

Third United Nations Conference on the Law of the Sea

1973-1982

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Summary records of meetings of the First Committee 9th meeting

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reached that there would be a 200-mile economic zone for coastal States and that the remaining ocean space would constitute the international area; there had, however, apparently been a misunderstanding on that question, even among those who supported a 200-mile economic zone, which should be resolved. Great care should be exercised in establishing the international machinery to ensure that it would not work to the detriment of the developing countries for whose benefit it was being established.

83. With regard to the question of the economic implications of sea-bed mineral production, he noted that two documents, TD/113/Supp.4 of 7 March 1972 and TD/B/449 of 25 June 1973, stated clearly that uncontrolled exploitation of sea-bed minerals would disrupt the market and adversely affect the economies of the developing countries that produced those minerals. The first of those documents (paragraph 21) stressed that no overt or disguised stimulus should be given to sea-bed production, and the second (paragraph 8 (h)) stressed that the international community should take care that the organization arrangements were fully consistent with the established role of the United Nations in the formulation and implementation of appropriate international commodity policies as an integral component of an over-all strategy for development, particularly of developing countries. However, as the representative of Fiji had said, controls to safeguard the interests of producing countries should not prejudice the interests of consuming countries. His delegation supported the enterprise system under which the International Sea-Bed Authority would engage directly in exploitation of the area, for that was the only way to ensure proper regulation of production and

marketing. That approach had been supported by the Organization of African Unity and by various States.

84. Mr. WARIOBA (United Republic of Tanzania), clarifying his delegation's position, said that it had made two fundamental changes in its position since submitting document A/AC.138/33 to the sea-bed Committee in March 1971. His delegation had previously favoured delimitation by depth as well as by distance, but it now called for delimitation exclusively by distance. On the question of who should exploit the international sea-bed area, his delegation had previously supported parallel exploitation of the resources of the area by the International Sea-Bed Authority and by other entities, but it now called for the exploitation of the area exclusively by the Authority.

85. The CHAIRMAN thanked members of the Committee for their co-operation during the special debate, which had proved useful in that it had highlighted the main issues and had provided an opportunity for new members to express their views.

86. He requested the Committee to show the same spirit of co-operation in the informal meetings to be headed by Mr. Pinto, and to remove all the alternative formulations and brackets on questions about which there appeared to be general agreement and all undesirable alternative formulations and brackets on matters which were still at issue. The Committee would meet formally on 26 July to hear the preliminary report by Mr. Pinto.

The meeting rose at 6.45 p.m.

9th meeting

Tuesday, 30 July 1974, at 11.05 a.m.

Chairman: Mr. P. B. ENGO (United Republic of Cameroon).

Report of the chairman of the informal meetings

1. The CHAIRMAN said that, as had been indicated in the programme of work, he had arranged for the Chairman of the informal meetings to report to the Committee. The reports had been delayed somewhat because it had been felt that more definite ideas should be allowed to emerge.

2. Mr. PINTO (Sri Lanka) said that the Committee had held nine informal meetings since the beginning of its work. It had had before it the texts appearing in the report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction (A/9021 and Corr.1 and 3, vol. II, p. 39) illustrating areas of agreement and disagreement, prepared by the working group of Sub-Committee I of that Committee and relating, first, to the status, scope and basic provisions of the régime, based on the Declaration of Principles contained in General Assembly resolution 2749 (XXV), and, secondly, to the status, scope, functions and powers of the international machinery. It had been agreed at the outset that the Committee would adopt the following method of work: it would begin by reviewing the draft articles relating to the first of those two topics; upon completion of that review, the chairman would submit to the Committee a list of the principal issues for discussion; finally, the Committee would decide whether to review the second topic or to begin detailed consideration of the principal issues. It had also been agreed that the Committee would use a technique adopted by the working group of the sea-bed Committee: if no conclusion could be reached after discussion of a particular text in the full

Committee, the text would be considered by a smaller group consisting of those who had participated in the discussion and any other interested delegations, with a view to elaborating a text or texts that would faithfully reflect the opinion or opinions expressed in the Committee. The results of the smaller group's work would be placed before the Committee as a whole for consideration and approval and would then be reported to an official meeting of the Committee.

