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COMMITTEE ON THE PEACEFUL USES OF  
THE SEA-BED AND THE OCEAN FLOOR  
BEYOND THE LIMITS OF NATIONAL  
JURISDICTION

Economic and Technical Sub-Committee

Report

1. The Economic and Technical Sub-Committee held 9 meetings in New York from 9 to 23 March 1970 and 6 meetings in Geneva from 11 to 24 August 1970. The meetings were attended by the representatives of the forty-two member countries of the Committee. Also present were the observers of the following countries: Barbados, Burma, Cuba, Denmark, Ecuador, Finland, Guyana, Indonesia, Iran, Jamaica, Morocco, Netherlands, New Zealand, Nicaragua, Philippines, Portugal, South Africa, Spain, Sweden, Tunisia, Turkey, Ukrainian SSR, Uruguay and Venezuela, and the representatives of the ILO, FAO, UNESCO and its IOC, WHO, IMCO and IAEA.
2. The Bureau of the Economic and Technical Sub-Committee was composed of the following members:  

Chairman: Mr. Roger Denorme (Belgium)

Vice-Chairman: Mr. J.S. Teja (India) during the Session in New York  
Mr. C.V. Ranganathan (India) during the Session in Geneva

Rapporteur: Mr. Anton Prohaska (Austria)
3. An interim report (A/AC.138/SC.2/L.6) was adopted at the end of its thirty-fourth meeting held on 23 March 1970. The Sub-Committee adopted its final report at the end of its 40th meeting (A/AC.138/29).

4. Following proposals made by the Chairman (A/AC.138/SC.2/L.2 and A/AC.138/SC.2/L.8), the Economic and Technical Sub-Committee considered the economic and technical conditions and rules for the exploitation of the resources of the sea-bed and the subsoil thereof beyond the limits of national jurisdiction in the context of the régime to be set up in accordance with the terms of reference as laid down in General Assembly resolution 2467 A (XXIII) and pursuant to the particular mandate contained in General Assembly resolution 2574 B (XXIV) (A/AC.138/SC.2/L.3 and A/AC.138/SC.2/L.7).
5. The Sub-Committee had the following documents at its disposal: The review prepared by the Secretariat on government measures pertaining to the development of mineral resources on the continental shelf (A/AC.138/21 and Corr.1): the Studies of the Secretary-General on International Machinery (A/AC.138/12, Add.1, Corr.1 and A/AC.138/23); the Report of the Secretary-General on Marine pollution and other hazardous and harmful effects which might arise from the exploration and exploitation of the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction (A/7924); the preliminary note of the Secretariat on the question of possible methods and criteria for the sharing by the international community of proceeds and other benefits derived from the exploitation of the resources of this area which it requested at its March session; and the relevant parts of the Report of the Sea-Bed Committee to the General Assembly at its twenty-fourth Session (A/7622). It also took into account the comments made during that session on this item (A/C.1/PV.1673-1783 and A/C.1/PV.1708-1710) and the comments during the debates in the Main Committee (A/AC.138/SR.17-24 and SR.25-38).
6. On the opening of the August session of the Sub-Committee, at its thirty-fifth meeting, the Under-Secretary-General for Economic and Social Affairs made a statement which, following a decision by the Sub-Committee, was reproduced in document A/AC.138/SC.2/L.9.
7. Under operative paragraph 6 of General Assembly resolution 2574 B (XXIV), the Committee is requested to formulate recommendations regarding the economic and technical conditions and the rules for exploitation of the resources of this area in the context of the régime to be set up. In response to this request, it was suggested that it would be appropriate in a first phase to identify and examine systematically the problems and issues of an economic and technical nature regarding the exploration and exploitation of marine mineral resources beyond the limits of national jurisdiction.

8. While the Sub-Committee recognized that something is to be learned from existing national rules and practices relating to resource exploration and exploitation in all countries, it recognized also that none of these existing systems is directly applicable to resource development in this environment under an appropriate régime internationally agreed upon.

9. The Sub-Committee further recognized that when considering economic and technical conditions and rules for activities of exploration and exploitation of the resources in this area, it would also have to study the alternative questions as to which economic and technical conditions and rules might need to be specified and in what detail in the international agreement establishing the régime, and which of them might require international machinery or might be left for determination by States. In this connexion, it was stressed by some representatives that consideration of such alternatives would not prejudice their future position with regard to international machinery or international institutional arrangements.

