



## Council

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### **Analysis of the draft regulations on prospecting and exploration for polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area**

#### **Part III: Provisions relating to the system of participation by the International Seabed Authority**

**Prepared by the secretariat**

#### **I. Introduction**

1. During the eleventh session of the International Seabed Authority in 2005, the Council completed a first reading of the draft regulations on prospecting and exploration for polymetallic sulphides and cobalt-rich ferromanganese crusts in the Area (hereinafter “the draft regulations”). At the conclusion of that first reading, the Council considered that further explanation and elaboration was required with respect to certain aspects of the draft regulations (ISBA/11/C/11, para. 14). In particular, it requested the Secretary-General to provide the Council with more detailed analysis and elaboration of the following aspects of the draft regulations:

(a) With respect to prospecting, the Council requested further clarification of the relationship between prospecting and exploration and the justification for the specific changes proposed by the Commission;

(b) With respect to the size of areas for exploration, the Council requested that further information be provided on the proposed system of allocating exploration blocks and the way in which it might operate in practice, as well as on the proposed schedule for relinquishment and its consistency with the provisions of the Convention;

(c) With respect to draft regulations 16 and 19, relating to the proposed system for participation by the Authority, the Council requested a more detailed analysis of how the draft provisions might operate in practice in the light of the comments and opinions expressed in the Council.



2. The issues referred to under (a) and (b) above have been covered in part I of the present study and in ISBA/12/C/3. The present part of the study (part III) responds to the request for a more detailed analysis of how the draft provisions relating to the system for participation by the Authority might operate in practice in the light of the comments and opinions expressed in the Council.

## **II. Overview of relevant provisions in the Convention, the 1994 Agreement and the regulations for prospecting and exploration for polymetallic nodules in the Area**

3. At the heart of the regime for the Area established by Part XI of the United Nations Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea<sup>1</sup> is the so-called “parallel” system, elaborated in article 153 of the Convention. The essential elements of the parallel system include assured access for States parties and their nationals to seabed mineral resources along with a system of site-banking, whereby, in the case of polymetallic nodules, reserved areas are set aside for the conduct of activities by the Authority through the Enterprise either by itself or in association with developing States.

4. The system of site-banking is elaborated in annex III, article 8, of the Convention. Unlike many other provisions of annex III, article 8 applies only to polymetallic nodules. Each application for exploration for polymetallic nodules must cover an area large enough to accommodate two mining operations and to be divided into two parts of “equal estimated commercial value”. The application must contain sufficient data and information to enable the Council to designate a reserved area based on the estimated commercial value of each part. Article 8 goes on to specify a strict time limit of 45 days within which to make such a designation, following which the applicant may submit its plan of work in respect of the non-reserved area. In the light of the provisions of the 1994 Agreement,<sup>2</sup> the time limit has now been dispensed with. The Regulations on Prospecting and Exploration for Polymetallic Nodules adopted in 2000 (hereinafter the “nodules regulations”) thus make it clear that designation of the reserved area may either precede the application for approval of a plan of work for exploration or, as is more likely to be the case, may be simultaneous with such an application.

5. Under annex III, article 9, of the Convention the Enterprise has the right of first refusal to make use of a reserved area. The way in which the Enterprise is to operate is, however, qualified under the 1994 Agreement. In accordance with section 2 of the annex to that Agreement, the Enterprise is to conduct its initial deep seabed mining operations through joint ventures. The parameters of any such joint venture are left undefined. A contractor that has contributed a particular area to the Authority as a reserved area has the right of first refusal to enter into a joint venture with the Enterprise in respect of the Area. The nodules regulations give effect to those requirements by providing that a developing State, or an entity sponsored by such a State, may notify the Authority that it wishes to submit a plan of work with respect to a reserved area. In such a case, the Enterprise must decide within six

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<sup>1</sup> General Assembly resolution 48/263, annex.

<sup>2</sup> Ibid., annex, section 3, para. 11 (b).

months if it wishes to use the area concerned. If the Enterprise decides not to use the reserved area, the prospective applicant may submit its application for approval of a plan of work. If no application is made to use a reserved area within 15 years of the date on which it was reserved for the Authority, the contractor which contributed the area shall be entitled to apply for a plan of work for the area provided it offers in good faith to include the Enterprise as a joint-venture partner.

