co-operation with the Secretary-General, to prepare for consideration by the General Assembly at its twenty-third session a study which would include a survey of existing international agreements concerning the areas subject of the study, an account of the legal aspects of the item, and an indication regarding practical means of promoting international co-operation in the exploration, conservation and use of such areas and of their resources.

2. At its second meeting, held on 19 March 1968, the Ad Hoc Committee decided to establish a Legal Working Group to deal with the legal aspects of the item. The composition of the Legal Working Group was the same as that of the Ad Hoc Committee.

3. Also at its second meeting the Ad Hoc Committee decided to elect the following officers for the Legal Working Group:

Chairman	Ambassador Leopoldo Benites (Ecuador)
Vice-Chairman	Mr. Alexander Yankov (Bulgaria)
Rapporteur	Mr. Shaffie Abdel-Hamid (United Arab Republic)

4. The agenda for the session (A/AC.135/WG.1/R.1) as adopted at the first meeting of the Working Group included the following item:

"3. Consideration of the legal aspects of the study which the Ad Hoc Committee has been requested to prepare for the General Assembly according to resolution 2340 (XXII)"

5. On the basis of a note (A/AC.135/WG.1/R.2) and a statement by the Chairman (A/AC.135/WG.1/R.3) the Working Group adopted the following programme of work (A/AC.135/WG.1/R.4):

"1. Examination of legal principles relating to the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, including:

(a) Existing regulations in this field;

- (b) Consideration of legal principles which should govern international co-operation with a view to the preparation of an agreement on the use of the sea-bed and the ocean floor, and the subsoil thereof, exclusively for peaceful purposes;
- (c) Consideration of legal principles which should govern international co-operation in the use, in the interests of mankind, of the resources of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction.

"2. Conclusions of a legal nature emerging from the reports on the subject submitted by the Secretary-General, the specialized agencies, the International Atomic Energy Agency and other inter-governmental bodies in accordance with operative paragraph 2 of resolution 2340 (XXII)

"3. Consideration of practical legal means, which the Working Group might think fit to recommend to the Ad Hoc Committee in accordance with operative paragraph 2, sub-paragraph (c), of resolution 2340 (XXII), for ensuring:

- (a) The use exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction; and
- (b) The use of the resources of this area in the interests of mankind.

"4. Other legal aspects of the subject."

6. In deciding upon the adoption of its programme of work, the Legal Working Group took into account operative paragraphs 1 and 2 (a), (b) and (c) of General Assembly resolution 2340 (XXII) and also the statements of the Chairman of the Ad Hoc Committee of 21 and 27 March, and 18 June 1968 (A/AC.135/5, A/AC.135/6 and A/AC.135/18).

7. The Legal Working Group met between 17 June and 8 July 1968 at United Nations Headquarters in New York. It had fourteen meetings.

8. The Working Group agreed to have informal meetings during which no record was to be maintained. Two such informal meetings were held, the fourth and the fifth, for which no summary records were maintained.

9. The representative of the Inter-Governmental Maritime Consultative Organization (IMCO) made a statement to the Working Group.

10. A list of the documents that the Working Group had before it is appended.

11. In addition, several draft resolutions suggested by delegations were referred to in the debates. These draft resolutions and amendments will be found in annex III to the present report.

12. In pursuance of its programme of work the Working Group tried to identify and list some of the legal problems which arose from the subjects under study. An account of the views expressed in the course of the debate is given below as they may be indicative of the complex legal problems which require further study.

(1) Legal status of the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction

13. A very large number of members expressed the view that the area beyond the limits of present national jurisdiction was not susceptible of appropriation and that States could not exercise national sovereignty over such an area. Other members noted that there was a distinction between non-appropriation of the sea-bed and ocean floor beyond the limits of present national jurisdiction and the exploitation of these areas. Such exploitation would not serve as a basis for claims to sovereignty.

14. The view was expressed that in the formulation of a legal status, analogy between the sea-bed and ocean floor, on the one hand, and outer space and the high seas, on the other, should not be carried too far.

15. Reference was made to the concepts of res nullius and res communis. Some members considered that the concept of res communis might be applicable. Other members expressed the view that neither concept would be helpful in the present context. The view was emphasized that the sea-bed and ocean floor beyond the limits of present national jurisdiction should be regarded as having special legal status as the common heritage of mankind. With respect to non-appropriation, it was noted that a number of historic examples of occupation put forward by various writers must be regarded as very special and exceptional cases.

16. Mention has been made of banks and shoals covered by waters of a depth between a couple of metres and 200 metres, and situated beyond the limits of any national jurisdiction, some of which are already exploitable with existing technological means and techniques.

17. A number of members expressed the view that States and nationals should conduct their activities on the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction in accordance with the principles of international law, including the Charter of the United Nations.

18. It was generally felt that many problems related to the sea-bed and ocean floor were not adequately dealt with in existing international law and it was also felt that legal principles on the activities of States in the exploration and use of the sea-bed and ocean floor beyond the limits of national jurisdiction should be developed in the interests of mankind as a whole.

19. Some delegations suggested that an international legal régime should be established under the auspices of the United Nations.

(2) Reservation of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction exclusively for peaceful purposes

20. The view was emphasized by a very large number of members that the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction should be reserved exclusively for peaceful purposes in the interests of international peace and security, the promotion of international co-operation and understanding and in order to ensure the orderly development of a régime for this area. It was suggested that all States use the sea-bed and the ocean floor beyond the limits of the territorial waters of coastal States exclusively for peaceful purposes.

21. It was suggested that the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond present national jurisdiction should not be used by any State or States for any military purposes whatsoever. The suggestion was made that consideration should be given to the question of prohibiting the use for military purposes of the sea-bed and the ocean floor beyond the limits of the territorial waters of coastal States.