10. During the debate, several representatives indicated their views as to the economic and technical rules and conditions of exploitation, the nature and scope of the régime to be established, and the principles to be reflected in this régime, as well as to the international machinery which will be responsible for management of the area and its resources. Several representatives suggested topics with regard to the economic and technical conditions and rules for the exploitation of the resources of this area which might, inter alia, be usefully considered in the context of the international régime to be set up and a number of considerations were expressed on various approaches and possible forms of solution. They are listed in Annex I to this report.

In addition, various proposals emerged which might also be usefully considered during future sessions of the Economic and Technical Sub-Committee in accordance with its terms of reference. Some of them are contained in annexes to this report. However, the Sub-Committee considered that at this stage it was not in a position to advance concrete proposals about the economic and technical conditions and rules regarding exploitation and exploration of the resources of this area.

11. The points raised during discussions, many of which are referred to in annexes to this report, as to economic and technical conditions and rules for exploitation of the resources of this area in the context of the régime to be set up indicate that the

subject in its totality is complex and that many of its aspects are interrelated. Many representatives felt the need for more time to enable the considerable amount of material now available to the Sub-Committee to be examined by their governments.

12. The need to provide training in sea-bed operations for nationals in developing countries as well as the importance of ensuring the widespread dissemination and availability to all States of the results of scientific research and exploration of the sea-bed and ocean floor of the area was stressed by the Sub-Committee. The need for agreed definitions of the economic and technical terminology used was also stressed. The Sub-Committee was conscious of the priority task of the Geneva session which was the preparation of an agreed declaration of principles and the carrying out of further discussions on the international machinery. It refrained, therefore, from making selective recommendations in terms of the task assigned to it by the Committee under operative paragraph 6 of General Assembly resolution 2574 B (XXIV) until, following further progress, it could present its recommendations as a balanced and coherent whole.

13. The Sub-Committee feels, however, that through the documents before it on this session and the wide-ranging discussions held, it was possible to obtain a further clarification of some of the economic and technical conditions and rules for the exploitation of the resources of the sea-bed and subsoil thereof beyond the limits of national jurisdiction in the context of the régime to be set up.

14. The Sub-Committee reports that it has made an encouraging start to its task and that progress made in the exchange of views has confirmed the value and importance of its work.

15. It was the unanimous recommendation of the Sub-Committee that it be instructed at its future sessions to study further and systematically the issues raised in order to identify the most suitable solutions, in accordance with the mandate given to the Committee as set out in General Assembly resolutions 2467 A (XXIII) and 2574 B (XXIV). In doing so it will keep in mind the relevant resolutions of the General Assembly as well as the concurrent studies of the Main Committee and the Legal Sub-Committee, and take into account the reports of the Secretary-General on International Machinery, the preliminary note on Possible Methods and Criteria for the Sharing by the International Community of Proceeds and other Benefits derived from the exploitation of the resources of the area, as well as comments thereon. It was felt that this study should be made with a view to incorporating the most suitable

alternative solutions in a draft resolution to be recommended by the Committee to the General Assembly. Such a draft resolution might, inter alia, request the Committee to pursue its consideration with a view to formulating acceptable draft provisions for the agreement establishing an international régime in the area.

16. The Sub-Committee agreed that the Committee should request the Secretary-General for a more comprehensive study on Possible Methods and Criteria for the Sharing by the International Community of Proceeds and Other Benefits derived from the exploitation and resources of the area, which will formulate and develop several possible alternatives. The report should be presented in one of the sessions of 1971. Some delegations expressed doubts on the necessity of this study for the discharge by the Sub-Committee of its mandate.

Annex I

LIST OF TOPICS SUGGESTED BY SOME MEMBERS TO BE STUDIED IN PREPARING ECONOMIC AND TECHNICAL RULES AND CONDITIONS FOR THE EXPLOITATION OF THE RESOURCES OF THE SEA-BED AND SUBSOIL THEREOF BEYOND THE LIMITS OF NATIONAL JURISDICTION WITHIN THE CONTEXT OF THE REGIME TO BE SET UP

This list, which represents a summary of the issues mentioned during the discussion by a number of members, is intended to identify some of the topics to be considered in the context of any kind of régime, and further to identify but not evaluate the alternative forms rules might take.

