

# **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/C.1/L.11**

## **Chile: working paper on the economic implications for the developing countries of the exploration of the sea-bed beyond the limits of national jurisdiction**

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)*

### 11. *Transition from evaluation to exploitation*

Upon attainment of commercial production<sup>17</sup> the Contractor of an evaluation contract shall propose to the Authority to conclude a contract of exploitation. The Authority shall award the contract within [three] weeks.

### V. *Obligations*

#### 1. *Compliance with these Rules and other standards*

(i) Entities conducting general survey, evaluation and exploitation shall comply with the terms and conditions of these Rules and the provisions of the rules to be adopted by the Authority pursuant to this Convention.

(ii) These entities shall also comply with other international standards relating to:

- (a) Operational standards;
- (b) Navigational safety;
- (c) Preservation of marine environment;
- (d) Installations and devices.

#### 2. *Relinquishment*

Upon attainment of commercial production, the Contractor shall renounce [one half] of the contract area. The relinquishment shall be made in such a way as not to prevent full utilization of the mineral resources of the renounced portion.

#### 3. *Work requirements*

(i) During the evaluation stage the Contractor shall expend such amounts as are specified in the rules to be adopted by the Authority.

(ii) The amount shall be determined at a level which will discourage the freezing of contract area for speculative or other purposes.

### VI. *Participation of nationals of developing countries*

1. Promotion of the employment of qualified personnel from developing countries;

2. Training of personnel of developing countries including the establishment of training centres.

### VII. *Financial arrangements*

(To be elaborated.)

### VIII. *Measures to ensure compliance*

#### 1. *Inspection*

(i) Objective of inspection:

<sup>17</sup>To be defined in terms of the quantity of ores to be mined per year.

Inspection may be conducted by the Authority with a view to ascertaining compliance with the obligations under article V of these Rules.

The Authority may also conduct inspection for the purpose of verifying the exact quantity of minerals produced by the Contractor.

In case the rights of Contracting Parties under the development contract are delegated under article IV, such Parties shall be responsible for inspection.

#### (ii) Modalities of inspection

Inspection shall be carried out by any of the following means:

- (a) Study of the reports of the Contractor including work plans;
- (b) On-the-spot inspection of mining sites.

#### 2. *Suspension and termination of contracts*

(i) In conformity with the provisions of articles . . . on settlement of disputes of this Convention, the Authority may suspend or terminate the contract if the Contractor is found to have violated the terms and conditions of the contract, these Rules and the rules to be adopted by the Authority pursuant to this Convention.

(ii) *Force majeure*  
(To be elaborated.)

#### 3. *Compensation of damage*

(i) Liability:

Entities shall be liable for damage caused by their activities of general survey, evaluation and exploitation to other users of the marine environment. In case a Contracting Party delegated its rights and obligations to natural or juridical persons in accordance with the provisions of articles III and IV, such natural or juridical persons shall be liable for damage.

(ii) Pollution damage:

If damage is caused by pollution arising from the activities of entities conducting general survey, evaluation and exploitation, such entities shall be absolutely liable for such damage. However, in the case of delegation of the rights and obligations under articles III and IV, the operator shall be absolutely liable for such damage.

(iii) Insurance:  
(To be elaborated.)

### IX. *Settlement of disputes*

(To be elaborated.)

## DOCUMENT A/CONF.62/C.1/L.11\*

### Chile: working paper on the economic implications for the developing countries of the exploration of the sea-bed beyond the limits of national jurisdiction

[Original: Spanish]  
[26 August 1974]

The topic with which we are concerned has been debated both in the First Committee, when the representatives of the Secretary-General and of the United Nations Conference on Trade and Development (UNCTAD) took part, and in the seminar that was organized on this question, which enabled a free, off-the-record and thorough discussion to be held.

The seminar, which all delegations had the opportunity to attend, the questions put to the representatives of UNCTAD and of the Secretary-General, and their answers, the very comprehensive reports submitted to the Conference by the Secretary-General and by UNCTAD, and the summary (A/CONF.62/C.1/L.2) which the Chairman had prepared for

the First Committee constitute a body of important information which has enabled delegations sufficiently to form their own views on this topic.