22. It was suggested that the terms "peaceful purposes" and "military purposes" were susceptible to different interpretations and that it would be more useful and more centrally directed at the real problem of arms limitation if the question of arms limitation on the sea-bed and ocean floor weretaken up in an appropriate forum with a view to defining those factors vital to a workable, verifiable and effective international agreement which would prevent the use of this new environment for the emplacement of weapons of mass destruction. Other delegates expressed the concern that to confine the present examination to the non-emplacment of weapons of mass destruction on the sea-bed would only afford a partial solution to the questions of the prohibition of the use of the sea-bed for military purposes.

23. Some delegations expressed the view that effective arms limitation measures on the sea-bed and the ocean floor should be realistically conceived and that the most urgent problems should be examined first. They should also be of a balanced character and command the support of all nations, including the maritime nations. The view was emphasized by some members that denuclearization of this area was a question of immediate concern. There was also strong support for the view that weapons of mass destruction should not be placed on the sea-bed or ocean floor or the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction.

24. The suggestion was made that the Ad Hoc Committee should recommend the adoption by the General Assembly of a declaration stating that the exploration and use of the sea-bed and ocean floor and the subsoil thereof, beyond the limits of present national jurisdiction, shall be carried on for the benefit and in the interests of mankind, and that the sea-bed and ocean floor and the subsoil thereof, beyond the limits of present national jurisdiction, are the common heritage of mankind and that as such, they are not subject to national appropriation and shall be used exclusively for peaceful purposes, for the benefit of all countries, particularly the developing countries.

25. A suggestion was made that the General Assembly should call on all States to use the sea-bed and the ocean floor beyond the limits of the territorial waters of

coastal States exclusively for peaceful purposes. It was also suggested by some members that the General Assembly should request the Eighteen-Nation Committee on Disarmament to consider, as an urgent matter, the question of prohibiting the use for military purposes of the sea-bed and the ocean floor beyond the limits of the territorial waters of coastal States.

26. Some members suggested reference of the question to the Eighteen-Nation Committee on Disarmament, under a precise mandate, and at the same time the question should be retained on the agenda of the Ad Hoc Committee.

27. There was also a suggestion that the Eighteen-Nation Disarmament Committee should take up the question of arms limitation on the sea-bed and ocean floor with a view to defining those factors vital to a workable, verifiable and effective international agreement which would prevent the use of this new environment for the emplacement of weapons of mass destruction.

28. Another suggestion would request the Eighteen-Nation Committee on Disarmament to consider, as a matter of urgency, the question of banning the use of the sea-bed and ocean floor beyond the limits of national jurisdiction by nuclear submarines and banning of military fortifications and missile bases on the sea-bed and ocean floor.

29. Some members suggested that the question of referring the matter, or certain specific aspects of it, to the Eighteen-Nation Committee on Disarmament should be considered by the Ad Hoc Committee. These members further suggested that consideration of this question should be preceded by consideration by the Ad Hoc Committee of general principles governing the sea-bed, ocean floor and the subsoil thereof beyond the limits of present national jurisdiction. Other members were agreed to the consideration of this subject by the Eighteen-Nation Committee on Disarmament and suggested that it should remain on the agenda of the General Assembly.

30. The view was expressed that the principles laid down in the Outer Space and Antarctica Treaty might provide some guidance for the Committee. There was also suggested an approach similar to the Outer Space Treaty which would involve prohibiting certain specific types of weapons and military installations, for example, nuclear weapons and other arms of mass destruction, as well as construction of military bases and fortifications.

(5) Use of the resources of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction in the interests of mankind

31. Members were in agreement that the use of the resources of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction should be in the interests of mankind and that the question of how those interests could best be served needs to be studied further.

32. Some members expressed the view that there could be no peaceful or rational exploitation of the natural resources unless there was exploitation in the interests of all mankind. It was also suggested that the only possibility which appeared to have no serious drawbacks was an international solution to the problem. Such a solution must be equitable, feasible and acceptable and promote orderly, peaceful

and efficient exploitation. Some members expressed the view that there should be a declaration to the effect that such areas should be exploited for the common benefit and be administered and controlled by a competent world body.

33. Others suggested that a statement of principles could appropriately state that there should be established, as soon as practicable, internationally agreed arrangements governing the exploitation of those resources and identifying the main objectives of such arrangements.

34. The view was expressed that there was no rule in existing international law prohibiting anyone from exploiting the ocean floor, subject only to the principles and rules of international law in general and the law of the sea in particular. With respect to freedom of exploitation and non-discrimination, the view was expressed that a fair application of these principles would require taking into account the special needs of the developing countries. A suggestion was made that the especial rights and interests of the coastal States regarding the conservation and exploration of those resources should be taken into account.

35. Several delegations emphasized that the interests of landlocked countries in participating in the exploration and exploitation of the sea-bed and the ocean floor beyond the limits of present national jurisdiction should be safeguarded.

(4) Freedom of scientific research and exploration of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction

36. Some members emphasized the view that there should be freedom of scientific research and exploration of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction. The view was expressed that results of scientific activities should be made available to all countries without discrimination and that international scientific co-operation should be promoted. It was suggested that it might be desirable to have one central body, such as UNESCO, co-ordinate all scientific and research activities and pool the results in the Intergovernmental Oceanographic Commission. It was also stated that it was necessary to distinguish between purely scientific research and that connected with the exploitation of resources. A large number of members emphasized that scientific exploration could not serve as a basis for the assertion of sovereignty or claims to appropriation. Some members expressed the view that scientific exploration should not serve as a basis for claims to exploitation. Preference was also made to the utility of the proposal that 1970-1980 should be an International Decade for Ocean Exploration.

(5) The question of reasonable regard to the interests of other States in their exercise of the freedoms of the high seas

37. Several members expressed the view that any activities on the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction should be carried out with reasonable regard to the interests of other States in their exercise of the freedom of the high seas, as recognized by the provisions and practice of the law of the sea. An express reference was made to article 2 of the Convention on the High Seas. The view was expressed that such activities should not obstruct navigation or fishing or the laying of submarine cables and should not result in damage to the marine flora and fauna. The devices

employed for such activities should be used in a manner consonant with international arrangements for the protection of the devices and of the persons manning them. With respect to submarine cables and pipelines, reference was made to the 1884 Convention on the Protection of Submarine Cables, article 26 of the Convention on the High Seas and article 4 of the Convention on the Continental Shelf.