This list does not imply that rules would be found necessary on all topics included in it when they come to be considered in the context of a particular régime, nor does it imply that all of the rules that prove necessary will have to be specified in the treaty by which the régime would be established.

I. General framework1. General definitions

Definitions of the various terms and concepts used in the context of marine mineral development will have to be agreed upon. The definition of working concepts used by the economic and technical working group of the Ad Hoc Committee constituted the first attempt in this direction (A/7230, annex I, paras. 5 and 12), which was followed up by the Economic and Technical Sub-Committee in 1969 (A/7622, part III, chap. I).

2. Assignment of responsibility for the administration of provisions and rules

The alternatives mentioned referred to the extent to which responsibility for administering provisions and rules is assigned to States as opposed to an international resource management authority. This problem will have to be considered further at the next session in the light of the report which the Secretary-General is to present in accordance with General Assembly resolution 2574 C (XXIV).

3. Definition of entities entitled to participate in sea-bed exploration and exploitation

Operators authorized to participate in sea-bed resources development could include States, State-authorized operators and international organizations.

This issue would also have to be considered further in the light of the report of the Secretary-General following resolution 2574 C (XXIV).

## II. Operating rights

### 4. Activities subject to registration or licensing

Distinction will have to be made between exploration for scientific purposes and exploration for commercial purposes (in French, prospection). Certain kinds of commercial exploratory activities as well as all kinds of exploitation activities might have to be registered or licensed in some manner.

### 5. Categories of rights to be assigned according to the stage of the development

Three categories of activity may be distinguished:

- (a) Broad reconnaissance exploration not involving deep drilling;
- (b) Detailed exploration including deep drilling and evaluation;
- (c) Exploitation.

A distinction is often made between rights of exploration, evaluation and exploitation. All of these could be grouped together in one category. It might then be left to the State to make the distinction between different types of titles in its relations with individual operators.

### 6. Rights to be assigned on an exclusive or on a non-exclusive basis

Rights under the headings in paragraph 5 can be assigned on an exclusive or a non-exclusive basis.

Category (a) could be granted on a non-exclusive basis.

Categories (b) and (c) could either be issued separately or combined in one title covering both phases of activity.

Generally speaking, it was felt that exploitation rights should be exclusive, but there is a question as to whether this is needed if production is from a mobile platform, e.g., dredging.

### 7. Types of minerals which are to be covered by exploration and exploitation rights

Titles can be granted to cover the development of all or only of specific minerals in the area for which they are granted.

According to the development phase for which the title is issued it was suggested:

(a) That exploration rights might cover:

(i) only particular minerals, or

(ii) all minerals;

(b) That exploitation rights might cover:

- (i) all minerals within the same area, or
- (ii) be distinguished according to the mode of occurrence between:
  - (1) nodules;
  - (2) hydrocarbons;
  - (3) other marine mineral resources.

8. Ways in which exploration and exploitation rights should be assigned

The following means and methods of assigning rights were listed:

- (a) Registration of claims or tracts on a first-come, first-served basis;
- (b) Selection among applicants by lottery;
- (c) Assignment by the administering authority on the basis of its judgement of the merits of the applicants;
- (d) Assignment to the highest bidder in an auction in which the bidding is based on the amount of a cash bonus to be paid for the acquisition of rights, the amount of royalties to be paid on production, the share to be paid on profit, or the amount of work to be undertaken, or possibly some combination of these elements.

In granting exploitation rights, the extent to which exploration has been undertaken might be taken into account.

Machinery might be provided by which, in the event of there being conflicting claims for the same area, the conflict can be resolved by mutual agreement on the allocation of an adjacent area.

This question will have to be studied further in the light of the Secretary-Generals report under resolution 2574 C (XXIV).

9. Means of selecting the areas which will be explored or exploited

- (a) The selection of the area to be explored or exploited might be left wholly to the initiative of the operator.
- (b) The administering authority could decide what areas or what proportion of the total areas are to be open for exploration and exploitation on the basis of its own cognizance.
- (c) The administering authority could decide what areas are to be opened after receiving nominations or applications from operators.

In addition, distinctions can be made depending on whether the rights applying to the area were exclusive or not:



(a) In so far as non-exclusive exploration rights are concerned, the initiative might be left with the operator who might be required to indicate to the administering authority the areas in which he will be working;

(b) As to exclusive titles, the authority might reserve to itself the right to determine over which areas titles will be granted, or again, it might be left to the initiative of the operator.

