

Third United Nations Conference on the Law of the Sea

1973-1982

Concluded at Montego Bay, Jamaica on 10 December 1982

Document:-
A/CONF.62/26

Reports submitted by the United Nations Conference on Trade and Development

Extract from the *Official Records of the Third United Nations Conference on the Law of the Sea, Volume III (Documents of the Conference, First and Second Sessions)*

of these important mineral resources. Recovery efficiency is a function of several factors, the most important of which are the percentage of total area that would remain unmined, the dredge efficiency and the sweep efficiency of the system.

The unmined area of a block depends on topographical barriers on the one hand and on nodule grade on the other. It is possible that part of an exploitation block might contain nodules below the cut-off grade in which case this area would not be worked over by the mining company. The paper suggests that 10 per cent of a mine site is likely to contain nodules below the cut-off grade.¹⁶⁴ It seems, however, that if the block size is not excessively large only a negligible proportion of the total area might contain nodules below the "cut-off" grade. The cut-off grade, of course, remains to be defined. As for the unmineable zones, which in the quoted industry paper are suggested to range between 15-25 per cent of the total area, the applicability of these figures would again depend on the size of the mine site. The larger the mine site—the paper considered mine sites as large as 750,000 square kilometres—the greater the likelihood of a significant proportion of the total area being covered with topographic barriers.

Dredge efficiency is the capability to collect the nodules lying within the sweep of the minthead. The industry paper uses three assumptions: 30 per cent, 50 per cent and 70 per cent. These assumptions probably reflect the capabilities of the mining systems under development by Deepsea Ventures and Kennecott. In the author's words: "At the present stage of

¹⁶⁴ *Ibid.*

development of the technology, it is unlikely that ocean miners will be able to approach a pick up efficiency of 100 per cent".¹⁶⁵

The same could be said of the sweep efficiency. The industry paper works with assumptions of 45 per cent and 65 per cent of the total mine site. It can be visualized how difficult it will be to control the movement of a towed dredge head. This system will work like a giant vacuum cleaner with a suction head perhaps 15 metres wide (50 feet) dangling from the mine ship by about 5,000 metres of semi-flexible pipe. Given the currents throughout the water column, even with precise steering of the mine ship to a course exactly 15 metres parallel to the previous run, the mine head at the bottom could be sweeping a new row anywhere within a 150 metres path. One mining company, after several computer simulation exercises, was forced to conclude that the best procedure would be to simply sweep the mine site at random.

Given the stage of existing technology both dredge efficiency and sweep efficiency must be rather low. However, regulation of mining operations cannot be logically based on a level of technology which is some 5 to 10 years prior to actual commercial operations. It is obvious that considerable progress can be expected from the leaders of the industry, such as television monitoring of the mining operations, sophisticated guidance systems for the dredge head and other devices. It is also possible that mining systems with bottom crawling devices will become operational, thus increasing both pick up efficiency and sweep efficiency.

¹⁶⁵ *Ibid.*, p. 655.

DOCUMENT A/CONF./62/26

Reports submitted by the United Nations Conference on Trade and Development

[Original: English]
[6 June 1974]

NOTE BY THE SECRETARY-GENERAL OF THE UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

1. The secretariat of UNCTAD has prepared a number of reports, within its field of competence, on issues relevant to the business of the Third United Nations Conference on the Law of the Sea. The Trade and Development Board has requested that they be transmitted to that Conference, for consideration, and this note is submitted accordingly.

2. It should be recalled that the question of mineral production from the sea-bed first arose within UNCTAD as a result of General Assembly resolution 2750 A (XXV) of 17 December 1970, which requested the Secretary-General of the United Nations to co-operate with the United Nations Conference on Trade and Development and other bodies in order to:

"(a) Identify the problems arising from the production of certain minerals from the area beyond the limits of national jurisdiction and examine the impact they will have on the economic well-being of the developing countries, in particular on prices of mineral exports on the world market;

"(b) Study these problems in the light of the scale of possible exploitation of the sea-bed, taking into account the world demand for raw materials and the evolution of costs and prices;

"(c) Propose effective solutions for dealing with these problems."