38. Concern was also expressed about the question of conservation of the resources of the high seas. The view was advanced by some delegations that it might be reasonable, in exceptional cases, to grant coastal States some special rights for the conservation and regulation of the fisheries of the coastal areas, thus safeguarding the means of livelihood of such nations from the effects of mineral exploitation.

(6) The question of pollution and other hazards

39. A number of members stated that exploitation and use of the sea-bed and ocean floor and the subsoil thereof underlying the high seas beyond the limits of present national jurisdiction should be carried out in accordance with rules and regulations concerning the prevention of pollution, radio-active contamination and conservation of the living resources of the sea. Concern was expressed about the possibility of an accident causing pollution which might affect the fisheries of nearby regions and countries. The view was expressed that, in a future international legal régime, provision would have to be made concerning responsibility and liability for damage. The suggestion was made that appropriate safeguards should be assured and that existing international arrangements, such as the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, be extended, in order to minimize pollution of the seas and the disturbance of the existing biological, chemical and physical processes and balances.

Other questions

40. It was generally agreed that there is an area of the sea-bed and ocean floor which is not subject to national jurisdiction and that this fact, which seemed obvious, needed emphasizing because of the broad interpretation of which article 1 of the Convention on the Continental Shelf was susceptible. It was pointed out that none of the members in the Working Group had suggested that either international law or article 1 of the Continental Shelf Convention authorizes the extension of limits for an indefinite distance into the deep ocean floor and this was considered possibly a valuable finding. On the other hand, several of the participants in the debate referred to the need for a more precise definition of the sea-bed and the ocean floor underlying the high seas beyond national jurisdiction, in order for the areas under discussion to have internationally agreed boundaries. There was agreement in general that the question of these boundaries raised difficult problems and some members stated that for this reason they were not yet ripe for immediate consideration. Some members were of the view that the question of the outer limits of the continental shelf, although indirectly related to the task of the Working Group, was not within its mandate. Others opposed any discussion of this subject on the grounds that the continental shelf was fully under national jurisdiction. In this connexion, it was also pointed out that national jurisdiction applies to the continental shelf only within the limits established by international law. A suggestion was made that a special sub-item entitled "Elaboration of a definition of the sea-bed beyond the limits of national jurisdiction" should be included in the agenda of the appropriate forum for the next year.

41. Several representatives suggested a moratorium or freezing of national claims over the sea-bed beyond the limits of present national jurisdiction.

42. The participants in the debate referred to the legal study prepared by the Secretariat under General Assembly resolution 2340 (XXII) (A/AC.135/10, 11, 19 and Add. 1 and 2). It was suggested that, subject to the observations of delegations, the "Survey of existing international agreements concerning the sea-bed and ocean floor, and the subsoil thereof, underlying the high seas beyond national jurisdiction" (A/AC.135/10) might serve as an element in the survey called for by operative paragraph 2 (a) of General Assembly resolution 2340 (XXII). Although the study was highly praised, there were also observations relating to points of drafting or materials excluded from or included in the study. The representative of the Secretary-General stated that such observations would be taken into account by the Secretariat. He added that information concerning international agreements or national legislation which may subsequently be received from Governments would be incorporated in the relevant documents. It appeared appropriate to the Working Group in the light of paragraph 2 of General Assembly resolution 2340 (XXII) to suggest to the Ad Hoc Committee that the Secretariat study be forwarded to the General Assembly at its twenty-third session.

43. It was widely felt that following precedents set by the United Nations in its treatment of other questions, such as that of outer space, a statement of principles in the form of a declaration could be adopted by the General Assembly concerning the peaceful use of the sea-bed, ocean floor and the subsoil thereof beyond the limits of present national jurisdiction. The contents of such a declaration of principles were, however, regarded as a matter for more detailed discussion and consultation. Various principles, some of which received wide support, were proposed for inclusion in the draft declaration, inter alia: that the sea-bed, the ocean floor and the subsoil thereof be used exclusively for peaceful purposes and for the benefit of mankind; that the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond national jurisdiction should not be subject to national appropriation by claim of sovereignty, by means of use, occupation or any other means; that activities in the exploration and use of the sea-bed and the ocean floor be carried out in accordance with international law, including the Charter of the United Nations; that all activities in the exploration and use of the sea-bed and the ocean floor beyond national jurisdiction should be conducted with due regard for the freedoms of the high seas and with due regard for the interests of other States and should not infringe on the legally protected uses of the sea for fishing, navigation, communications, research and other purposes complying with international law and with generally agreed standards of security and safety regulations; the principle of conservation of the marine resources, including safeguards against pollution; international co-operation for scientific research and exploration and exploitation of marine resources; safety standards for installations and equipment; recognition of the special needs and rights of developing countries; and international responsibility and liability for damage. It was also proposed that a declaration of principles deal with the question of a more precise boundary for the area under consideration, and with the question of internationally agreed arrangements concerning the use of the resources of this area.

44. Some delegations considered that such a declaration could be adopted by the General Assembly at its forthcoming session. Some delegations, however, considered that the precise timing for its adoption was also dependent upon more detailed discussion and consultations.

45. Owing to the limited time at its disposal and the complexity of the problems before it, the Legal Working Group was not in a position at this session to complete its programme of work. It considered, however, that a valuable exchange of views had taken place and that its preliminary exploration of problems might provide the basis for further consideration of the issues involved.

Appendix

LIST OF DOCUMENTS BEFORE THE WORKING GROUP

Survey of Existing International Agreements concerning the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Underlying the High Seas beyond the Limits of Present National Jurisdiction (A/AC.135/10).

Survey of National Legislation concerning the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Underlying the High Seas beyond the Limits of Present National Jurisdiction (A/AC.135/11).

Summary of Views of Member States (A/AC.135/12).