10. Size of areas to which exploitation and exploration rights will apply

The size of areas can vary according to the type of minerals covered by the titles and on the phase of development for which rights are issued.

For the exploration stage the area should be big enough, from the point of view of the operator, to be economically explored, taking into account distance from shore and depth of water, while, from the point of view of the international community, not so big that it cannot be effectively worked over during a reasonable period of time.

At the production stage the area should be big enough to mount a viable operation for a period long enough to amortize expenditure and make a reasonable profit.

11. Duration of rights

Following the distinction between exclusive and non-exclusive rights, which is based to a large extent on the size of the investment (see also 5 (a)):

(a) Exploration rights on a non-exclusive basis might be granted only for a relatively short duration and be easily renewable;

(b) Exploitation rights on an exclusive basis might be granted in principle for a longer period whereby the continuation of these rights might be made contingent, after a suitable period, on the achievement of production or be subject to a renewal of rights under new terms.

12. Relinquishment of part of the area after a certain lapse of time

A certain proportion of the initial area allotted might be relinquished by the operator according to a predetermined schedule.

13. Transferability

It could be considered whether or not any rights under the régime should be transferable from one licence- or concession-holder to another.

14. Maintenance of exploitation rights subject to work requirement

In order to discourage the freezing of areas, it could be required that the operator spend a minimum amount on exploration each year and deposit that amount in advance with the administering authority.

15. Size of area that may be held by a single operator or State

A formula will have to be designed to prevent the monopolizing of sea-bed resources and to give the people of the world access to them on an equal basis. The total area to be held by operators of a single State could be limited according to a variety of criteria concerning States (size, population etc.).

Alternatively, the areas that could be held by individual States or operators could be limited in a de facto way by a combination of work requirements and rules limiting the period over which rights could be held.

16. Production requirements

The question will have to be considered as to how far continuing production should be made a condition for the retention of rights, how commercial production would be defined, and to what extent it could be delayed or interrupted without loss of exploitation rights. Another question is the extent and manner to which production of sea-bed minerals should be controlled to protect the markets of land producers. It was suggested that this problem could be approached in the context of the world commodity agreements in relation to the particular mineral or minerals concerned.

III. Operating obligations

17. Operational standards

The requirement for agreed operational standards in the performance of work is necessary to ensure and has a bearing on:

- (a) The safety of personnel and equipment;
- (b) The prevention of unjustifiable interference with other uses of the high seas;
- (c) The prevention of waste in mineral exploitation, and
- (d) The prevention of pollution and other damage to other resources and the marine environment.

The aims and objectives of operations standards might be embodied in the agreement establishing a régime while the elaboration of the more detailed regulations governing the implementation of those standards could be left to the administering authority.

On the other hand, the inclusion of fairly explicit rules of implementation in the agreement was also envisaged as a possibility.

18. Collection and dissemination of data

The questions raised referred to the advisability, from the standpoint of the resource management system, the operator and the world community, of whether, to what extent and when operators should be required to make available data which they acquire during mineral exploration and exploitation.

19. Liability

Rules will have to be developed to govern liability for damage resulting from sea-bed operations.

Annex II

PROPOSALS WHICH MAY BE STUDIED IN THE ECONOMIC AND TECHNICAL SUB-COMMITTEE (FROM A STATEMENT MADE ON 13 AUGUST 1970 BY THE USSR REPRESENTATIVE IN THE ECONOMIC AND TECHNICAL SUB-COMMITTEE OF THE UNITED NATIONS COMMITTEE ON THE PEACEFUL USES OF THE SEA-BED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION)