3. He was happy to report that the Committee in informal meetings had considered draft articles 2 to 21 within a period of three working days, and had referred those articles to the smaller group for further consideration and report. There had been no discussion of article 1, because it had been felt that a final decision on the limits of the area would depend on the results of the discussion of limits in the Second Committee. The smaller group had not yet completed its consideration of articles 2 to 21, but was trying to reconcile opposed points of view and narrow differences of opinion so as to eliminate as many alternative formulations as possible and to arrive at a single text. Significant concessions had been made by several delegations; the number of alternative texts was being reduced. It was expected that the process would be completed and articles 2 to 21 placed before the full Committee in an informal meeting by Thursday, 1 August.

4. He had suggested to the Committee three issues that might be regarded as crucial and which ought to be the subject of detailed study. They were: first, the system of exploration and exploitation: who might explore and exploit the area, secondly,

the conditions of exploration and exploitation, and thirdly, the economic aspects of exploitation of the area. It had been agreed that those were the principal issues, although some representatives had pointed out that there were several other issues which members might consider important, such as the allocation of powers and functions to the various organs of the Authority. It had also been agreed that the first issue would be given a certain priority, since many representatives had felt that the other issues were subsidiary and should be taken up at a later stage. Other representatives had not subscribed to that view and had maintained that it would not be possible to discuss each of the subjects in isolation. In their opinion, the first and second issues were inseparable. It had been agreed that although a certain priority would be accorded to the first issue, material and relevant reference could be made to the second and third issues, and that representatives could have considerable latitude in that respect, it being clearly understood that the second and third issues would be taken up subsequently.

5. Discussion of the first issue had proceeded on the basis of the four alternative texts of draft article 9 prepared by the working group of the sea-bed Committee. At the outset, the representative of Jamaica had proposed the text of two articles designed to raise several essential points for consideration in connexion with that and subsequent discussions. The first of those articles required that all activities of exploration and exploitation should be conducted pursuant to regulations promulgated by the Authority and that no such exploration or exploitation should be carried out except under and in conformity with such regulations and the provisions of the convention. The article then listed the categories of subjects on which the Authority would promulgate regulations. The sponsor of the article had held that such regulations would ensure that the powers and functions of the Authority would be exercised in accordance with fundamental norms enshrined in the convention and, while giving a dominant and controlling position to the Authority, would introduce the element of certainty considered essential in order to attract the necessary capital and technology for the conduct of the Authority's operations. Under the second article proposed by Jamaica, exploration and exploitation of the area and its resources could be carried out directly by the Authority, or on its behalf by States, groups of States or national and juridical persons, or under such legal arrangements as the Authority might in any particular case approve.

6. An event of major significance and one that had perhaps marked a turning-point in the Committee's consideration of that central issue was the introduction by the members of the Group of 77 of a draft article to replace alternatives B and C of draft article 9. The new article provided that all activities of exploration of the area and of the exploitation of its resources and all other related activities, including those of scientific research, should be conducted directly by the Authority, which might, if it considered it appropriate, and within the limits it might determine, allocate certain tasks to juridical or natural persons, through service contracts or in association with them or through any other such means as it might determine which would ensure its direct and effective control at all times over such activities. The introduction of that article, which enjoyed the support of a very large number of participants, was a matter of the highest importance and should assist in the process of detailed negotiation towards which the Committee had been moving slowly but steadily. That single article represented a kind of manifesto of sea-bed exploration and exploitation adhered to by a very large number of countries. It interpreted the fundamental principle that all sea-bed operations should be conducted directly by the Authority, and introduced essential flexibility by providing that the Authority might utilize natural or juridical persons in the conduct of sea-bed operations under contractual arrangements that would ensure the Authority's continuing and effective control. In the course of the discussion

that had followed, considerable interest had been shown in the proposal. A number of delegations had found the draft article somewhat too concise and had sought clarification on a variety of points, particularly the basis for the underlying assumption of the financial viability of sea-bed operations conducted in accordance with the system implicit in the proposal, the modalities of sea-bed operations under that system, and the devices that would be utilized to ensure the Authority's control at all times over such activities. The representative of Jamaica had expressed the view that his proposal was not inconsistent with that of the Group of 77.