Legal Aspects of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Underlying the High Seas beyond the Limits of Present National Jurisdiction, and the Use of Their Resources in the Interests of Mankind (A/AC.135/19, A/AC.135/19/Add.1 and A/AC.135/19/Add.2).

Letter dated 30 May 1968 from the Director-General of the United Nations Educational, Scientific and Cultural Organization addressed to the Secretary-General (A/AC.135/22).

Regulatory Aspects of Exploration and Exploitation including Rules Respecting Ocean Data Stations, Drilling Rigs, Production Platforms and Other Devices. Note by the Inter-Governmental Maritime Consultative Organization (A/AC.135/23).

Resources of the Sea. Introduction and Summary (E/4449);

Part One: Mineral Resources of the Sea beyond the Continental Shelf (E/4449/Add.1);

Part Two: Food Resources of the Sea beyond the Continental Shelf Excluding Fish (E/4449/Add.2).

A limited number of copies of the following documents were distributed under their original symbol:

UNESCO - Intergovernmental Oceanographic Commission (Information Paper on the Legal Problems Associated with Manned and Unmanned Ocean Data Stations) (ICC/INF.108). Paris, March 1967.

UNESCO - Intergovernmental Oceanographic Commission - Fifth Session (UNESCO, Paris, 19-27 October 1967) (SC/CS/150). Paris, 25 March 1968, particularly item 6 - Legal Aspects of Scientific Research and Its Applications on the High Seas.

ANNEX III

DRAFT RESOLUTIONS AND AMENDMENTS SUBMITTED TO THE AD HOC COMMITTEE (in order of submission)

Union of Soviet Socialist Republics: draft resolution on the prohibition of the use of the sea-bed and the ocean floor beyond the limits of territorial waters for military purposes
(A/AC.135/20)

The General Assembly,

Recalling its resolution 2340 (XXII) in which it referred to the importance of preserving the sea-bed and the ocean floor, and the subsoil thereof, from actions and uses which might be detrimental to the common interests of mankind, and recognized that the exploration and use of those areas should be conducted in accordance with the purposes and principles of the Charter of the United Nations, in the interest of maintaining international peace and security and for the benefit of all mankind,

Recognizing the need to take steps to prevent the arms race from spreading to the sea-bed and the ocean floor,

1. Solemnly calls upon all States to use the sea-bed and the ocean floor beyond the limits of the territorial waters of coastal States exclusively for peaceful purposes;

2. Requests the Eighteen-Nation Committee on Disarmament to consider, as an urgent matter, the question of prohibiting the use for military purposes of the sea-bed and the ocean floor beyond the limits of the territorial waters of coastal States.

India: draft declaration of legal principles governing the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the uses of their resources in the interests of mankind
(A/AC.135/21)

The General Assembly,

Noting that developing technology is making the sea-bed and the ocean floor, and subsoil thereof, accessible and exploitable for scientific, economic, military and other purposes,

Recognizing the common interests of mankind in the sea-bed and the ocean floor, which constitute the major portion of the area of this planet,

Believing that the exploitation and use of the sea-bed and ocean floor and the subsoil thereof should be carried out for the betterment of mankind and for the benefit of States irrespective of their degree of economic or scientific development,

Desiring to contribute to broad international co-operation in the scientific as well as in the legal aspects of the exploration and uses of the resources of the sea-bed and ocean floor,

Believing that such co-operation will contribute to the development of mutual understanding and to the strengthening of friendly relations between nations and peoples,

Mindful of the importance of preserving the sea-bed and ocean floor, and the subsoil thereof from actions and uses which might be detrimental to the common interests of mankind,

Recognizing that the exploration and use of the sea-bed and the ocean floor and the subsoil thereof should be conducted in accordance with the principles and purposes of the United Nations Charter, in the interests of maintaining international peace and security and for the benefit of all mankind,

Mindful of the provisions and practice of the law of the sea relating to this question,

Recalling its resolution 2340 (XXII) of 18 December 1967,

Convinced that, pending the conclusion of a Treaty regulating the administration and utilization of the sea-bed and ocean floor and the subsoil thereof, in the common interests of mankind, it is necessary to set forth the principles applicable in this regard,

Declares as follows:

1. The exploration and use of the sea-bed and ocean floor and the subsoil thereof, beyond the limits of present national jurisdiction, shall be carried on for the benefit and in the interests of mankind;
2. The sea-bed and ocean floor and the subsoil thereof, beyond the limits of present national jurisdiction, are the common heritage of mankind. As such, they are not subject to national appropriation and shall be used exclusively for peaceful purposes, for the benefit of all countries, particularly the developing countries;
3. The activities of States in the exploration and use of the sea-bed and ocean floor shall be carried out in accordance with international law, including the Charter of the United Nations, in the interests of maintaining international peace and security and for promoting international co-operation and understanding;
4. Taking into account the work currently being performed by other bodies, the United Nations shall endeavour to provide direction and purpose to international and inter-governmental activities with regard to the sea-bed and ocean floor and the subsoil thereof, beyond the limits of present national jurisdiction.

United States of America: draft resolution on preventing the
emplacement of weapons of mass destruction on the sea-bed and
ocean floor (A/AC.135/24)

The General Assembly,

Desiring that workable arms limitation measures be achieved that will enhance the peace and security of all nations and bring the world nearer to general and complete disarmament,

Requests the Eighteen-Nation Committee on Disarmament to take up the question of arms limitation on the sea-bed and ocean floor with a view to defining those factors vital to a workable, verifiable and effective international agreement which would prevent the use of this new environment for the emplacement of weapons of mass destruction.

