Developing a Regulatory Framework for Mineral Exploitation in the Area

A Discussion Paper on the Development and Implementation of a Payment Mechanism in the Area for consideration by Members of the Authority and all stakeholders

Contents

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Disclaimer: although reference is made to "the Authority" in this discussion paper, the content of this paper is neither endorsed by nor reflective of the opinions of Member States of the International Seabed Authority nor any decision-making organs of the Authority. The content of this paper is addressed to all stakeholders, including Member States, to seek their views and opinions on the development of a financial mechanism.

"All things being equal (including tax), a country should attract exploration investment proportional to its international geological attractiveness rating. If investment is less, it implies other faults in the investment climate, such as excessive tax. However, if investment is greater than geological potential, investment conditions may be overly generous".

Advancing the EITI in the Mining Sector: A consultation with stakeholders EITI 2009

1. Introduction

Background

1. The International Seabed Authority (the Authority) is obliged to adopt rules, regulations and procedures to provide for a payment mechanism and financial terms for mineral resources recovered from the Area in accordance with relevant international agreements.[1] These agreements set out the guiding objectives and principles of a payment mechanism.

2. In February 2013, the Authority published a Technical Study, which discussed briefly the challenges and possible components of a payment regime for exploitation activities in the Area.[2]

3. Subsequent to this Technical Study, in February 2014, the Legal and Technical Commission of the Authority (the Commission) considered a working paper to develop a discussion of financial terms under contracts for the future exploitation of resources in the Area.[3] Some of the assumptions made in this discussion paper flow from that working paper. Following the meeting of the Commission, a Stakeholder Survey (the Survey) was issued in March 2014. A number of questions were specifically directed at a financial payment mechanism.

4. On 23 March 2015, the Commission issued a Report to Members of the Authority and all Stakeholders. The Report contains a draft framework for the regulation of exploitation activities in the Area.[4]

Purpose of this discussion paper

5. The purpose of this paper is to facilitate stakeholder consideration and discussion in connection with the development of a financial payment mechanism and its associated terms in the Area.

6. First, the paper will outline the background to a financial mechanism and the specific financial objectives and principles the Authority is obliged to take into account.

[1] The United Nations Convention on the Law of the Sea (the Convention) and the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (the Agreement).
[2] ISA *Towards the development of a regulatory framework for polymetallic nodule exploitation in the Area*, Technical Study No.11, 26 February 2013.
[3] An electronic copy of this working paper, *Developing Financial Terms for Deep Sea Mining Exploitation*, may be found at http://bit.ly/19BLJC9.
[4] Available at http://www.isa.org.jm/files/documents/EN/Survey/Report-2015.pdf.

7. Secondly, it will outline the views and opinions of stakeholders who responded to the 2014 Stakeholder Survey on the development of a regulatory framework for mineral exploitation in the Area and specifically those questions relating to a financial mechanism.

8. Thirdly, the paper seeks to advance discussion including a request for additional stakeholder input in connection with a financial mechanism.

9. The paper focuses solely on a suitable financial payment mechanism for exploitation activities. There are naturally other terms of any regulatory framework that will have a financial impact, including regulatory compliance. These are not considered in this paper but remain part of an overall package to be contemplated by stakeholders in connection with activities in the Area.

2. Executive summary

10. The development of a fair and equitable payment regime for the Common heritage of mankind (CHM) is a particular challenge. The industry has yet to demonstrate full commercial viability, not least the development of processing facilities and the treatment / refining of the mineral resources extracted.

11. While the Authority is required to optimize the proceeds from commercial production it is also required to attract investment and technology in the Area. This is an important balance and a discussion that is still relevant to many existing and mature land-based mining regimes. However, deep seabed exploitation is an emerging industry and this makes for a more complex discussion. This discussion involves multiple issues under the CHM principle, including the ultimate benefit sharing of the revenues received from the extraction of mineral resources in the Area and the complexity of socio-economic and environmental considerations.

12. The financial parameters set by the Convention and the 1994 Agreement are relatively simple. Their practical development is much more complex. The principles of efficiency, fairness, simplicity, certainty, flexibility and enforceability as applied to the development of any fiscal regime are equally applicable to the development of the financial mechanism for the Area. However, there remain a number of unknowns and uncertainties in deep seabed mining models.

13. A number of stakeholders have endorsed the development of a royalty and profit-share mechanism as provided for in the Agreement. This would ensure that the Authority, on behalf of the CHM, would receive revenues from the time of production and benefit in a share of future, more profitable projects.

14. However, stakeholders have also expressed reservation in defining the absolute parameters of a financial mechanism now before the industry has demonstrated its commercial viability. This clearly points to a discussion centered on the need for a transitional regime and a move toward a longer-term regime as the industry stabilizes. While this does not provide the appropriate predictability, stability and certainty demanded of a financial mechanism, it seems an inherently sensible approach to develop an effective and economically efficient payment mechanism for the CHM, the Authority, and investors in the longer term. It is simply too early to formulate an absolute mechanism. However, in the interests of fairness, some indication as to the possible direction of a payment mechanism needs to be articulated to allow for further discussion and input by all stakeholders.