3. In accordance with that resolution, the UNCTAD secretariat co-operated with the Department of Economic and So-

cial Affairs of the United Nations Secretariat in the preparation of relevant studies, and reported on this co-operation to the Committee on Commodities at its sixth session. In the discussion of this subject at the Committee's sixth session, representatives of developing countries stated that they attached great importance to the subject-matter of General Assembly resolution 2750 A (XXV); that the co-operation envisaged in the resolution should be regarded as referring to UNCTAD at the inter-governmental as well as the secretariat level; that provision should be made for the Committee on Commodities to be informed of, and to discuss, developments in this field on a continuing basis; and that an opportunity should be provided for an examination of the matter at the third session of UNCTAD. Similar views were expressed at the eleventh session of the Trade and Development Board.

4. The UNCTAD secretariat initially carried out a preliminary over-all review of the main issues of international commodity policy arising from the potential production of minerals from the area of the sea-bed beyond the limits of national jurisdiction. The results of this review were incorporated in certain reports by the Secretary-General of the United Nations to the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction appearing in documents A/AC.138/36 of 28 May 1971 and A/AC.138/73 of 12 May 1972¹⁶⁶ and were presented to the

¹⁶⁶ *Official Records of the General Assembly, Twenty-seventh Session, Supplement No. 21 and corrigendum, annex II, sect. 2.*

United Nations Conference on Trade and Development at its third session as document TD/113/Supp. 4.¹⁶⁷

5. The United Nations Conference on Trade and Development, in resolution 51 (III), adopted at its third session, decided that

“the question of the economic consequences and implications for the economies of the developing countries resulting from the exploitation of mineral resources shall be kept constantly under review by the Conference and its subsidiary organs, in particular the Trade and Development Board”

and it invited the Secretary-General of UNCTAD

“to continue to study the measures necessary to avoid the adverse economic effects which the exploitation of the sea-bed and the ocean floor, and the subsoil thereof beyond the limits of national jurisdiction may have on the prices of minerals exported primarily by developing countries, and to propose specific and detailed measures in that connexion”.

6. Accordingly, the UNCTAD secretariat continued its examination of these matters, with the initial objective of assessing, through case studies of individual minerals, the possible quantitative impact of the production of minerals from the sea-bed on world markets and the export earnings of the developing producing countries. The results of the first case study to be completed—relating to cobalt—were summarized and commented upon in document TD/B.449 and Add.1, presented to the Board at its thirteenth session. In response to a

request made by the Conference in another part of resolution 51 (III), the Board, at its thirteenth session, also had before it a report by the FAO secretariat on “Possible adverse effects of the exploitation of the sea-bed beyond national jurisdiction on fishery resources” (TD/B/447).

7. At its thirteenth session, the Trade and Development Board noted the reports contained in documents TD/B/447, TD/B/449 and Add.1 and requested that these studies, together with a summary of the views expressed thereon at that session, be transmitted to the Third United Nations Conference on the Law of the Sea for consideration.

8. Since the thirteenth session of the Trade and Development Board, the UNCTAD secretariat has completed a further case study, relating to manganese ore, which, in the spirit of the Board's decision, should also be brought to the attention of the Third United Nations Conference on the Law of the Sea.

9. Accordingly, in pursuance of the aforementioned request of the Board, the following reports are transmitted for presentation to the Third United Nations Conference on the Law of the Sea. (The list takes into account the desirability of document TD/B/449 being read in conjunction with an earlier report by the UNCTAD secretariat (TD/113/Supp.4); the possible interest of Governments in the econometric study on which the report on cobalt is largely based; and the availability of a further case study, relating to manganese ore (TD/B/483 and Add.1).