United States of America: draft resolution containing statement
of principles concerning the deep ocean floor (A/AC.135/25)

The General Assembly,

Desiring to encourage the exploration, use and development of the deep ocean floor to the fullest extent possible for the benefit and in the interest of all mankind,

Believing that such exploration and use of the deep ocean floor will contribute to international co-operation and understanding,

Convinced that no nation, regardless of geographical location, level of economic development, or technological capability, should be denied the opportunity to participate in the exploration and use of the deep ocean floor,

Conscious of the importance of promoting the general welfare of all peoples, and of furthering scientific study and the conservation of resources,

Reaffirming the traditional freedoms of the high seas under international law,

Recalling its resolution 2340 (XXII) of 18 December 1967,

Commends to States for their guidance the following principles concerning the deep ocean floor:

1. No State may claim or exercise sovereignty or sovereign rights over any part of the deep ocean floor. There shall be no discrimination in the availability of the deep ocean floor for exploration and use by all States and their nationals in accordance with international law;

2. There shall be established, as soon as practicable, internationally agreed arrangements governing the exploitation of resources of the deep ocean

floor. These arrangements shall reflect the other principles contained in this Statement of Principles concerning the Deep Ocean Floor and shall include provision for:

(a) The orderly development of resources of the deep ocean floor in a manner reflecting the interest of the international community in the development of these resources;

(b) Conditions conducive to the making of investments necessary for the exploration and exploitation of resources of the deep ocean floor;

(c) Dedication as feasible and practicable of a portion of the value of the resources recovered from the deep ocean floor to international community purposes; and

(d) Accommodation among the commercial and other uses of the deep ocean floor and marine environment;

3. Taking into account the Geneva Convention of 1958 on the Continental Shelf, there shall be established, as soon as practicable, an internationally agreed precise boundary for the deep ocean floor - the sea-bed and subsoil beyond that over which coastal States may exercise sovereign rights for the purpose of exploration and exploitation of its natural resources; exploitation of the natural resources of the ocean floor that occurs prior to establishment of the boundary shall be understood not to prejudice its location, regardless of whether the coastal State considers the exploitation to have occurred on its "continental shelf";

4. States and their nationals shall conduct their activities on the deep ocean floor in accordance with international law, including the Charter of the United Nations, and in the interest of maintaining international peace and security and promoting international co-operation, scientific knowledge, and economic development;

5. In order to further international co-operation in the scientific investigation of the deep ocean floor, States shall:

(a) Disseminate, in a timely fashion, plans for and results of national scientific programmes concerning the deep ocean floor;

(b) Encourage their nationals to follow similar practices concerning dissemination of such information;

(c) Encourage co-operative scientific activities regarding the deep ocean floor by personnel of different States;

6. In the exploration and use of the deep ocean floor States and their nationals:

(a) Shall have reasonable regard for the interests of other States and their nationals;

(b) Shall avoid unjustifiable interference with the exercise of the freedom of the high seas by other States and their nationals, or with the conservation of

the living resources of the seas, and any interference with fundamental scientific research carried out with the intention of open publication;

(c) Shall adopt appropriate safeguards so as to minimize pollution of the seas and disturbance of the existing biological, chemical and physical processes and balances; each State shall provide timely announcement and any necessary amplifying information of any marine activity or experiment planned by it or its nationals that could harmfully interfere with the activities of any other State or its nationals in the exploration and use of the deep ocean floor. A State which has reason to believe that a marine activity or experiment planned by another State or its nationals could harmfully interfere with its activities or those of its nationals in the exploration and use of the deep ocean floor may request consultation concerning the activity or experiment;

7. States and their nationals shall render all possible assistance to one another in the event of accident, distress or emergency arising out of activities on the deep ocean floor.

United Republic of Tanzania: amendments to the draft resolution contained in document A/AC.135/20 (A/AC.135/26)

Substitute operative paragraph 1 by the following paragraph:

1. Declares that the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond present national jurisdiction, should not be used by any State or States for any military purposes whatsoever.

Substitute operative paragraph 2 by the following paragraph:

2. Requests the ENDC to consider, as a matter of urgency, the question of (a) banning the use of the sea-bed and ocean floor beyond the limits of national jurisdiction by nuclear submarines; (b) banning of military fortifications and missile bases on the sea-bed and ocean floor.

United Republic of Tanzania: amendments to the draft resolution contained in document A/AC.135/24 (A/AC.135/27)

Replace preambular paragraph 1 by the following paragraph:

Recalling the preamble of its resolution 2340 (XXII) on the question of the reservation exclusively for peaceful purposes of the sea-bed and ocean floor, beyond present national jurisdiction, in which it was especially stated that "mindful also of the importance of preserving the sea-bed and ocean floor, and the subsoil thereof, as contemplated in the title of the item, from actions and uses which might be detrimental to the common interests of mankind".

Add an operative paragraph as follows as operative paragraph 1:

1. Declares that the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond present national jurisdiction, should not be used by any State or States for any military purposes whatsoever.

Substitute operative paragraph 1 with the following paragraph which will become operative paragraph 2:

2. Requests the ENDC to consider, as a matter of urgency, the question of (a) banning the use of sea-bed and ocean floor beyond the limits of national jurisdiction by nuclear submarines; (b) banning of military fortifications and missile bases on the sea-bed and ocean floor.

Belgium: Revised working paper

1. In paragraph 2(c) of its resolution 2340 (XXII) the General Assembly requested "an indication regarding practical means to promote international co-operation in the exploration, conservation and use of the sea-bed and the ocean floor, and the subsoil thereof, as contemplated in the title of the item, and of their resources...". It was also requested that the Committee's views on this subject should be put into concrete shape and presented formally (A/AC.135/L.1, para. 15).

2. The Belgian delegation feels that the question of how to continue the task begun by the Ad Hoc Committee comes within the above mandate and should be discussed by the Ad Hoc Committee at its third session. A recommendation might be addressed to the General Assembly that it should decide "to establish a standing committee responsible not only for enumerating the problems, but also for preparing solutions acceptable to the international community in the form of resolutions and declarations of principle, on the one hand, and treaties and international conventions, on the other" (statement by the representative of Belgium at the meeting of the Ad Hoc Committee on 9 July 1968).