That is, there needs to be discussion around stakeholder expectations of a financial mechanism.

15. While the Authority may consider incentive mechanisms to further financial objectives, it is proposed that these are addressed once the foundations of a financial mechanism are formulated.[5] In a land-based context, many incentives have had distorting economic impacts. Consequently, their discussion at this time in the context of activities in the Area adds an additional layer of complexity to an already challenging discussion.

16. It is recommended that the Authority proceed cautiously with the development of a financial regime. Though the objectives of the Convention and the principles reflected in the Agreement are clearly, but very generally, articulated, aligning optimal proceeds with attracting investments to the Area will prove a fundamental challenge in practice. The economic and commercial viability of deep seabed mining activities is yet to be tested. Equally, to make automatic comparisons and assumptions based on land-based mining regimes and principles, may fail to take account of the differences in risk profile, technology and environmental challenges, investment levels and cost base (including transportation), investor return rates, payback periods, differences in grading and regulatory hurdles to name but a few. Similarly, under land-based regimes unique government fiscal and investment targets impact fiscal models.

17. Additionally, consultation with stakeholders, particularly current and potential contractors, is critical to the development of a fair and effective financial regime.

18. In order to develop a more substantive and fruitful discussion, the Authority needs financial projections and economic assumptions to model various economic and financial scenarios, using discounted cash flow techniques, to forecast cash flows to a "typical" contractor and royalty / profit share to the CHM.[6] From a range of input variables, the impact of royalty and profit share options and their impact on the commercial viability of an operation can be modeled. To this end, the Authority will approach contractors to solicit the necessary information. This will allow the Authority to formulate a medium to longer-term proposal for discussion taking

[5] See Annex III, Article 13(1)(d) & 13(14) of the Convention. The issue of incentives was also reflected in the 2014 Stakeholder Survey at question 9 and a number of suggestions made for future consideration.

[6] A number of external models have been prepared by third parties in looking at the economic viability of deep seabed mining. For example, see Ecorys *Study to investigate the state of knowledge of deep-sea mining,* Final Report under FWC MARE/2012/06-SC E1/2013/04, 28 August 2014.

account of the principle evaluation criteria (objectives and principles) outlined in section 3 to this paper. It is anticipated however, that the discussion will continue into the foreseeable future as the real economics of the industry unfolds. Additionally, a wider audience will also be encouraged and engaged in developing a payment mechanism.

19. In the meantime, stakeholders are encouraged to respond to the considerations in section 6 of this paper.

3. The objectives of the payment regime and mechanism

20. The policy objectives and principles underlying the development of financial terms and a payment mechanism (as outlined below) are reflected in the Convention and the Agreement.[7] Objectives assumed to be of prime importance to the Authority and stakeholders in guiding the development of financial terms and the payment mechanisms are as follows:

a. ***To ensure optimum revenues for the Authority from the proceeds of commercial production.*** This is a key consideration in securing a fair financial return for the mineral resources owned by the CHM. Optimum revenues in this instance are considered “best possible” revenues taking into account other considerations, in particular, the need to attract investment and technology to the Area.[8] This objective is a principle of effectiveness of the financial mechanism to achieve its objectives.

b. ***To attract investments and technology to the exploration and exploitation of the Area.*** Investment capital is mobile and consequently the exploration and exploitation regimes in the Area must remain competitive in a global mining industry environment. Consequently, the financial return to the CHM from its mineral resources must be set in a manner that does not act as a disincentive to investors. It is generally accepted that a financial regime should ensure that development projects that are commercially viable before applying fiscal terms, should remain so after their application. This is a principle of efficiency of any financial mechanism.

c. ***That contractors receive equal treatment and have comparable financial obligations.*** This is an important objective for the Authority as there are a number of different entities and persons potentially involved in the extractive process, namely States parties, State enterprises, the Enterprise and natural persons, including private investors. This objective is a principle of equity and consistent treatment by the Authority. In principle the same commercial transactions should have the same financial (fiscal) consequences. Consequently, the Authority needs to better understand the specific drivers across its contractor base together with a deeper appreciation of financial and economic models.