<i>Title</i>	<i>Symbol</i>	<i>Date</i>
Mineral production from the area of the sea-bed beyond national jurisdiction: issues of international commodity policy	TD/113/Supp.4	7 March 1972
Possible adverse effects of the exploitation of the sea-bed beyond national jurisdiction on fishery resources: report by the FAO secretariat	TD/B/447	18 June 1973
Exploitation of the mineral resources of the sea-bed beyond national jurisdiction: issues of international commodity policy	TD/B/449	25 June 1973
Exploitation of the mineral resources of the sea-bed beyond national jurisdiction; issues of international commodity policy: case study of cobalt	TD/B/449/Add.1	26 June 1973
The impact of cobalt production from the sea-bed: a review of present empirical knowledge and preliminary appraisal	TD/B/(XIII)/Misc.3	31 July 1973
The effects of production of manganese from the sea-bed, with particular reference to effects on developing country producers of manganese ore	TD/B/483	23 April 1974
An econometric model of the manganese ore industry	TD/B/483/Add.1	23 April 1974

10. The text of that part of the Report of the Trade and Development Board on its thirteenth session which contains a summary of the views expressed on documents TD/B/447, TD/B/449 and Add.1 at that session is reproduced as an annex to this note.

11. Studies by the UNCTAD secretariat of the possible impact on world markets, and on the export earnings of developing countries, of the production of copper and nickel from the International Area of the sea-bed are currently in progress for presentation when completed to the Trade and Development Board or /and the Committee on Commodities. Copies of these reports will be transmitted, when available, to the Third United Nations Conference on the Law of the Sea; the report on copper is expected to become available in the course of June 1974.

ANNEX

Extract from Report of the Trade and Development Board on its thirteenth session, held at the Palais des Nations, Geneva, from 21 August to 11 September 1973¹⁶⁸

E. *The exploitation, for commercial purposes, of the resources of the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction* (UNCTAD resolution 51 (III))

45. The representative of the Secretary-General of UNCTAD introduced the secretariat's progress report prepared in conformity with Conference resolution 51 (III) (TD/B/449) and the summary of a case study of the possible effects of the production of cobalt from the sea-bed on the world market for this mineral (TD/B/449/Add.1). He stated that studies of the potential consequences of the production of manganese ore and nickel from the sea-bed were being undertaken. In

¹⁶⁷ See *Proceedings of the United Nations Conference on Trade and Development, Third Session*, vol. II (United Nations publication, Sales No. E.73.II.D.5).

¹⁶⁸ *Official Records of the General Assembly, Twenty-eighth Session, Supplement No. 15, part III.*

the secretariat's opinion there were two possible methods of protecting existing producers of minerals against possible adverse effects of the mining of these minerals from the sea-bed: the preventive method and the compensatory method. For the reasons given in the study relating to cobalt it considered that the compensatory method would probably be ineffective and that for this reason alternative methods might have to be considered.

46. The representative of the FAO introduced the study prepared by the FAO secretariat in response to the invitation of the Secretary-General of UNCTAD regarding the possible adverse effects of the exploitation of the sea-bed beyond the national jurisdiction on fishery resources (TD/B/447). He emphasized that the study was a preliminary one inasmuch as the limits of national jurisdiction were as yet undefined and as the existing state of knowledge regarding the subject did not permit the drawing of definitive conclusions. He drew specific attention to the passages in the document which concerned the harmful effects on fisheries of the discharge of toxic substances into the sea. He pointed out that research was needed to determine the potential effects of the exploitation of the sea-bed on the biological resources of the sea.

47. The representatives of several developing countries emphasized the competence of UNCTAD, in accordance with General Assembly resolution 2750 A (XXV) and Conference resolution 51 (III), and in keeping with the discussions that had already taken place in the Board and the Committee on Commodities, to study the question of the economic implications of the commercial exploitation of mineral production from the sea-bed and ocean floor beyond national jurisdiction, to propose measures for dealing with possible adverse effects of such exploitation and to keep under constant review both in the Board and through its subsidiary organs, especially the Committee on Commodities, the complex problems arising from mineral production from the sea-bed. One such representative stated that these studies showed that UNCTAD's analysis of the economic consequences of such exploitation could be carried out without trespassing on the competence of other forums.