7. The Chairman of the Group of 77 had undertaken to prepare, in consultation with the members of that Group, a response to those important questions. It was hoped that that response would enable other representatives to appreciate more fully the nature and scope of the proposal and, most important, that it would set the stage for possible solutions and compromises on essential issues. The discussion was proceeding on the basis of alternatives A and D of article 9 of the text proposed by the Group of 77, and the relevant portions of the Jamaican proposal.

8. He believed that the Committee was at a momentous stage in its discussions; an opportunity missed could set it on a tragically wrong course and bring down on it the blame, if not the contempt, of generations to come. For the first time in seven years, the Conference was on the threshold of real negotiation and a possible breakthrough. Representatives bore a very heavy responsibility towards the millions of people they represented and the countless others who would seek to benefit in the future from the system the Conference was attempting to create. He was confident that representatives were determined to approach the task with the solemnity, vision and humility it required.

9. The CHAIRMAN said that the submission of alternative texts was essential for the negotiation of treaty articles. He did not share the view that the Conference had been convened to work out a declaration of principles; its task was to negotiate a treaty. He hoped that would be borne in mind during all discussions. He appealed to members to co-operate with the officers of the Committee and with the Chairman of the informal meetings, particularly on issues where the only course was to narrow the choice of texts. He hoped that if it was necessary to convene a further session, that would simply be to complete the work on agreed articles.

10. Mr. KASEMSRI (Thailand) proposed that the report by the Chairman of the informal meeting should be reproduced *in extenso* in the summary record.

It was so agreed.

Economic implications of sea-bed mineral development

11. The CHAIRMAN reminded the Committee that some delegations had reiterated the importance of the economic consequences of sea-bed exploitation. He had already indicated that some time would be devoted to discussing the subject. The representative of the United Nations Conference on Trade and Development (UNCTAD), at the 6th meeting, had given a very helpful introduction to one of that organization's reports. At least one of the industrialized countries had been unable to accept the conclusions of the UNCTAD reports. After consultations, the officers of the Committee had felt that an opportunity should be provided for all shades of opinion to be expressed. Questions could be raised and conclusions stated to permit a more balanced judgement. He had arranged with the Special Representative of the Secretary-General to introduce a report on the subject and was setting up two informal meetings with experts from the developed and developing countries, a representative of the Secretary-General and a representative of UNCTAD. They would be held on successive evenings, after which the matter could be discussed thoroughly in the Committee.