3. The terms of reference of this new body might be laid down as follows:

(a) To study the elaboration of a body of rules which would promote international co-operation in the exploration and use of the sea-bed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction and, in particular, the legal principles which should govern the rights to explore and exploit the resources of this area, and the economic requirements which such régime should satisfy in order to meet the interests of the international community;

(b) To study the possibilities of exploiting the resources of this area, taking into account the foreseeable development of technology and the economic implications of such exploitation and bearing in mind the fact that such exploitation should benefit mankind as a whole;

(c) To study further the reservation of this area exclusively for peaceful purposes, taking into account the studies being undertaken in the field of disarmament;

(d) To review the studies undertaken in the field of exploration and research in this area in order to intensify international co-operation and to stimulate the exchange and the widest possible dissemination of scientific knowledge on the subject;

(e) To consider measures of co-operation to be adopted by the international community in order to prevent the marine pollution which may result from the exploration and exploitation of the resources of this area;

(f) To work in close co-operation with the specialized agencies of the United Nations, the International Atomic Energy Agency and the inter-governmental bodies dealing with the problems referred to in this resolution, so as to avoid any duplication or overlapping of activities between these organizations;

(g) To make recommendations to the General Assembly on all these questions.

4. Once these questions have been discussed during the third session of the Ad Hoc Committee, the Belgian delegation proposes to submit a draft resolution on the basis of the foregoing considerations, as follows:

Reservation exclusively for peaceful purposes of the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond the limits of national jurisdiction, and the international co-operation for the use of their resources for the benefit of all mankind

The General Assembly,

Recalling its resolution 2340 (XXII),

Reaffirming the objectives set forth therein,

Taking note of the report prepared by the Ad Hoc Committee,

Recognizing that it is in the interest of mankind as a whole to favour the exploration and the use of the sea-bed and the ocean floor and the subsoil thereof, beyond the limits of national jurisdiction, for peaceful purposes,

Considering that it is important to promote international co-operation for the exploitation of the resources of this area,

Convinced that such exploitation should be carried out for the benefit of mankind as a whole,

Desiring to prevent such exploitation from becoming a subject of rivalry between States,

Considering that it is essential to ensure the co-ordination of international activities in this regard and that the United Nations should be given a central responsibility in this matter,

1. Establishes a Committee on the peaceful uses of the sea-bed and the ocean floor beyond the limits of national jurisdiction, composed of the following States:

2. Instructs the Committee:

(a) To study the elaboration of a body of rules which would promote international co-operation in the exploration and use of the sea-bed and the ocean floor and the subsoil thereof, beyond the limits of national jurisdiction and, in particular, the legal principles which should govern the rights to explore and exploit the resources of this area, and the economic requirements which such régime should satisfy in order to meet the interests of the international community;

(b) To study the possibilities of exploiting the resources of this area, taking into account the foreseeable development of technology and the economic implications of such exploitation and bearing in mind the fact that such exploitation should benefit mankind as a whole;

(c) To study further the reservation of this area exclusively for peaceful purposes, taking into account the studies being undertaken in the field of disarmament;

(d) To review the studies undertaken in the field of exploration and research in this area in order to intensify international co-operation and to stimulate the exchange and the widest possible dissemination of scientific knowledge on the subject;

(e) To consider measures of co-operation to be adopted by the international community in order to prevent the marine pollution which may result from the exploration and exploitation of the resources of this area;

(f) To work in close co-operation with the specialized agencies of the United Nations, the International Atomic Energy Agency and the inter-governmental bodies dealing with the problems referred to in this resolution, so as to avoid any duplication or overlapping of activities between these organizations;

(g) To make recommendations to the General Assembly on all these questions.

3. Requests the Committee, in co-operation with the Secretary-General, to submit to the General Assembly reports on its activities at each subsequent session;

4. Invites the specialized agencies, the International Atomic Energy Agency and other inter-governmental bodies to co-operate fully with the Committee in the implementation of this resolution.

Iceland: proposed draft resolution on a study of means for minimizing the danger of pollution of the marine environment which might arise from the exploration and exploitation of the sea-bed and ocean floor and the subsoil thereof

The General Assembly,

Recognizing that it is in the common interest of all nations that the exploration and exploitation of the resources of the sea-bed and the ocean floor, and the subsoil thereof, should be conducted in such a manner as to avoid infringement of the other interests and established rights of nations with respect to the uses of the high seas,

Mindful of the threat to the marine environment presented by pollution which might result from exploration and exploitation of the areas under consideration,

Desiring to assure satisfactory measures of prevention and control of such pollution and to allay the serious damage which might be caused to the marine environment and, in particular, to the living marine resources which constitute one of mankind's most valuable food resources,

Noting the complex problem of assuring effective co-ordination in the wide field of environmental pollution and in the more specific area of prevention and control of marine pollution,

Recalling, in this regard, the progress achieved towards such concerted action by inter-governmental bodies and the establishment by the Food and Agriculture Organization of the United Nations, the United Nations Educational, Scientific and Cultural Organization and its Intergovernmental Oceanographic Commission and the Inter-Governmental Maritime Consultative Organization of a Joint Group of Experts on the Scientific Aspects of Marine Pollution,

Recalling further the competence and continuing valuable contributions of the other competent inter-governmental organizations concerned,

1. Commends to States the adoption of appropriate safeguards against the dangers of pollution arising from the exploration and exploitation of the resources of the sea-bed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, notably in the form of concrete measures of international co-operation for the purpose of realizing this aim;

2. Considers that, in connexion with the elaboration of principles underlying a possible future international régime for the area concerned, a study should be made of the modalities of exploration and exploitation with a view to clarifying all aspects underlying the principle of protection against the consequences of pollution of the living and other resources of the sea-bed and ocean floor, and the superjacent waters;

3. Considers further that such a study should take into consideration the necessity for keeping at a minimum mutual interference between the many means by which the wealth of ocean space may be harvested, and that it should extend to the examination of the circumstances in which measures may be undertaken by States for the protection of the living and other resources of those areas in which pollution detrimental to those resources has occurred or is imminent;

4. Requests the Secretary-General to entrust to the appropriate and competent body or bodies presently undertaking co-ordinated work in the field of marine pollution control the study referred to in paragraphs 2 and 3 above and to request a report thereon for the guidance of the General Assembly.