6. In the meantime, at least until such time as the first plan of work for exploitation is approved or the Council receives an application for a joint venture with the Enterprise, the functions of the Enterprise are to be performed by the Secretariat of the Authority. Upon either of these eventualities taking place, the Council shall take up the issue of the functioning of the Enterprise independently of the Secretariat. However, in order for the Council to issue a directive for the independent functioning of the Enterprise under article 170 of the Convention, such a joint venture must accord with “sound commercial principles”.<sup>3</sup>

### **III. Practical considerations relating to polymetallic sulphides and cobalt-rich crusts**

7. In June 2000, as part of its preparatory work for the preparation of a regulatory framework for polymetallic sulphides and cobalt-rich crusts, the Authority convened an international workshop on the mineral resources of the Area. The workshop was attended by over 60 participants from 34 countries, including several members of the Legal and Technical Commission. With respect to the issue of participation by the Authority, the workshop participants noted that, because the nature of the resources was very different, it was very difficult to make a comparison between, on the one hand, polymetallic sulphides and cobalt-rich crusts and, on the other hand, polymetallic nodules. In the case of nodules, which are two-dimensional in nature, it was relatively easy to divide a potential nodule field into two areas of equal estimated commercial value. In the case of polymetallic sulphides and cobalt-rich crusts, which are three-dimensional in nature, no two occurrences are the same and there may be substantial variation in grade of deposits, even within one seamount. It would be impossible to determine two sites of equal estimated commercial value without substantial and costly exploration work on the part of the would-be contractor. Furthermore, it was pointed out that, in the case of polymetallic nodules, those who applied for pioneer status under resolution II of the Third United Nations Conference on the Law of the Sea had in fact already undertaken substantial exploration work and had incurred high levels of expenditure prior to the establishment of the Convention regime, and had therefore not undergone the same level of risk as a new prospector coming in under the Convention. Consequently, it appeared to several participants that it would be impracticable to implement a site-banking system for polymetallic sulphides and cobalt-rich crusts in the same manner as for polymetallic nodules. It was suggested that, instead of providing the Authority with a reserved area, which the Authority may never be in a position to utilize in any event, another possible option would be to require the contractor to give the Authority the right of first refusal to enter into a joint venture with the contractor, subject to certain specified terms and conditions. It was considered that equity participation in this manner would constitute a mechanism to avoid monopolization

<sup>3</sup> Ibid., annex, sect. 2, para. 2.

and ensure participation by the international community in the development of the common heritage.

8. In the light of those discussions, the secretariat has prepared model clauses (see annex) to reflect an alternative system, consistent with the provisions of the 1994 Agreement, whereby the Authority could be given the opportunity to participate in the development of resources by achieving equity risk-free participation in mining operations. Equity participation of this type is a practice that is familiar in the context of land-based mining and offshore petroleum exploitation operations. The application of such a scheme would give meaning to the parallel system and enable the Authority to participate effectively in future exploitation. By delaying any potential joint venture until the exploitation phase and by requiring a market-oriented approach, it would also be consistent with the principles contained in the 1994 Agreement.

9. Under the model clauses, each applicant, at the time of submitting an application for approval of a plan of work, would be required to elect either to provide a reserved area (as in the case of a contract for exploration for polymetallic nodules) or, in lieu thereof, to offer to the Authority an equity interest in a future joint-venture arrangement. Such a joint-venture arrangement would commence from the time of exploitation. The Enterprise would be entitled to acquire a minimum of 20 per cent equity in the joint-venture arrangement, half of which would accrue immediately, without payment to the contractor, and in respect of which the Enterprise would be entitled to share in any profits from the venture. To safeguard the interests of the contractor, the Enterprise would not be entitled to share in any profits from the venture arising in respect of the remaining portion of the guaranteed minimum equity participation until such time as the contractor has recovered its total equity participation. Notwithstanding the guaranteed minimum equity participation, the Enterprise would also be given the option to purchase up to 50 per cent equity participation in the joint-venture arrangement.