We must try to deal with the whole subject of the so-called economic implications in an orderly and systematic manner, for it is something with which we have been concerned since 1968.

It must first be asked: what are the economic implications? Here we are dealing with a cliché of the same kind as the term

\* Incorporating document A/CONF.62/C.1/L.11 and Corr.1 of 27 August 1974.

“rules and regulations” and many others. What are the economic implications? Since 1968, when the sea-bed Committee met for the first time, it has been said that the new submarine products will necessarily affect the prices and markets of land-source supplies. If a new source of production appeared on the scene, it was only logical that it should cause some drop in prices and have some impact on the market; thus it would be harmful for the countries producing the same minerals, particularly for the developing countries, and that harmful effect had to be prevented or efforts must be made to minimize it. At that time in 1968 there began to be talk of the so-called economic implications of future exploitation and there was included 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 principle which is always reiterated every year. The principle is that the harmful effects which future production might cause or initiate in the economies of the producing developing countries should be minimized.

This principle has been repeated in all the reports of the sea-bed Committee since 1968 and it is included in the solemn declaration of principles proclaimed by the twenty-fifth anniversary session of the General Assembly in resolution 2749 (XXV) which was adopted by consensus. That same session also adopted resolution 2750 A (XXV) in which the Secretary-General was requested, in co-operation with UNCTAD, to keep this matter under review and to propose solutions; the report of the Secretary-General is a result of that resolution. For its part, UNCTAD adopted at its third session, held at Santiago, Chile, resolution 51 (III) which uses practically the same language as the General Assembly resolution; accordingly, UNCTAD has issued reports and sent two representatives to this Conference. By taking up this topic and dealing with it—it is an item on its agenda—the Conference is in fact repeating and ratifying the mandate which it has received to deal with this principle and give it a precise formulation.

The principle of minimizing the harmful implications of future exploitation coexists with another principle—that of the common heritage of mankind. The principle of the common heritage of mankind implies that there is going to be exploitation, subject to a régime and an international authority, and that this exploitation is going to benefit mankind, i.e. all States. Thus the principle of minimization should be understood in conjunction with the principle of the common heritage.

I must now get down to specifics.

In the first place, which are the exploitable minerals of the sea-bed?

We have been tending to give priority to manganese nodules containing manganese, cobalt, nickel and copper, for the simple reason that the prospects of exploiting such nodules have been imminent, because extensive exploration activities have already been carried out, and because certain steps identifiable with incipient exploitation have been taken despite the existence of a moratorium which was already implicit in General Assembly resolution 2749 (XXV) establishing the principles governing the sea-bed. However, manganese, copper, nickel and cobalt obtained from manganese nodules are not the only minerals involved or the only ones to be exploited. The study prepared by the Secretary-General for the Economic and Social Council, entitled *Mineral Resources of the Sea*,<sup>38</sup> provides a clear indication as to which minerals are involved.

In addition to manganese nodules, petroleum and gas should not be overlooked. It is not my intention to go into or prejudge the question of national jurisdiction, but as the Secretary-General's study established, petroleum is to be found not only on the continental shelf but also in various ocean basins, among them the Gulf of Mexico. In the opinion of a University of Miami geophysicist, recently reported in *Time* magazine,

there could be hundreds of sites in the ocean depths which contain petroleum and gas.

A recent issue of *The New York Times* contained a report on the project known as FAMOUS which was carried out jointly by the United States and France. While exploring the mid-Atlantic sea-bed to study a series of geological phenomena, the project discovered geysers, upwellings of manganese, and manganese ore in its pure state. The project has also studied and examined the so-called metalliferous muds existing in different areas of the world, especially in the Red Sea, which contain zinc, iron, silver, gold and copper. The sea-bed also contains tin, diamonds, metalliferous sands and sediments, coal, gold, iron, phosphate and phosphorite. Thus the mineral content of the sea-bed is not limited to manganese nodules alone.