1. The economic and technical conditions and rules for exploitation of the resources of the sea-bed beyond the limits of national jurisdiction should form part of an international agreement on the regime of exploration and exploitation of the mineral resources of the sea-bed. Those conditions and rules should, in particular, be based on fuller information about the utilization of the sea-bed and the ocean floor and should presuppose the availability of more advanced means of developing mineral resources on the sea-bed.
2. The State shall bear international responsibility for national activity within the limits of the area under consideration, irrespective of whether that activity is carried on by governmental agencies, juridical persons or physical persons; their activity shall be carried on with the authorization and under the continuous supervision of the State concerned.
3. As hitherto, the main task at this stage is to organize surveys of the sea-bed on the basis of broad international co-operation and co-ordination of the efforts of individual States, since industrial development of the wealth of the sea-bed can in practice be expected to take a long time yet.
4. In determining the nature of operations it is necessary to distinguish between:
  - (a) Surveys for scientific purposes - any geological and geophysical operations carried out at a particular spot, along a particular route or within a small area as well as the sampling of bottom and subsoil deposits of a regional character, which are not undertaken for the purpose of locating occurrences of mineral raw materials, making a geological or economic evaluation thereof, or deriving a direct economic advantage from the use of mineral resources;
  - (b) Surveys (prospecting and exploration) for industrial purposes - any large-scale geological and geophysical exploration and prospecting operations, drilling and sampling of bottom and subsoil deposits undertaken for the purpose of locating and evaluating industrial fields of mineral raw materials with a view to preparing them for exploitation;

- (c) Industrial exploitation of deposits of mineral raw materials by any technological means, undertaken for the purpose of deriving a direct economic advantage from their use.
5. In setting standards for the exploitation of mineral resources, the State bearing international responsibility for national activity in the area under consideration:
- (1) Should ensure the conservation of the mineral resources in process of exploitation and should not permit any irrational waste of mineral raw materials; to this end it should ensure that geological, geophysical, geological engineering and hydrological operations are carried out on the necessary scale before a deposit is developed;
  - (2) Should not permit the pollution of or any damage whatsoever to other resources of the sea and the marine environment; to this end it should ensure that all necessary special research on the subject is carried out;
  - (3) Should not create unjustified obstacles to the use of the high seas or, in particular, to navigation or fishing;
  - (4) Should ensure the safety of personnel in accordance with the recommendations of the International Labour Organisation and the Inter-Governmental Maritime Consultative Organization, and the preservation of equipment.
6. The technical conditions and standards applied by States to the exploration and exploitation of the resources of the sea-bed should be such that the waters of the world ocean are not poisoned or contaminated; that no damage is done to the fauna and flora of the marine environment or to living resources; that the biological, chemical and physical balances and processes which have come into being naturally are not disturbed; that there is no infringement of the interests of all States in the enjoyment of the free high seas; and that no damage is done in any of these respects to riparian States.
7. Wasteful exploitation of the resources of the sea-bed and the ocean floor beyond the limits of national jurisdiction shall be prohibited; the exploration and exploitation of mineral resources may be carried on only on the basis of rational and scientifically sound principles and rules.

8. Since the exploration and exploitation of sea-bed resources at great depths are radically different from the extraction of minerals on the continental shelf as at present understood, advances made in the exploitation of sea-bed resources on the continental shelf should not be mechanically transferred to areas beyond the limits of national jurisdiction.

9. Continuing intensive scientific research and exploration, which form the basis for a full understanding of the marine environment and the resources of the world ocean floor, should be supplemented by broad dissemination of information on the results of such operations, so as to enable all States to participate in developing the resources of the sea-bed.

Annex III

WORKING PAPER PRESENTED BY CAMEROON, CEYLON, INDIA, KENYA, KUWAIT, LIBYA, MADAGASCAR, MALAYSIA, PAKISTAN, SIERRA LEONE, SUDAN AND THAILAND ON INTERNATIONAL MACHINERY FOR THE USE, EXPLORATION AND EXPLOITATION OF THE SEA-BED AND OCEAN FLOOR AND THE SUBSOIL THEREOF, UNDERLYING THE HIGH SEAS BEYOND THE LIMITS OF NATIONAL JURISDICTION

The sea-bed and ocean floor and the subsoil thereof beyond the limits of national jurisdiction including the resources of that area (hereinafter collectively referred to as the sea-bed) is the common heritage of mankind.

The sea-bed shall be reserved exclusively for peaceful purposes.

All activities with respect to the sea-bed, including the exploration, use and exploitation thereof, shall be carried out in the interests of mankind, irrespective of the geographic location of the States, and taking into account the special interests and needs of the developing countries.

Appropriate measures shall be taken to ensure a free flow of scientific information on the sea-bed to all States.

The sea-bed shall be placed under the jurisdiction of an international machinery. It shall be an autonomous universal organization possessing full international legal personality within the United Nations system. It shall be responsible for ensuring the rational exploration, conservation, exploitation, and development of the resources of the sea-bed. States shall be entitled to participate on an equal footing in the management of the organization.