12. He drew attention to document A/CONF.62/C.1/L.2, which was a compilation of the major summaries and conclusions of pertinent documents submitted to the Conference. He had prepared the summary because some of the basic documents were available only in limited quantities and because he had felt that it would be more convenient to be able to refer to a single document. Some of the fundamental documents were not available in all languages. The summary contained no new material; it was merely intended to assist the Committee in its work.
13. Mr. STAVROPOULOS (Special Representative of the Secretary-General) introduced the Secretary-General's report on the economic implications of sea-bed mineral development in the international area, contained in document A/CONF.62/25. The report was the latest in a series prepared in accordance with General Assembly resolution 2750 A (XXV) and had also been requested by the sea-bed Committee.
14. If, as seemed likely, nodule mining became an important new source for a number of base metals needed in increasing quantities by modern society, it might well create a problem for some traditional suppliers of those minerals in developing countries. The report was a study in depth of the economic implications of sea-bed mining.
15. The first part of the report, a review of sea-bed mining activities, contained information collected by the Secretariat from technical journals, periodicals and company press releases, in the absence of more official material.
16. The second part was an analysis of the probable impact of nodule mining, undoubtedly one of the fundamental issues in the negotiations on the international régime and machinery for sea-bed resources. The nodule industry was still in its embryonic stage, however, and information from the groups developing mining and processing technology was not always complete. It had therefore been necessary to use a number of assumptions, which might well be revised once the systems under development had become operational. The figures in the report were merely indications of the magnitudes involved.
17. Metal production from nodules was a joint-product industry, the most important metals—nickel, copper, cobalt and manganese—being produced in more or less fixed proportions as determined by the nodule grade, and not in accordance with existing world demand. It had been estimated, on the basis of a number of assumptions, that by 1985 some 15 million tons of nodules might be mined and processed by the industry, resulting in a production of 920,000 tons of manganese, 220,000 tons of nickel, 200,000 tons of copper, 30,000 tons of cobalt and 38,000 tons of other metals. Cobalt production from nodules would amount to at least one half of projected world demand in 1985 and the likely impact would be substantial drops in price, affecting developing country exporters such as Zaire, Zambia, Cuba and Morocco. The impact might be even more serious if some of the cobalt-rich nodules of the South Pacific were exploited.
18. Estimates of the impact of nodule mining on manganese markets were uncertain; metallurgical recovery of manganese from nodules was complex and costly and so far only two groups had indicated plans to recover that metal. If manganese was recovered from only 4 million tons of nodules by 1985, production would amount to 13 per cent of the import requirements of the developed market-economy countries for that year. Given the inelastic nature of demand for manganese, the likely impact of sea-bed production would be to depress prices, thus reducing the export income of a number of developing countries.
19. Nickel was expected to be the mainstay of nodule operations and future expansion of the industry was likely to be, to some extent, self-regulated by the world nickel market situation. Nickel production was concentrated primarily in the developed countries, though the developing countries' market share was expected to increase dramatically during the coming decade with the completion of several large projects now under construction or in the planning stage.
20. The recovery of copper from nodules was expected to have a minor impact on the market by 1985. The 200,000 tons which could be produced from nodules would amount to only 1.3 per cent of a total world demand of about 15 million tons, but about 6 per cent of the required net imports of the developed market-economy countries.
21. To sum up, the analysis indicated that over the coming decade the impact of sea-bed mining would not be unduly disruptive in world mineral markets and that less than a dozen developing countries might experience a fall in income. The situation could change after 1985, however, if there were no regulation by the International Sea-Bed Authority. The extent to which the nodule industry might expand would depend on the relative cost of metal production from nodules compared with traditional land sources. Only experience would show whether the existing favourable cost estimates for the nodule industry would materialize. The unique institutional framework that the Committee was in the process of creating should be capable of ensuring the rational exploitation of sea-bed resources for many generations to come.
22. The last section of the report, on promoting the rational development of nodule resources, had been prepared in response to the request to the Secretary-General in General Assembly resolution 2750 A (XXV) to propose effective solutions for dealing with problems relating to the impact of sea-bed mining. The section examined a number of policy alternatives designed to harmonize the different interests of the world community with respect to sea-bed mining. There were seldom simple solutions for complex problems: with diverse and sometimes conflicting interests, comprehensive policy packages would have to be formulated to ensure the maximum net gain for the world community.
23. The UNCTAD representative had spoken about the need for comprehensive multicommodity stabilization schemes to protect, in an equitable and effective manner, the export earnings of developing countries producers of raw materials. In the past week the nine European Common Market countries were reported to have proposed an ambitious and far-reaching programme designed to stabilize the export earnings of their associate members in Africa, the Caribbean and the Pacific which were producers of primary commodities. The International Authority should be empowered to participate in such comprehensive commodity arrangements and also to take more specific measures aimed at protecting the interests of developing countries that were exporters of minerals. Most of the debate on that issue had been between proponents respectively of compensatory and preventive measures. In the abstract, those two approaches seemed irreconcilable, but in practice, the joint-product nature of metal production from nodules, with each of the four major metals being affected to a different degree by sea-bed mining, showed that the harmonization of all interests involved would probably require a combination of both. The preventive approach, in the form of long-term planning of nodule development, could form the backbone of a strategy to safeguard the basic interests of developing countries as exporters of minerals. In addition, the world community could resort to some form of compensation to redress the hardship that might be imposed on the few countries that would not be sufficiently protected by the preventive measures.
24. The primary concern of delegates negotiating a régime for exploiting sea-bed resources in the international area was to find a just and equitable formula that would reconcile early use of the new technology for deep sea-bed mining with minimum disruption to developing countries. The report was intended to assist in the search for such a formula, which would put the common heritage of mankind to work for the benefit of all

mankind with particular concern for those whose needs were greatest—the developing countries.