Which countries could therefore be affected? Almost all of the developing countries. There is not a single one of the 90-odd developing countries (perhaps their number already exceeds 100) which is not a producer of one of those minerals. But apart from this, it has been said that the exploitation of manganese nodules would affect only five easily identifiable countries. According to the report prepared by the Secretary-General in 1971 (A/AC.138/36), there are two categories of States which would be affected: those whose economies would be profoundly affected and those which would be simply affected. With regard to copper, Zambia, Zaire, Peru, Chile, the Philippines and Uganda would be substantially affected. Haiti, Bolivia, Nicaragua, Mexico, Morocco, Cuba, the Republic of Korea and India would be affected to some degree. With regard to manganese, Gabon, Ghana, Brazil, India and China would be seriously affected, while Guyana, the Ivory Coast and the Philippines would be affected to some degree. With regard to nickel, Cuba, Indonesia, New Caledonia would be substantially affected, while the Philippines, Guatemala and the Dominican Republic would be affected to some degree. With regard to cobalt, Zaire, Zambia and Morocco would be substantially affected, while New Caledonia and Cuba would be affected to some degree.

As can be seen, the list contains more than 30 countries.

What is the true position with regard to the exploitation of the nodules? First, the sea-bed resources are adequate to cover world demand for the most important minerals for centuries, even if there were no land-based production. Secondly, the great maritime Powers have explored all the oceans for manganese nodules and are well aware of their existence; the places where the minerals are richest in manganese nodules are well known; there are not only one but four or five highly developed methods of extraction which have been described in some detail in the Secretary-General's report; there are sophisticated metallurgical mineral-separating systems; transport and marketing systems have already been studied; there is intensive research into the economic potential of the nodules; several companies from most of the Western industrialized countries have invested large sums (each group of companies—and there are at least six of them—has invested between \$100 million and \$200 million) in exploration for the nodules; technology is developing at a fantastic rate and substantial progress is being made in undersea mineralogy every year, as anyone who has attended marine science and technology congresses in the United States knows; economists have also established that the commercial exploitation of minerals, and particularly of nodules, will be profitable. Certain activities, such as those carried out by the ship belonging to the American Howard Hughes, are difficult to distinguish from the early stages of a process of exploitation. A bill has also been submitted to the congress of an important industrialized nation authorizing that nation, in agreement with others, to grant licenses in the area beyond national jurisdiction, without reference to the United Nations, the Conference or the international community. In other words, this would authorize the establishment of a régime among the developed countries under which they would share

<sup>38</sup>United Nations publication, Sales No. E.70.II.B.4.

the resources of the sea-bed. All the foregoing shows that the sea-bed is exploitable, and exploitable in the very near future. That is the true situation.

What are the economic implications of this situation? We have before us two basic studies, that of UNCTAD and that of the Secretariat. Both are summarized in document A/CONF.62/C.1/L.2 and have been explained extremely clearly and in detail by the representatives of UNCTAD and of the Secretariat.

The UNCTAD document says that, if a new source of production is exploited, this will necessarily have adverse effects on the producers of land-based minerals. The report says that this is bound to lead to a reduction in prices, because the price of the land-based products must either decrease or increase less than it normally would. If the increase is less than normal, there must obviously be adverse effects in any case, since the prices of raw materials—other raw materials such as food products, petroleum, etc.—are rising considerably. However large the volume of production, UNCTAD concludes that there

must be adverse effects on the developing producer countries. Since they export almost all the copper, much of the manganese and cobalt and a large proportion of the nickel in the world, they would be the most affected.

The Secretariat holds that there will be adverse effects, that there will be some short-term adverse effects on cobalt, manganese and nickel, and that there will be other long-term adverse effects on copper.

With respect to the magnitude of the adverse effects, there are no numerical estimates in the UNCTAD study, although there are no precise estimates in the study by the Secretary-General. The UNCTAD study calculates, for 1980, that the income of the producing developing countries, with respect to nodules, may decrease by \$360 million, while the total income of the International Authority, in the same period, would be practically the same. In other words, the producing developing countries would be paying the Authority fully with the adverse effects which they would suffer. The Secretariat makes over-all estimates which are based on the same UNCTAD statistics; it

Table 1

CRUDE PETROLEUM<sup>a</sup> EXPORTS OF SELECTED DEVELOPING COUNTRIES AS A PERCENTAGE OF TOTAL EXPORTS AND GROSS DOMESTIC PRODUCT, 1968