48. They attached importance to measures that should be evolved and adopted to avoid any possible adverse impact on world markets for the minerals concerned. The representatives of several developing countries urged that such measures should be adopted before the commencement of commercial exploitation in order to ensure that exploitation could be regulated so as to preclude developing producing countries from being adversely affected. Such preventive arrangements could be effective only if the sea-bed Authority was empowered to undertake direct exploration of the area by itself or by means of joint ventures or service contracts, thus ensuring direct control by the sea-bed authority. An economic and development planning unit within the authority itself, which could monitor on a continuing basis the effects of exploitation of sea-bed minerals on land-based production in developing countries, should form an integral part of any system of control. These representatives were of the view that in this regard all States ought to observe the moratorium on the exploitation of the sea-bed beyond national jurisdiction recommended by General Assembly resolution 2574 (XXIV) and Conference resolution 52 (III).

49. The representative of a developing socialist country of Asia stated that the international seas beyond the limits of national jurisdiction and the resources thereof should in principle belong to the peoples of all countries. He reiterated the competence of UNCTAD to propose measures necessary to avoid adverse economic effects which exploitation of the sea-bed might have on the prices of minerals exported primarily by the developing countries and he called on all States engaged in activities in the sea-bed area beyond the limits of national jurisdiction to cease such activities before the establishment of an international régime.

50. The representative of a developed market economy country noted that his country had supported a proposal made in the United

Nations Committee on the Sea-Bed to establish, within a proposed international sea-bed authority, a commodity board aimed at regulating mineral production from the international area of the sea-bed. It was the hope of this delegation that such an international board would benefit both developed and developing countries.

51. The representatives of several developed market economy countries were of the view that, since the conclusions which might be drawn from the studies were still tentative and since many economic aspects of sea-bed production were as yet uncertain, no firm conclusion or recommendation regarding measures or approaches to avoid market disruption could be reached at this stage. Moreover, they considered that these questions were the primary responsibility of the United Nations Committee dealing with the sea-bed and would be discussed subsequently at the Conference on the Law of the Sea. They also wished to avoid any action which might prejudice the conclusions, or duplicate the work, of the forthcoming Conference on the Law of the Sea.

52. The representative of one developed market economy country observed that the UNCTAD secretariat's views on possible consequences of the exploitation of sea-bed resources on the export earnings of developing countries were interesting, but that these consequences could not be the only criteria relevant to this matter.

53. The representative of a developed market economy country said there was a need to consider the orderly exploitation of sea-bed resources and that the question of the conservation of such resources should be taken into account.

54. Several of the representatives participating in the debate stated that in conformity with General Assembly resolution 2750 A (XXV) and Conference resolution 51 (III), UNCTAD should continue to study the problems arising from the commercial exploitation of the sea-bed and strengthen and supplement the present studies. They urged that close liaison should be maintained by the UNCTAD secretariat in its future work with the secretariats of other United Nations bodies concerned with these questions.

55. The representatives of some developed market economy countries emphasized that care should be taken to avoid duplication of work. The representatives of several developing countries emphasized that in view of the competence of UNCTAD in the field of international commodity policy, it should study the possible adverse implications of sea-bed production and propose remedial measures.

56. The representatives of a developing country said that the use for military purposes of the sea-bed and ocean floor might prejudice the future constructive use of the resources in question. He suggested that the organizations within the United Nations system, among them UNCTAD, should keep this aspect of the subject under review.

Action by the Board

57. At its 380th meeting on 8 September 1973, the Board noted the reports contained in documents TD/B/447, TD/B/449 and Add.1 on this matter.

58. Bearing in mind that the exploitation of the sea-bed was still in a preliminary stage and that more knowledge had to be gained regarding exploitation processes and their possible effects on the conservation and utilization of living resources, and noting further that this matter was under consideration by the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction acting as a preparatory committee for the Third United Nations Conference on the Law of the Sea, the Board requested that the studies mentioned above, together with a summary of the views expressed thereon at its present session, be transmitted to the Third United Nations Conference on the Law of the Sea for consideration, and noted that the secretariat intended to carry out case studies on manganese and nickel. The Board noted with interest the FAO study on fisheries resources of the seas and oceans.