The organization shall have regulatory and operational functions.

Its regulatory functions shall include organizing, controlling, administering and co-ordinating all activities with respect to the sea-bed. It shall grant licences for lawful activities with respect to the sea-bed in accordance with rules and legal norms to be formulated embodying standards and criteria for the granting and termination of such licences.

It shall take appropriate measures to prevent pollution and other hazards in the marine environment.

It may undertake operations independently. This may be done either through or in association with investors (government or private) possessing the necessary technical skills, equipment and financial resources or by use of its expertise and equipment.

It shall provide for the most appropriate and equitable application of benefits obtained from the exploration, use and exploitation of the sea-bed to mankind as a whole, particular consideration being given to the special interests and needs of developing countries.

It shall regulate production of the sea-bed resources with a view to preventing fluctuation of prices of raw materials in the world market resulting from the exploitation of the resources of the sea-bed.

The organization shall arrange training programmes aimed at enabling the developing countries to increase their expertise in the techniques needed to carry out all operational activities with respect to the sea-bed.

It shall establish its own budget. It shall be financed initially out of members' subscriptions, according to an appropriate scale of assessment to be determined. Other sources of funds may include borrowing, grants, licence fees, and proceeds derived from operational activities. Conditions of exploitation shall be negotiated with the organization prior to the commencement of activities.

Resources obtained from the exploitation of the sea-bed shall be made available to all countries, in accordance with their needs and in relation to their economic and social development.

A certain portion of the organization's net income shall be allocated to the developing countries in accordance with a scheme to be established and to increase the resources of the United Nations and its specialized agencies active in the field of economic development.

The organization shall have all the powers necessary for the performance of its functions.



Annex IV

WORKING PAPER PRESENTED BY THE UNITED STATES OF AMERICA ON THE  
OBJECTIVES TO BE SERVED BY THE INTERNATIONAL REGIME GOVERNING  
THE EXPLORATION AND EXPLOITATION OF SEA-BED RESOURCES BEYOND  
THE LIMITS OF NATIONAL JURISDICTION

The following objectives to be served by an international régime governing sea-bed resource exploration and exploitation beyond the limits of national jurisdiction were described by the representative of the United States of America, Christopher H. Phillips, in his speech on 6 March 1970 to the Sea-Bed Committee, as objectives that would need to be met by any régime, regardless of its character. They were also referred to by the United States representative, V.E. McKelvey, in his speech on 11 March to the Economic and Technical Sub-Committee as useful in the evaluation of alternative rules and provisions that might be developed to implement the régime, and on 17 March he proposed that they be distributed to the Sub-Committee as a working paper for that purpose. The list of objectives (with Ambassador Phillips' explanatory comments on them) then distributed as a working paper, is as follows:

1. To encourage exploration and exploitation of sea-bed resources

This objective, of course, is basic. All of us are looking to the sea-bed as the source of future benefit to mankind. In its potential mineral wealth, it does indeed promise long-term benefit to mankind as a source of supplemental supplies as well as a source of income derived from their development. But these benefits will stem only from the production and use of these resources; no benefits at all will come either to potential users of these resources or to the international community unless we are successful in encouraging their exploration and exploitation. A sea-bed resource régime not built with this as its primary objective would truly be self-defeating.

2. To assure that all interested States will have access, without discrimination, to the sea-bed for the purpose of exploring and exploiting mineral resources

At the outset, possibly only a few States will be active in the exploitation of sea-bed resources beyond the limits of national jurisdiction. But over the period in which need for them is likely to develop, we hope that all interested nations will have the capability to develop them to supplement their needs for raw materials. It is important, therefore, that equal access be assured for all.

3. To encourage scientific research and the dissemination of scientific and technological information related to sea-bed resources

Continued scientific research and exploration are the keys to full understanding of the ocean environment and its resources, and the dissemination of the results of research is essential to allow all nations to participate in sea-bed development.

4. To encourage the development of services, such as aids to navigation, maps and charts, weather information, and rescue capability

All of these are necessary to support sea-bed operations.

5. To provide procedures for the assignment of rights to minerals or groups of minerals in specific areas under terms that protect the integrity of investments in sea-bed resource development, that encourage economic efficiency in the exploration and exploitation of sea-bed resources, that prevent a race for claims, and that discourage operators from seeking to hold large areas for purely speculative purposes

This objective is related to the first, but it is also of basic importance if we are to achieve an effective international régime, for without assurance of security of tenure of exploitation rights under agreed terms, no one will risk the large investment required to achieve resource development in this area.