Country	Exports in 1968 (Millions \$US)	Value of petroleum as a percentage of	
		Total exports	Gross domestic product
<b>A. Petroleum as major foreign exchange earner: (above 10 per cent of total exports)</b>			
Libya <sup>b</sup> .....	1,860.0	99.6	58.4
Kuwait <sup>b</sup> .....	1,590.8	96.8	59.7
Iraq <sup>b</sup> .....	996.0	95.5	35.9
Iran <sup>b</sup> .....	1,686.6	89.7	19.5
Algeria .....	699.8	84.3	20.8 <sup>c</sup>
Saudi Arabia .....	1,487.3	78.4	43.6
Venezuela .....	1,973.9	69.1	19.9
Gabon .....	63.9	51.5	26.8 <sup>d</sup>
Lebanon <sup>e</sup> .....	50.8	34.8	16.9
Indonesia .....	276.2	33.7	3.8
Tunisia .....	35.5	22.5	3.3
Nigeria .....	118.0	20.0	2.9 <sup>d</sup>
Bolivia .....	21.1	13.8	2.5
<b>B. Petroleum as important foreign exchange earner: (between 3 per cent-10 per cent of total exports)</b>			
Syria .....	14.1	8.2	1.2
United Arab Republic .....	51.3	8.2	0.8
Colombia .....	40.3	7.2	0.4
Trinidad and Tobago .....	29.0	6.2	3.6
Mexico <sup>e</sup> .....	40.8	3.2	0.2
<b>C. Petroleum as minor foreign exchange earner: (less than 3 per cent of total exports)</b>			
People's Republic of the Congo .....	1.0	2.0	...
Peru .....	12.5	1.4	0.3 <sup>c</sup>
Liberia <sup>e</sup> .....	2.18	1.3 <sup>c</sup>	0.9 <sup>b</sup>
Malaysia .....	8.1	0.6	0.25
Uruguay <sup>e</sup> .....	0.54	0.3	0.03
Southern Yemen <sup>e</sup> .....	0.27	0.2	...
Burma <sup>e</sup> .....	1.52	0.13	0.08 <sup>d</sup>

Source: United Nations, *Statistical Papers, World Energy Supplies 1965-68; Monthly Bulletin of Statistics*, March 1971; Organisation for Economic Co-operation and Development (OECD), Series C, 1968 (January-December), *Trade by Commodities*; International Monetary Fund (IMF), *International Financial Statistics*, April 1971; Agency for International Development (AID), *Economic Data Book*; gross domestic print-outs in national currency.

<sup>a</sup> Crude petroleum [Standard International Trade Classification (SITC) 331].

<sup>b</sup> Data is obtained from *International Financial Statistics* of the IMF for individual countries.

<sup>c</sup> As percentage of gross national product or total exports from AID *Economic Data Book*.

<sup>d</sup> Using 1967 gross domestic product.

<sup>e</sup> Value of petroleum exports as reported by OECD importing countries.

<sup>f</sup> Using 1966 gross domestic product.

does not reach numerical conclusions, but its estimates are not inconsistent with those just made with respect to the Authority.

For that reason, it is clear that there will be adverse effects and the only matter to be discussed is their magnitude. Various criteria have been put forward to deal with the adverse effects and we have established that it is an accepted principle that we have to minimize the negative implications which such production might have on land-based production.

Now, what needs to be established is the means which we should lay down in the treaty and what measures the International Authority might adopt.

The documents of UNCTAD, the Secretariat and the seminar were based on two possible approaches: the compensatory approach and the preventive approach. The compensatory approach is generally rejected, both by UNCTAD and by the Secretary-General, as impractical, because the Authority's income would certainly not be sufficient to provide the necessary compensation, and also as difficult and cumbersome. The Secretariat contemplates it only marginally for the cases of manganese and cobalt, as a supplementary criterion.

The second method is the preventive one and, in that respect, four major areas have been suggested. The first is the regulation and control of production which would be exercised by the Authority. UNCTAD states that, for this method to be effective, the Authority would have to control production, sales and prices and argues that these measures or the powers of the Authority will be necessary in any event to effect a certain regulation because flexibility would be required seeing that the technological and economic conditions are changing daily; the Secretariat also emphasizes this flexibility.