25. Mr. ILLANES (Chile) asked which developing countries would be affected by the exploitation of nodules and other sources of minerals in the international area, having regard to future changes in technology.

26. Mr. BRANCO (Secretariat) said that it would be a very considerable task to list all the developing countries affected by the exploitation of sea-bed resources. A distinction would have to be made between countries that would benefit from such exploitation and those that would be adversely affected. There was also the question which minerals would be recovered. The Secretary-General's report was concerned only with nodules, because they were the only sea-bed resource in the international area that was likely to be exploited in the near future. Nevertheless, there were other possible sources, such as metallic muds, hot brines and minerals in the rock bed of the mid-ocean ridges that might become sources of metal in the next century.

27. In considering which countries were likely to be adversely affected by the exploitation of sea-bed resources, the time factor had to be taken into account. Over the next 10 years, the producers of cobalt were likely to be affected, while manganese producers might be affected. He would stress, however, that experts were very uncertain of the likely effect of sea-bed exploitation on the manganese market. The extraction of manganese was a very complicated process; only two groups, one in the United States and one in Japan, had shown any interest. On the other hand, if manganese was treated as a waste product, its recovery would involve only marginal costs provided a suitable new technology could be found. The only developing country that was highly dependent on manganese exports was Gabon; for the other major producers manganese exports accounted for less than 2 per cent of their export earnings.

28. Mr. KALONDJI TSHIKALA (Zaire) said that his country, which produced the minerals in question, would be greatly affected by sea-bed mining and could not therefore be indifferent to the report of the Secretary-General. Accordingly, it believed that the prices of raw materials, from which the industrialized countries benefited greatly, should be re-evaluated from the point of view of international justice. Zaire, which had always supported the concept of the "common heritage of mankind", attached great importance to the proposed International Authority and it believed that exploration and exploitation should not be carried on to the detriment of developing countries and humanity.

29. His delegation was particularly interested in ways of mitigating any unfortunate results that the production of minerals from nodules might have on land-based production. The prospects that compensation might afford some protection were not very encouraging, and no specific method had been suggested. For example, his delegation wondered what the obligations of the industrialized countries with respect to stabilization of prices would be. It therefore preferred the preventive approach with short-term, medium-term and long-term planning geared to the manner in which production from nodules would affect the economy of developing countries.

30. His delegation wished to have the views of the economic affairs officer on the powers of the International Authority for the prevention of possible unfortunate results from sea-bed mining.

31. Mr. BRANCO (Secretariat) said that it was possible for the international community to ensure that the developing exporting countries would not be too seriously affected by sea-bed mining. The fact remained, however, that production from nodules would in no way, in the near future, be commensurate with existing demands. In the case of cobalt the smallest nodule mining operation under consideration (1 million tons of nodules per year), could supply 9 per cent of world demand. The

international community could limit nodule production to low levels in order to prevent pressures on prices but the future International Sea-Bed Authority would have to decide which mineral or minerals should be protected by restricting nodule development. If it were not possible to prevent harmful effects to developing producing countries, then the only alternative would be compensatory measures.

32. Mr. FIGUEREDO (Venezuela) observed that the report of the Secretary-General stated that only 3 per cent of the ocean floor had been studied. It would therefore seem that there was as yet insufficient knowledge of the resources of the ocean floor. Their exploitation could have great repercussions on the economies of producing countries.

33. At present, it was known that manganese, nickel, cobalt and copper could be produced from nodules. In the light of rapidly advancing technology, his delegation wondered whether other minerals might also be produced from nodules in the future and, if so, how soon.

34. Mr. BRANCO (Secretariat) said that it was difficult to reply to the representative of Venezuela as regards the timing of the appearance on world markets of other minerals produced from nodules. Fifteen years ago, mineral production from nodules had been unheard of and, similarly, mining in the mid-ocean ridges might very well be conceivable 15 years hence.

35. The representative of Venezuela had raised one important aspect which should be kept in mind by the international community, namely, the rapid advance of technology. The coming decade could very well bring new technology with respect to metallized muds and oozes and the next century might very well see mining in the bed-rock of mid-ocean ridges.