Considering the cost barriers that must be surmounted to make sea-bed development economically feasible, it is essential that we develop a régime that makes possible maximum economic efficiency in sea-bed exploration and exploitation. And, of course, it is essential that we prevent sea-bed resources from being tied up by speculators or others who intend to hold them for future gain rather than immediate development.

6. To provide for a reasonable return on risk investment

This objective is also related to the first and is just as basic. It applies, I might point out, equally to risk investment undertaken by an international operating organization and to that undertaken by private or state entrepreneurs. Regardless of who is making the investment in exploration or exploitation, risk of total loss must be compensated by a higher rate of return on successful ventures than is the case for low- or non-risk investment, if the operation is to be economically viable in the over-all.

7. To provide revenue to benefit international community purposes, taking special account of the needs of the developing countries, and to meet the operating expenses of the international body established to administer its provisions

Over the long term, the fullest benefit to mankind will come from the use of sea-bed resources as a supplemental source of raw materials, but in the immediate future the benefit to much of mankind may well come via a share in the economic rent that accrues from resource production.

8. To assure that exploration and exploitation of sea-bed mineral resources will be carried out in a manner that will protect human life, prevent conflicts between users of the sea-bed, safeguard other uses of the ocean environment against undue interference, avoid irreparable damage to the environment and its resources, and promote the use of sound observation practices

The basic and most important objective here is to provide effective standards governing sea-bed operations, but backing them up must be procedures and measures to assure compliance.

9. To provide terms and procedures governing liability for damage resulting from exploration and exploitation of sea-bed minerals so that damage will be adequately repaired or compensated

As recent mishaps have shown all too clearly, the chance for accidents of massive proportions in this environment is a very real one. As in all safety precautions, the most effective ones have to do with the development of safe operating procedures. But arrangements for financial responsibility must be provided to pay for the cost of reparations for damage that occurs in spite of all precautionary measures.

10. To provide for the stability of rules, and yet for the flexibility to introduce modifications over time responsive to new knowledge and new developments

Potential operators need the assurance that rules and provisions governing conditions of tenure and the payment of fees will not change during the life of permits and rights that they may acquire, but at the same time provisions must be made to modify operational standards and procedures to take account of new knowledge and new developments.

11. To provide effective procedures for the settlement of disputes

As in pollution control, the most effective means of settling disputes is to prevent them from happening in the first place, but effective procedures for resolving them promptly and fairly are surely a basic objective of any régime.

12. In the over-all, to establish an international régime so plainly viable that States will in fact ratify the treaties establishing it

Unless the régime we establish is acceptable to the vast majority of the nations who would participate in sea-bed resource development, its chance of success is small.

#### Note

On 3 August, the United States submitted as a working paper a Draft United Nations Convention on the International Sea-bed Area, which shows how these objections would be met under an international régime and machinery and proposes rules governing exploration and exploitation relating to topics listed in Annex I of this report. The 3 August working paper is included as an Annex to the report of the Plenary Committee. In addition, the United States Representative gave a statement to the Economic and Technical Sub-Committee on 13 August describing the rules proposed in the Draft Convention under each of the headings listed in Annex I.

Annex V

WORKING PAPER SUBMITTED BY EL SALVADOR INCLUDING PROPOSALS ON THE REGIME  
OF EXPLORATION AND EXPLOITATION OF THE INTERNATIONAL ZONE OF THE SEA-BED