United States of America: draft resolution on the
international decade of ocean exploration

The General Assembly,

Recalling its concern for ascertaining practical means to promote international co-operation in the exploration, conservation and use of the sea-bed and the ocean floor, and the subsoil thereof, as manifested in its resolution 2340 (XXII),

Recalling as well that in its resolution 2172 (XXI) it requested that the Secretary-General prepare proposals for ensuring the most effective arrangements for an expanded programme of international co-operation to assist in a better understanding of the marine environment through science, and for initiating and strengthening marine education and training programmes,

Recalling further the proposals made by the Secretary-General in his report (E/4487) pursuant to resolution 2172 (XXI),

Noting that the Bureau and Consultative Council of the Intergovernmental Oceanographic Commission of UNESCO considered the proposed International Decade of Ocean Exploration a useful initiative for broadening and accelerating investigations of the oceans and for strengthening international co-operation,

Noting also the recommendation adopted by the Economic and Social Council on 2 August 1968, inviting the General Assembly to endorse the concept of a co-ordinated long-term programme of oceanographic research, taking into account such initiatives as the proposal for an International Decade of Ocean Exploration and international programmes already considered, approved and adopted by the Intergovernmental Oceanographic Commission for implementation in co-operation with other specialized agencies,

Aware of the consideration given to the proposal in the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor, arising from the important contribution which the Decade would make to scientific research and exploration of the sea-bed and deep ocean floor,

1. Welcomes and commends to Member States the concept of an International Decade of Ocean Exploration to be undertaken within the framework of a long-term programme of research and exploration under the general aegis of the United Nations;
2. Invites interested Member States to formulate proposals for national and international scientific programmes and agreed activities to be undertaken during the Decade with due regard to the interests of developing countries, to transmit these proposals to the Intergovernmental Oceanographic Commission, and to begin such activities as soon as practicable;
3. Urges Member States to publish as soon as practicable the results of activities which they will have undertaken within the framework of the Decade and at the same time to communicate these results to the Intergovernmental Oceanographic Commission;

4. Requests the Intergovernmental Oceanographic Commission:

(a) To further and co-ordinate, in co-operation with other interested agencies, an expanded, accelerated, long-term and sustained programme of world-wide exploration of the oceans and their resources of which the Decade will be an element, including international agency programmes, expanded international exchange of data from national programmes, and international efforts to strengthen the research capabilities of all interested nations;

(b) To report through appropriate channels to the twenty-fourth session of the General Assembly on the progress made in ocean activities undertaken pursuant to this resolution.

Working paper on the draft Declaration of General Principles proposed by Argentina, Brazil, Ceylon, Chile, Ecuador, El Salvador, India, Kenya, Liberia, Libya, Pakistan, Peru, Thailand, United Arab Republic and United Republic of Tanzania concerning the item "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind"

The General Assembly,

Recalling its resolution 2340 (XXII) of 18 December 1967, on the "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and ocean floor, and the subsoil thereof, underlying the high seas, beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind",

Bearing in mind the perspectives that technological advances have opened up with regard to the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, an area which constitutes the major portion of the earth surface,

Considering that the exploration, use and exploitation of the resources of this area, and the subsoil thereof are a matter of common interest to all mankind,

Convinced that the exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, should be carried on for the benefit of all States, whether coastal or land-locked, and specially for the benefit of the developing countries, taking into account the interests of the coastal States in the protection, conservation and exploitation of the resources that lie within their jurisdiction,

Recognizing that the reservation of this area exclusively for peaceful purposes will serve the principles and purposes of the Charter of the United Nations and thereby the cause of mankind,

Believing also that the use of the sea-bed and ocean floor should contribute to strengthen co-operation and assistance among States,

Firmly convinced that the exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, should conform to the purposes and principles of the Charter of the United Nations so as to safeguard international peace and security, ensure the territorial integrity of States and promote international co-operation,

Considering further that the United Nations has the responsibility for the promotion of the common interest of mankind in the exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item,

Recognizing the need for promoting scientific investigation on the peaceful utilization of the sea-bed and the ocean floor, and the subsoil thereof, as referred to in the title of the item, and the importance of furthering international co-operation in such investigation,

Mindful of the necessity of establishing general principles to guide all activities in the exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item,

Declares the following general principles:

1. The sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, are the common heritage of mankind and no State may claim or exercise sovereignty over any part of the area mentioned in resolution 2340 (XXII);

2. The exploration, use and exploitation of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, shall be carried on exclusively for peaceful purposes;

3. The exploration, use and exploitation of this area, and the subsoil thereof, as referred to in the title of the item, shall be carried out for the benefit and in the interest of mankind;

4. The exploration and use of the sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, and the exploitation of their resources shall be carried on in accordance with the principles and purposes of the Charter of the United Nations and an international régime to be established with the purpose of contributing to the maintenance of international peace and security, the respect for the territorial integrity of States and the interests of the coastal States, and the promotion of economic development, particularly that of the developing countries, whether coastal or land-locked;

5. The international régime to be established shall also consider the way for the most appropriate and equitable application of benefits obtained from the exploration, use and exploitation of the sea-bed and ocean floor and the subsoil thereof, as referred to in the title of the item, through a suitable international machinery, for the economic, social, scientific and technological progress of the developing countries;

6. All activities in the sea-bed and ocean floor and the subsoil thereof, as referred to in the title of the item, shall conform to the following guidelines, aimed at protecting the rightful interests of other States:

(a) No impediment shall be created to navigation and fishing nor shall there be undue interference with the laying and the maintenance of submarine cables and pipelines;

(b) Coastal States closest to the area in which any activities occur shall be consulted lest their rightful interest be harmed;

(c) Any such activity must take into account the economic interest of the developing countries so as not to be detrimental, in particular, to the activities undertaken within the national jurisdictions of those countries;

(d) Appropriate safety measures shall be adopted in all activities of exploration, use and exploitation of the area and international co-operation for assistance in case of mishap shall be facilitated;

(e) Pollution of the waters of the marine environment, specially radioactive contamination, shall be avoided by means of international co-operation;

(f) No damage shall be caused to animal and plant life in the marine environment;

(g) Damages caused by any such activities entail liability;

7. The sea-bed and ocean floor, and the subsoil thereof, as referred to in the title of the item, shall be open to scientific investigation, without discrimination, and States shall foster international co-operation in this investigation so as to enable all States to have access to it, disseminate its results and provide technical assistance to the developing countries;

8. The United Nations, in co-operation with the specialized agencies and IATA, shall take adequate measures to ensure the observance of these general principles and guidelines and the implementation of the objectives set forth in this declaration with the aim of promoting international co-operation in this field.