10. Given the uncertainties surrounding not only the prospects for exploitation of the resources, but also the operations of the Enterprise, it was recognized that this model provided a satisfactory balance between the interests of potential contractors and those of the Authority, but did not preclude any future decision by the Council relating to the operations and financing of the Enterprise. The form and content of any joint-venture arrangement for exploitation would, of course, require considerable further elaboration. Nevertheless, it should be noted that this would also be the case with respect to any potential joint-venture agreement for polymetallic nodules under paragraph 5 of section 2 of the annex to the 1994 Agreement.<sup>1</sup>

#### **IV. Provisions of the draft regulations**

11. After considering the model clauses, the Legal and Technical Commission decided to maintain the option of electing to offer equity participation in a joint-venture arrangement. The Commission, however, introduced two more alternative options: to offer either a joint-venture operation or a production-sharing arrangement with the Enterprise. These changes are in ISBA/10/C/WP.1/Rev.1 (regulation 19).

## A. Joint-venture operation

12. By definition, a joint-venture arrangement involves an agreement whereby partners share equity in a joint operation. There is, therefore, considerable overlap between an equity interest and a joint-venture operation. On the other hand, a joint-venture operation may go further than simple equity participation if it takes the form, for example, of an incorporated joint venture of the sort that is well known in the oil and gas industry. Such a venture might involve an equal assumption of financial and development risk on the part of the joint-venture partners as well as agreements on transfer of technology and direct access to production. The problem with this approach in the present case is that, given the uncertainties surrounding the economics of mining for cobalt-rich crusts and polymetallic sulphides, it would appear to be impossible at this stage to envisage the financial and development risks involved in any potential seabed mining operation. A further point to note is that, while individual States may be prepared to contribute capital resources to such projects (assuming the financial risks can be quantified), the Enterprise is extremely unlikely to have such resources at its disposal for the foreseeable future. It is difficult to envisage, therefore, that the option of a joint venture, with unknown levels of risk attached and no guidance as to the terms of such a joint venture, would be attractive either to potential contractors or to the Enterprise.

## B. Production-sharing arrangement

13. The Commission has defined a production-sharing contract as “an agreement under which a contractor recovers its costs each year from production and is further entitled to receive a certain share of the remaining production as payment in kind for the exploration risks assumed and the development service performed if there is a commercial discovery”. The Commission has proposed that under such an arrangement, profits during the exploitation phase would be shared equally between the contractor and the Enterprise.<sup>4</sup>

14. Production-sharing arrangements are well developed in the petroleum industry. Prominent examples include oil and gas production-sharing arrangements in Indonesia, Egypt, Malaysia and Angola. Both China and Nigeria, for example, apply production-sharing contracts to the continental shelf. Although detailed discussion of such arrangements is beyond the scope of the present document, all share a number of characteristics. First, production sharing is an alternative to the traditional system whereby a contractor is given exclusive rights over an area in return for an obligation to pay a royalty and a proportional part of gross profits (total revenue less costs and losses carried forward). What is shared is total production, which may be calculated on an annual basis or, more commonly, on a fluctuating basis calculated according to tranches of daily production.<sup>5</sup> Deductions

<sup>4</sup> See the Report of the Legal and Technical Commission working groups, ninth session, 28 July to 8 August 2003.

<sup>5</sup> For example, the Regulations of the People’s Republic of China on Exploitation of Offshore Petroleum Resources in Cooperation with Foreign Enterprise ([www.oilchina.com/eng/Service-Center/Laws/REGULATIONS.htm](http://www.oilchina.com/eng/Service-Center/Laws/REGULATIONS.htm)) of 1982 provide for net production (after deduction of royalties, taxes and allowable costs) to be divided between the State and the contractor in the proportion  $(X)/(1-X)$ , where X is determined on the basis of successive tranches of daily production, each tranche having its own X fixed by negotiation with applicants.

may be made from total production to account for royalties, internal taxation and development costs. The latter may be divided into long-term development costs and recurrent operational costs. In some cases, for example Petronas in Malaysia, there may be a further sharing of production once production under the contract has reached a certain level.