36. Mr. GONZALEZ LAPEYRE (Uruguay) asked what nations had the existing capability of exploring and exploiting the resources in the international area.

37. Mr. BRANCO (Secretariat) said that it was known that close to 10 nations had the capability to explore the sea-bed for deep-sea mining. Currently, no nation was able to engage in commercially profitable exploitation. However, enterprises and groups from the United States of America, Japan, the Federal Republic of Germany, France, Canada, the United Kingdom and the Soviet Union were all engaged in developing technology for deep sea-bed mining.

38. Mr. RATTRAY (Jamaica) said that basic rules for exploration and exploitation of the international area had to be established. His delegation wondered whether any analysis or evaluation had been made of the implications, for the international area, of raw material production from the new national 200-mile economic zone to be established. Conversely, how would exploitation of the international area affect exploitation in national zones?

39. Mr. BRANCO (Secretariat), observing that the report of the Secretary-General had dealt primarily with the economic implications in the developing countries, said that the representative of Jamaica had raised the very important issue of the interrelationship of mining in the economic zone and in the international area. The impact of one on the other was important because, for example, sedimentary areas in the sea-bed were primarily in the continental margin and, if no part of that margin was placed within the international area, all off-shore oil production in the future would be carried out exclusively within national jurisdiction. With respect to nodule mining, it was known that areas close to many South Pacific islands had nodules within the areas to be considered as coming under a 200-mile economic zone. Thus, nodule production in national economic zones would have implications for the world community and, accordingly, the Conference might wish to consider measures such as revenue sharing.

40. Mr. TARCICI (Yemen) asked where the metallized muds were to be found and whether serious studies had been carried

out with respect to their present values, i.e. whether they were economically exploitable.

41. Mr. BRANCO (Secretariat) said that those areas could be ascertained only approximately. The existence of hot brines and metallized muds in the Red Sea had come to the attention of the international community some decades before and the past decade had seen much research in methods for their recovery and processing. Copper, nickel, lead and zinc were to be found in considerable quantities in hot brines and metallized muds and it was felt that the technology for mining them was close to that of the hydro-lift type of nodule mining. In other words, it was possible to use a string of tubes and pumps to suck them from the sea-bed. Of course, those areas were limited and the hot brines and metallized muds were to be found only at specific points there. Furthermore, the suction of highly fluid sediments made it difficult to restrict the mining to the specific areas of highly metallized muds and brines. Those sediments were also to be found in Indonesia and in a number of places along the mid-ocean ridge. The Federal Republic of Germany and the United States of America seemed to be the most advanced countries in the technology for that type of mining.

42. Mr. CHAO (Singapore) observed that at the 6th meeting the representative of UNCTAD had stated that the revenue from sea-bed mining would not be enough to provide compensation to the producing developing countries. That left the alternative of the use of preventive measures through stabilization of prices. It appeared to his delegation that costs would therefore rise and, in that connexion, it should be pointed out that most developing countries were not producers but consumers of finished products. His delegation wished to know how non-producing developing countries could benefit without paying more for the finished product and how, at the same time, the interests of developing producing countries could be protected. Furthermore, the economic affairs officer had stated that the impact of nodule production could become more serious after 1985. His delegation wished to know whether that impact would be increasingly serious or whether its seriousness would gradually diminish.

43. Mr. BRANCO (Secretariat) said that the first of the Singapore representative's questions was really the crux of the matter before the Committee. The Secretariat's studies had shown that a solution which might benefit most of the developing countries could be found, but sometimes solutions were more costly than the benefits they produced, and sometimes there was no willingness to use the instruments that would help to meet the desires of the groups concerned. To protect the developing raw material producing countries without preventing sea-bed mining from increasing world supplies and slowing down the constant increase of primary commodity prices would require a package policy, involving a number of instruments, some of them powerful and having side effects which would have to be counteracted by further policy instruments. The general lines of long-term planning in the Secretary-General's report, with nickel as the guideline, would defend most mineral exporting developing countries, but not exporters of cobalt and, to some extent, of manganese. Compensation measures might therefore be adopted, but if cobalt and manganese exporters were compensated by the Authority, the revenues available for distribution would be greatly reduced. The dilemma could be resolved by other methods of compensation, not exclusively from the Sea-Bed Authority's revenue, but from a share of the savings resulting from lower prices of minerals to importers—in the short run, cobalt and manganese—what the UNCTAD representative had described as a consumer surplus. Such a scheme would involve considerable institutional and political difficulties. However, since the question had been hypothetical, he had given a hypothetical reply: the possibility existed, but its application was another matter.