The second approach was suggested by the representatives of UNCTAD; it would involve a general agreement on primary commodities from the land and the sea; that is the criterion

which is being discussed in the Economic and Social Council and in UNCTAD, and it is the criterion which was suggested in the sixth special session of the General Assembly on raw materials held in New York.

The criterion is very interesting, but it will obviously take many years for any general and world-wide agreement between producers and consumers on primary commodities to be negotiated.

A third criterion suggested by UNCTAD is that of minimum prices. A fourth criterion, developed in the report of the Secretary-General, is the so-called complementary criterion, namely, that sea-bed production should be limited to meeting the growth in demand for minerals in short supply. This criterion is being thoroughly studied with respect to the demand for nickel because nickel is expected to be the principal metal recovered from manganese nodules and it is suggested in the report of the Secretary-General that new production should keep pace with increases in demand for nickel.

Thus we have four distinct approaches—four options open to us, each of great interest and all of which may be coordinated. A third and fourth criterion presented in the studies before us is the need in every case to conserve mineral wealth, that is to say the need to refrain from exploiting it all at once and instead to set aside certain areas so that more countries can join in submarine production as their technology improves. Failing that, these studies maintain that preferences or additional incentives should not be given to sea-bed production over land-based production.

These are the preventive or compensatory approaches suggested in the studies before us. We have therefore established, Mr. Chairman, that there will be submarine production, that this submarine production will have adverse effects—the extent of which has yet to be evaluated—that there is one undisputed

Table 2

MANGANESE EXPORTS<sup>a</sup> OF DEVELOPING COUNTRIES AS A PERCENTAGE OF TOTAL EXPORTS AND GROSS DOMESTIC PRODUCT IN DEVELOPING COUNTRIES, 1969

Country	Exports in 1969		Value of manganese exports	
	Thousands metric tons	US dollars (.000)	As a percentage of total exports	As a percentage of gross domestic product
<b>A. Manganese as major foreign exchange earner: (above 10 per cent of total exports)</b>				
Gabon .....	1,584	30,095	21.2	12.7 <sup>b</sup>
<b>B. Manganese as important foreign exchange earner: (between 3 per cent-10 per cent of total exports)</b>				
Ghana .....	305	9,149	33.04	0.45 <sup>c</sup>
<b>C. Manganese as minor foreign exchange earner: (less than 3 per cent of total exports)</b>				
Democratic Republic of the Congo .....	272	9,134	1.6	0.63 <sup>c</sup>
Brazil .....	808	25,408	1.10	0.09 <sup>c</sup>
India .....	897	17,619	0.96	0.04 <sup>b</sup>
Morocco .....	73	4,407	0.91	0.14
Guyana .....	29	501	0.4	0.2 <sup>c</sup>
Ivory Coast .....	82	1,573	0.35	0.12
Trinidad and Tobago .....	13	487	0.1	0.05 <sup>c</sup>
Philippines .....	31	815	0.08	0.01

Source: Agency for International Development, *Economic Data Book; Bulletin Annuel de la statistique de la Republique Gabonaise*, 1959 and 1970; United Nations, *Monthly Bulletin of Statistics*, March 1971; International Monetary Fund, *International Financial Statistics*, April 1971.

<sup>a</sup> Manganese ore concentrate (SITC 283.7).

<sup>b</sup> 1967 data.

<sup>c</sup> 1968 data.

principle, namely, minimization, that all we have to discuss is the measures required to implement it, and that there exist certain criteria for putting this principle into practice.

In the recent seminar, the Chairman of the Committee summarized the proceedings. He said: first, that the adverse effects that would be suffered by land-based producers were clearly established, and secondly, that there was the question as to what the international community should do. He went on to say that it must take effective measures which would ensure, on

the one hand, that future exploitation was not paralysed and, on the other, that sea-bed production was not counter-productive and did not greatly harm the developing countries or lessen the benefits they were entitled to expect. He also said that a formula or principle must be found and concluded that the Authority must be able to adopt measures and be invested with sufficient and full powers to ensure its effectiveness. He ended by saying that the Authority must be equipped with a technical body and should keep the matter under review and adopt measures.