ANNEX IV

LIST OF DOCUMENTS OF THE AD HOC COMMITTEE

- Note by the Secretary-General /transmitting replies of Member Governments to the Secretary-General's note verbale under operative paragraph 3 (a) of General Assembly resolution 2340 (XXII)/ A/AC.135/1 and Corr.1 (English only) and Add.1-10
- Letter dated 7 February 1968 from the Director-General of the United Nations Educational, Scientific and Cultural Organization addressed to the Secretary-General A/AC.135/2
- Letter dated 20 March 1968 addressed to the Chairman of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction by the representative of Belgium A/AC.135/3
- Scientific aspects relevant to the study of the peaceful uses of the sea-bed and ocean floor beyond the limits of national jurisdiction - an outline prepared by the Intergovernmental Oceanographic Commission (ICC) secretariat A/AC.135/4
- Statement by the Chairman of the Ad Hoc Committee at its ninth meeting, on 27 March 1968 A/AC.135/5
- Statement by the Chairman of the Ad Hoc Committee at the fourth meeting, on 21 March 1968 A/AC.135/6
- Note by the Secretary-General /bringing to the attention of the Committee documents E/4449 and Add.1 and 2, containing the report of the Secretary-General on the resources of the sea beyond the continental shelf/ A/AC.135/7
- Letter dated 13 May 1968 from the Secretary-General of the World Meteorological Organization addressed to the Secretary-General A/AC.135/8 and Corr.1 (English only)
- Note by the Secretary-General /bringing to the attention of the Committee document E/4487, containing the report of the Secretary-General on Marine Science and Technology: Survey and Proposals/ A/AC.135/9
- Survey of existing international agreements concerning the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction - document prepared by the Secretariat A/AC.135/10 and Rev.1

Survey of national legislation concerning the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction - document prepared by the Secretariat	A/AC.135/11 and Corr.1 and Add.1
Summary of views of Member States - working paper prepared by the Secretariat	A/AC.135/12
Note by the Secretariat <u>[relating to papers for the information of the Economic and Technical Working Group]</u>	A/AC.135/13
Economic implications of the exploitation of mineral resources on and underlying the sea-bed and ocean floor and its subsoil with particular reference to world trade and prices - note by the Secretariat	A/AC.135/14
Effect of the exploitation of mineral resources on the superjacent waters and on other uses of the marine environment - note by the Secretariat	A/AC.135/15
Provisional agenda for the second session	A/AC.135/16
Scientific aspects of peaceful uses of the ocean floor, prepared by the IOC secretariat for the United Nations General Assembly <u>Ad Hoc</u> Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction	A/AC.135/17
Programme of work: statement by the Chairman of the <u>Ad Hoc</u> Committee at its tenth meeting, on 17 June 1968	A/AC.135/18
Legal aspects of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind - study prepared by the Secretariat	A/AC.135/19 and Add.1 and 2
Union of Soviet Socialist Republics: draft resolution on the prohibition of the use of the sea-bed and the ocean floor beyond the limits of territorial waters for military purposes	A/AC.135/20
India: draft declaration of legal principles governing the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind	A/AC.135/21

A/AC.135/22

A/AC.135/23

A/AC.135/24

A/AC.135/25

A/AC.135/26

A/AC.135/27

A/AC.135/28

Summary report of the fifth session of the Intergovernmental Oceanographic Commission (SC/CS/150).

- Letter dated 14 August 1968 from the permanent representative of Belgium to the Chairman of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction A/AC.135/29 and Rev.1
- Statement by the Chairman of the Ad Hoc Committee at its thirteenth meeting, on 19 August 1968 A/AC.135/30
- Iceland: proposed draft resolution on a study of means for minimizing the danger of pollution of the marine environment which might arise from the exploration and exploitation of the sea-bed and ocean floor and the subsoil thereof A/AC.135/31
- Statement by the Chairman of the Ad Hoc Committee at the seventeenth meeting on 23 August 1968 A/AC.135/32
- United States of America: draft resolution on the international decade of ocean exploration A/AC.135/33 and Corr.
- Statement by the Chairman of the Ad Hoc Committee at its nineteenth meeting, on 26 August 1968, summarizing the discussion on the scientific aspects of the item A/AC.135/34 and Corr.
- Statement by the Chairman of the Ad Hoc Committee at its twenty-first meeting, on 27 August 1968 A/AC.135/35
- Working paper on the draft Declaration of General Principles proposed by Argentina, Brazil, Ceylon, Chile, Ecuador, El Salvador, India, Kenya, Liberia, Libya, Pakistan, Peru, Thailand, United Arab Republic and United Republic of Tanzania concerning the item "Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind" A/AC.135/36
- Draft interim report of the Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction covering its first and second sessions (prepared by the Rapporteur in accordance with a decision of the Ad Hoc Committee at its twelfth meeting, on 9 July 1968) A/AC.135/L.1 and Corr.1
- Provisional programme of work for the third session A/AC.135/L.2 and Rev.1

Report of the Economic and Technical Working Group	A/AC.135/L.3 and Corr.1
Progress report of the Economic and Technical Working Group	A/AC.135/R.1 and Add.1
Report of the first session of the Legal Working Group	A/AC.135/R.2
Draft report of the <u>Ad Hoc</u> Committee to study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction	A/AC.135/R.3 and Add.1