44. The answer to the second question depended on the pace of nodule mining. Given freedom of access and guided exclusively by market conditions, sea-bed mining would continue to expand as long as it was profitable in comparison with land mining. If sea-bed mining proved to be a way of producing metals at low cost, the impact on traditional producers would probably be greatly compounded in the second and third decades of sea-bed mining. It was not really possible to say without knowing the actual costs of sea-bed mining and future market prices.

45. Mr. BOATEN (Ghana) asked in the first place whether it was possible, on the basis of available technology, to gain some idea of the comparative costs of exploiting minerals on land and in the sea-bed.

46. Secondly, he would like to know what were the prospects of improving the technology for exploiting sea-bed resources in order to reduce costs in the next decade. It seemed to him that such technology might be improved to a point where there would no longer be any interest in exploiting land resources which would be too costly in comparison with sea-bed exploitation.

47. Lastly, he asked for projections concerning future world demand for sea-bed minerals.

48. Mr. BRANCO (Secretariat) said that there were no precise figures concerning the comparative costs of sea-bed and land exploitation. In an industry where several metals were produced jointly it was difficult to determine which part of the total cost was applicable to each specific metal. There were various methods of economic analysis for apportioning the cost of joint production, the most common one being to assess costs in accordance with market strategy for competitive products. The information given in the Secretary-General's report was based on the industries' cost figures, which were strictly estimates, and might to some extent be optimistic in order to attract investors. The comprehensive figures for costs and revenues presented in the report would be only approximations until the Sea-Bed Authority could tackle the problem and produce more definite figures.

49. With regard to the second question, the representative of Ghana was right in thinking that the nodule industry was only at the start of the learning curve: the first one or two operations would be costly, but the costs would be expected to fall with experience and with technological progress. While nothing was certain, it must be assumed that mineral production from nodules would become cheaper than mining on land: otherwise there would be no incentive for the expansion of the sea-bed mining industry.

50. Regarding future demand, he drew attention to table 6 of the Secretary-General's report.

51. Mr. RATINER (United States of America) said he did not think that the exchange of questions and answers—which seemed to be anticipating the seminar—was the most constructive way of proceeding in such a complex matter. There was more than one answer to each question and members should have the opportunity to hear all of the answers. The current discussion would be recorded and studied. Under that format full justice might not be done to an important subject and to all the interests represented in the Committee. He appealed to the Chairman to arrange for one or more further meetings of the Committee in which the fullest possible answers to these extremely important questions raised could be given and placed on record. He agreed with the Secretariat representative that the first question raised by the representative of Singapore was the crux of the matter.

52. He would like to ask whether, bearing in mind that higher prices for raw materials would mean higher prices for finished products needed by the developing countries, it was possible to calculate the cost of preventive or compensatory measures to consumers in the developing countries. Normally, his delega-

tion would leave that type of question to be dealt with by the developing countries—for example, in the Group of 77—but in that case, United States' interests in the sea-bed would be directly affected by the answer. In view of the extreme importance of the subject, he asked whether the Secretariat could provide, before the next meeting of the Committee, an idea of the cost to developing consumer countries of maintaining or raising the prices of nickel, copper, cobalt and manganese.

53. He would also like to know if an analysis had been made of the extent to which preventive or compensatory measures would benefit the developed rather than the developing countries. Would it be possible to help developing countries selectively—for example Zaire—by controlling production, without producing financial gain for the developed countries? He would like a precise and careful answer to that question.