Table 3

COPPER EXPORTS<sup>a</sup> OF DEVELOPING COUNTRIES AS A PERCENTAGE OF TOTAL EXPORTS AND GROSS DOMESTIC PRODUCT, 1969

Country	Exports in 1969 (millions US dollars)	Value of copper exports	
		As a percentage of Total exports	Gross domestic product
A. Copper as major foreign exchange earner: (above 10 per cent of total exports)			
Zambia <sup>b</sup> .....	720.8	94.6	52.6
Democratic Republic of the Congo .....	475.8	83.0 <sup>c</sup>	33.0 <sup>c</sup>
Chile <sup>b</sup> .....	730.7	78.3	12.7
Peru .....	250.1	28.9	6.1 <sup>d</sup>
Philippines .....	150.9	15.6	1.8
Uganda .....	21.4	10.8	2.4 <sup>c</sup>
B. Copper as important foreign exchange earner: (between 3-10 per cent of total exports)			
Haiti .....	2.3	6.2	...
Bolivia .....	7.4	4.1	0.8
Nicaragua .....	6.3	4.1	0.83
C. Copper as minor foreign exchange earner: (less than 3 per cent of total exports)			
Mexico .....	21.5	1.5	0.08 <sup>b</sup>
Morocco .....	2.3	0.5	0.07
Cuba .....	2.3	0.35 <sup>c</sup>	...
South Korea .....	0.1	0.02	...
India .....	0.2	0.01	...

Source: Organisation for Economic Co-operation and Development, Series C, 1969 (January-December), *Trade by Commodities: Imports*; United Nations, *Monthly Bulletin of Statistics*, March 1971; International Monetary Fund, *International Financial Statistics*, April 1971.

<sup>a</sup> Copper ore concentrates, including matte (SITC 283.1); copper and alloys, unwrought (SITC 682.1); copper and alloys of copper, worked (SITC 682.2).

<sup>b</sup> 1968 data based on International Monetary Fund, *International Financial Statistics*.

<sup>c</sup> 1968 data.

<sup>d</sup> 1967 data.

Table 4

NICKEL EXPORTS<sup>a</sup> OF DEVELOPING COUNTRIES AS A PERCENTAGE OF TOTAL EXPORTS AND GROSS DOMESTIC PRODUCT, 1969

Country	Exports in 1969 (millions US dollars)	Value of nickel exports	
		As a percentage of total exports	As a percentage of gross domestic product
Cuba .....	13.4	2.1 <sup>b</sup>	...
Indonesia .....	4.4	5.9	0.6 <sup>b</sup>
New Caledonia <sup>c</sup> .....	67.4	...	...

Source: *Annales des mines* (1968), January 1971; Organisation for Economic Co-operation and Development, Series C, 1969 (January-December), *Trade by Commodities: Imports*; United Nations, *Monthly Bulletin of Statistics*, March 1971.

<sup>a</sup> Nickel ore and concentrate, including matte (SITC 283.2); nickel and alloys, unwrought (SITC 683.1); nickel and alloys, worked (SITC 683.2).

<sup>b</sup> 1968 data.

<sup>c</sup> Territory of France.

Table 5

COBALT EXPORTS OF DEVELOPING COUNTRIES AS A PERCENTAGE OF TOTAL EXPORTS AND GROSS DOMESTIC PRODUCT, 1968

Country	Exports in 1968 (millions US dollars)	Value of cobalt exports	
		As a percentage of total exports <sup>a</sup>	As a percentage of gross domestic product <sup>a</sup>
Democratic Republic of the Congo .....	29.7 <sup>b</sup>	5.2	0.2
Zambia .....	4.7 <sup>c</sup>	0.6	0.3
Morocco .....	n.a.	—	—

<sup>a</sup> United Nations, *Monthly Bulletin of Statistics*, March 1971.

<sup>b</sup> Banque Nationale du Congo, 1970.

<sup>c</sup> Republic of Zambia, *Annual Statement of External Trade 1968*.