15. The key point to be made about all these arrangements is that, while they share certain characteristics, each has developed over a number of years, with details varying considerably, depending on the different royalty and taxation regimes and the particular characteristics of production in each area. In order to achieve the necessary balancing of benefits and risks between the contractor and the State, each agreement also sets out its financial terms in specific detail. In the case of polymetallic sulphides and cobalt-rich crusts, no reliable information is currently available on which to base an economic assessment of a mine site. Without even a rough estimate of risks and anticipated profits, it is unclear whether any contractor, or even the Enterprise itself, would be willing to make a commitment to 50-50 production sharing even before the exploration phase begins.

16. The 1994 Agreement itself envisages profit sharing as one of a number of alternative systems that might eventually apply to mineral production from the deep seabed,<sup>6</sup> but also requires that the production policy of the Authority be based on sound commercial principles<sup>7</sup> and that an evolutionary approach be taken to the setting-up and functioning of the organs and subsidiary bodies of the Authority. The financial terms of contracts will be considered at the stage when regulations for exploitation are under consideration. Given the substantial lead time required for the preliminary results from exploration to be achieved, it is suggested that, at this time, the Council needs to strike a balance between offering an alternative to the system of reserved areas, which might prove burdensome to potential contractors and potentially of little benefit to the Enterprise, and a system which offers the potential, at some future date, for participation on an equitable basis by the Enterprise.

17. In the light of the above concerns, it is suggested that the preferred option at this stage is to return to the proposal made in the model clauses (see annex) whereby the Enterprise is given the opportunity to participate in the development of resources by achieving a basic guaranteed equity participation in a mining operation. This would provide the necessary flexibility without compromising the future position of the Enterprise. If the three alternative options proposed by the Legal and Technical Commission are to be retained, it should be noted that the delegation of Japan had proposed, at the eleventh session, that any election by the contractor be deferred until application for a plan of work for exploitation.

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<sup>6</sup> General Assembly resolution 48/263, annex, sect. 8.

<sup>7</sup> Ibid., sect. 6.

## Annex

### Model Clause 6 (regulation 18 bis)

#### Joint-venture participation

1. Where the applicant elects to offer an equity interest in a joint-venture arrangement, it shall submit data and information in accordance with regulation .... The area to be allocated to the applicant shall be subject to the provisions of regulation ....

2. The joint-venture arrangement, which shall take effect at the time the applicant applies for a contract for exploitation, shall include the following:

(a) The Enterprise shall obtain a minimum of 20 per cent of the equity participation in the joint-venture arrangement on the following basis:

(i) Half of such equity participation shall be obtained without payment, directly or indirectly, to the applicant and shall be treated *pari passu* for all purposes with the equity participation of the applicant;

(ii) The remainder of such equity participation shall be treated *pari passu* for all purposes with the equity participation of the applicant, except that the Enterprise shall not receive any profit distribution with respect to such participation until the applicant has recovered its total equity participation in the joint-venture arrangement;

(b) Notwithstanding subparagraph (a), the applicant shall nevertheless offer the Enterprise the opportunity to obtain up to 50 per cent of the equity participation in the joint-venture arrangement on the basis of *pari passu* treatment with the applicant for all purposes;<sup>a</sup>

(c) In the event that the Enterprise elects not to accept 50 per cent of such equity participation, the Enterprise may, notwithstanding subparagraph (a) above, obtain a lesser percentage on the basis of *pari passu* treatment with the applicant for all purposes for such lesser participation;

(d) Except as specifically provided in the agreement between the applicant and the Enterprise, the Enterprise shall not by reason of its equity participation be otherwise obligated to provide funds or credits or issue guarantees or otherwise accept any financial liability whatsoever for or on behalf of the joint-venture arrangement, nor shall the Enterprise be required to subscribe for additional equity participation so as to maintain its proportionate participation in the joint-venture arrangement.

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<sup>a</sup> The terms and conditions upon which such equity participation may be obtained would need to be further elaborated.