54. Another question was to what extent revenues available for sharing would be lost or diminished by production control or compensation. It would also be necessary to consider, for example, the extent to which new equipment and technology needed to deal with the new economic zones being created, such as drilling platforms and drill pipes, would be made from metals produced from manganese nodules. How much was the

international community interested in ensuring cheap production costs and low prices for finished products?

55. He had many more questions to ask in the seminar and in the Committee. He would not ask for immediate answers but hoped that the Secretariat would provide them before decisions were made and before delegations adopted positions. Such information could ensure that any decisions taken were in the interests of the whole international community and not of a few land-based producers.

56. The CHAIRMAN remarked that the seminar would be different from the current meeting, in that there would be several experts present to answer questions. He thought that the United States representative's questions had perhaps not been asked purely for purposes of information and it would not be useful to insist on answers at the present meeting. The Secretariat would, however, provide answers for the record, as requested.

57. The purpose of the present debate was to obtain clarification about the Secretary-General's views. He would ensure that there would be ample opportunity for full debate in the Committee later.

The meeting rose at 1.05 p.m.

10th meeting

Tuesday, 30 July 1974, at 3.15 p.m.

Chairman: Mr. P. B. ENGO (United Republic of Cameroon).

Economic implications of sea-bed mineral development (continued)

1. Mr. D'STEFANO PISSANI (Cuba) expressed concern over the possibility of a short-run reduction in the price of cobalt, which would affect Cuba, a country that produced cobalt. If cobalt was sold at a lower price, it could be used as a substitute for other metals; thus, cobalt consumption might increase at the expense of that of other metals because it was offered at more competitive prices. He requested further information on the quantitative and qualitative consequences of the trend towards the production of substitutes for mineral and agricultural products from the developing countries.

2. Mr. BRANCO (Secretariat) said that using substitutes for raw materials was the result of technological progress. It was true that cobalt could be used as a substitute for nickel, for instance, so that while the price of cobalt might fall, market demand for it would rise. It was, however, more difficult to conceive of substitutes for other raw materials.

3. Mr. HARAN (Israel) asked why there was a discrepancy between the forecasts made by the representative of the United Nations Conference on Trade and Development (UNCTAD) at the 6th meeting and those made by the representative of the Secretary-General, on the expected shortfall in the income of developing countries. He also asked if any estimate had been made or would be made of possible savings to developing countries from a reduction in prices which would enable them to increase their exports and make their products cheaper. In connexion with the possible allocation of the resources of extended economic zones to coastal States, he asked if any estimate had been made of the possible increase in income of those coastal States as a result of their jurisdiction over extensive marine resources.

4. Mr. BRANCO (Secretariat) said that the Secretariat had not tried to quantify the shortfall in the revenues of developing countries because there were still too many imponderables.

Only UNCTAD had made econometric studies and produced some figures. It was very difficult to project what would happen in the next five or ten years and given the many unknowns about the nodule industry, no precise figures could be given. The Secretary-General and UNCTAD had, however, agreed on the general trend. The expected shortfall in the export earnings of developing countries consisted of two elements; what developing countries would lose as a result of a fall in prices; and what they would forgo because prices would not increase as they would have in the absence of sea-bed mining. Developing countries might indeed import some products that could be made from minerals produced from nodules, but that would represent a small part of their imports. Replying to the last question asked by the representative of Israel, he said that the Secretary-General had prepared a report in 1973 on the economic significance, in terms of sea-bed mineral resources of the various limits proposed for national jurisdiction.¹ If resources falling under national jurisdiction were exploited, the income of the coastal States concerned would increase. The Secretariat had not, however, carried out any detailed study on the estimated increase in income.

5. Replying to questions asked by the United States representative at the previous meeting, he said that he would reply only in general terms, as quantifying the answers would require further study, time and research. The answer to the first question, i.e., whether higher prices for raw materials produced from nodules would mean higher prices for finished products imported by developing countries, was a qualified yes. The report of the Secretary-General (A/CONF.62/25) dealt with the likely impact of only the first decade of nodule mining. During that period only the prices of cobalt and manganese were likely to be affected. Cobalt was used in sophisticated industries for products primarily used by the developed countries. It was, however, only a small component of the total cost

¹ Document A/AC.138/87 and Corr.1.