1. The régime of exploration and exploitation shall be part of the general régime of the international zone of the sea-bed, and the general régime shall be agreed upon as a unit by means of a treaty.
2. The aforesaid régime shall apply to the international zone of the sea-bed including the subsoil thereof, and hence to the exploration and exploitation of its natural resources.
3. The régime shall provide, among other procedures, for legitimizing exploration and exploitation, for the issuing of licences exclusively to States, associations of States and international organizations.
4. The régime shall be administered by an international organ.
5. The régime shall provide for the payment of dues, taxes, royalties and shares in the profits for the exploitation of the resources of the international zone of the sea-bed in a reasonable proportion consistent with the nature, volume and international price of the resources exploited, the investment and the risks.
6. The régime of exploration and exploitation and the régimes of the superjacent waters and air space above the international zone shall be harmonized and co-ordinated.
7. The régime shall provide for the measures necessary to ensure that exploration and exploitation activities do not interfere with other marine activities, including those designed to conserve biological resources, oceanographic research and the laying of cables and oil pipe-lines, and vice versa.
8. The régime shall introduce measures to ensure work safety, the coverage of risks and other normal safeguards for the personnel engaged in exploration and exploitation, in accordance with the recommendations of the International Labour Organisation.
9. The régime shall provide that the authority issuing a licence or any other permit to explore or exploit shall assume responsibility for complying with the regulations and for any damage that may be caused, even unwittingly, in carrying out legitimate operations.
10. The régime shall prescribe the grounds for the withdrawal and forfeiture of licences and other permits issued pursuant to the relevant regulations.

Annex VI

ECONOMIC AND TECHNICAL RULES AND CONDITIONS FOR THE  
EXPLOITATION OF THE RESOURCES OF THE SEA-BED BEYOND  
THE LIMITS OF NATIONAL JURISDICTION

Working Paper presented by Australia

The following outline<sup>1/</sup> of possible economic and technical rules and conditions is submitted by Australia as a Working Paper. The outline does not necessarily represent the definitive views of the Australian Government and is put forward to promote the exchange of ideas.

Outline

1. A statement of agreed definitions should be included in the rules.
2. States, or groups of States, should be the basic entity authorized by the international machinery to participate in seabed operations. If a company is to be the operator a State should be interposed between the company and the international machinery.
3. State administrations should be used as much as possible to supervise operations which they sponsor.
4. The international machinery should have full rights of inspection.
5. All commercial operations directed towards exploration and exploitation of seabed resources should be licensed by the international machinery.
6. Deep drilling of the seabed for scientific purposes should only be done under the authority of the international machinery.
7. For commercial operations there should be two types of licence issued by the international machinery:-

First - a non-exclusive licence - a "hunting licence" covering broad reconnaissance exploration, but not deep drilling.

Second - an exclusive licence covering all forms of exploration and also production.

8. Non-exclusive licences should cover all seabed minerals.
9. Exclusive licences should specify one of the following three categories of minerals:
  - (a) hydrocarbons and associated substances recovered through drill holes,

<sup>1/</sup> To be read in conjunction with the Statement by the Australian representative in the Economic and Technical Sub-Committee on 13th August, 1970 (S.R. ).

- (b) manganese nodules and similar substances which occur on the seabed,
- (c) all other minerals.

10. Assignment of licences should be by a combination of methods designed to ensure an equitable distribution among all contracting parties.
11. Initiative in selecting areas which offer the best chance of success should be encouraged.
12. Exclusive licences should be over areas big enough to be economically explored and exploited, but not so big that they cannot be effectively worked over during a reasonable period of time.
13. Non-exclusive licences should be granted for short periods, but easily renewable.
14. Exclusive licences should be for long enough to mount a viable operation, amortize expenditure and make a profit.
15. Relinquishment of part of the area of exclusive licences should be according to a predetermined schedule.
16. Licences should be transferrable provided always that a State remains responsible.
17. Rules and procedures should be such as to ensure, preferably without the imposition of fixed limitations as to total areas held, that no State can monopolize the resources of the international seabed.
18. Retention of an exclusive licence beyond a specified period should be subject to continuing commercial production.
19. Operational standards should be specified covering such subjects as:
  - Safety,
  - Prevention of interference with other activities,
  - Prevention of waste,
  - Prevention of pollution.

These operational standards should be kept continuously under review by the international machinery as technology develops.

20. Data acquired in the course of seabed operations should, after a suitable period, be available through the international machinery for public information.
21. States sponsoring activities should be liable for damages caused by such activities. The possibility of providing an effective insurance scheme should be studied.

22. Before finally settling on the level or method of payments, consideration might be given to adopting a scheme of tax on profits, rather than royalties, as the main financial impost.
23. Failure to conform to established operating standards or to meet agreed obligations shall render a licence liable to forfeiture.
24. Rules and conditions should be efficient in their operation and equitable in their treatment of all parties.

Further Annexes

The delegations of France, the United Kingdom and the United States of America have requested the inclusion of their respective working papers as annexes to this report insofar as these documents are not annexed to the report of the Main Committee.