[7] See Annex III, Article 13(1) of the Convention and Annex, Section 8 of the Agreement.
[8] Equally, the development of the resources of the Area must be in accordance with sound commercial principles. See Annex, Section 6(1)(a) of the Agreement.

d. ***That the system of payments to the Authority shall be fair both to a contractor and to the Authority.*** A "fair" system highlights a number of considerations and objectives. In a terrestrial mining context, it is generally accepted that a progressive system is fairer. That is, the financial return to the resource owner should increase with increasing levels of operator profitability. However, best practice dictates that there should be a minimum payment, production charge or royalty, in place to secure a return to the resource owner from the beginning of production. Equally, in the early years of development, a fiscal or payment system should have a low financial impact allowing recovery of the initial investment. The system should also be flexible to accommodate economic cycles and to extract rents during peak commodity pricing. Certainty, predictability and stability are also appropriate characteristics inherent in a fair system. However, in the case of the payment mechanism for the Area, it may be some time before a final and stable payment system is fully developed.

e. The system is also to ***provide adequate means of determining compliance by the contractor.*** This points to an effective audit mechanism that should also be supported by sponsoring State and taxing State involvement where practicable.

f. ***That any payment mechanism should not be complicated to administer for both the contractor and the Authority.*** The Agreement permits the Authority to consider a royalty system or a royalty and profit-sharing system.[9] A profit-share mechanism in this instance is equivalent to profit taxes that are levied by States. The Agreement does not restrict consideration solely to a royalty or royalty and profit-share system. Alternatives may be proposed and agreed upon.

A royalty system is simpler to administer in relative terms than a profit-based model. This is a key consideration for the Authority in its early years of operation as there is currently no accounting system in place to handle a more complicated profit share mechanism. A simpler system can also be facilitated by the frequency of accounting returns, payment periods and *de minimis* thresholds etc.

While there is a simple trade-off discussion in any financial mechanism, that of administrative capacity and costs versus optimal (best) revenue opportunity, the Authority may consider that the medium to longer-term

[9] See Annex, Section 8(c) of the Agreement.

objective of optimum revenues (see paragraph 20(a) above) should not be determined ultimately by the relative simplicity of a system.

As a general rule however, the greater the complexities of a financial mechanism, the greater the potential for its manipulation. Nevertheless, clear rules, guidance, transparency and a robust audit mechanism will alleviate the risk to the CHM here and provide certainty for investors.

g. ***That a periodic review be applied to the system of payments***. This is a key consideration in developing an appropriate mechanism which is both fair to the contractor and the CHM / Authority. However, while this may provide the necessary degree of flexibility to the Authority, the certainty and predictability of a system are important drivers to attracting investment and technology to the Area in the medium to longer term. It is important to note that the principles outlined in this provision of the Agreement and the impact of any changes on a contractor, relate to the system, not the rates of payment under the system.

h. ***The rates of any payments under the system shall be within the range of those prevailing in respect of land-based mining of the same or similar minerals.*** The wording of this principle is very broad. However, the financial terms working paper[10] presented to the Commission does provide a range of headline royalty and corporate income tax rates under comparable land-based mining regimes. The rationale for this is clear: that contractors in the Area should be neither advantaged nor disadvantaged over comparable land-based operations and regimes. That is, the regime must be competitive against international benchmarks.

Setting a royalty rate in a range is challenging. Different grades and the metallurgical quality of any ore; extraction expenses will vary; the distance to the processing market and the differences in contractor cost bases. In a land-based environment, there is no commonality in the adoption of royalty rates. Rates have arisen through unilateral imposition by States or through a consultative process.

Equally, a “range” is dynamic. Recently, land-based regimes have suffered from periods of fiscal instability. At the beginning of the century, ad valorem royalty rates were typically in a range of 2-3%. Rates in a range of 4%-6% are now common. That said many States have reduced their corporate income tax rates during the same period.

[10] See note 3 above.

21. Table 1 on page 14 shows a range of royalty rates, corporate income taxes and other mining taxes imposed under a number of mining regimes. The table highlights the differences between the countries selected, both in the rates of royalty and mining taxes and their respective calculation base. [11]

22. It is evident from the table, aside from the range of rates, the base and payment mechanisms on which rates are applied vary including gross market values / sales revenues, net sales revenues and operating income. Equally, some regimes including Australia and South Africa apply different rates depending on the condition of the product (unrefined / refined).

23. What is a common however is that these fiscal regimes apply a corporate income tax to accounting profits (as adjusted for tax purposes under mining fiscal rules), a minimum return to the State as resource owner, generally in the form of a royalty payment and in some instances additional mining taxes based on profitability.

[11] See also *Developing Financial Terms for Deep Sea Mining Exploitation* (note 3 above) at pages 108 to 116.

Country	Corporate income tax rate	Royalty and / or Additional profit tax rate	Royalty / taxable base	Resource rent type tax
Ad valorem royalty on sales price / revenues				
Australia (WA)	30%	2.5% -7.5%	Gross sales less deductions (rates depend on condition of product)	-
Brazil	34%	2% (4%	Mineral sales revenue less deductions Gross sales - proposed)	-
China	25%	0.5% - 4%	Sales revenue	-
Cook Islands	20%	3%	Export value	25%
Ghana	25%	5%	Sales turnover	-
Indonesia	25%	3% - 5%	Sales proceeds	-
Papua New Guinea	30%	2%	Net smelter return plus 0.25% to Mineral Resource Authority	-
Russian Federation	20%	6% - 8%	Value of minerals extracted less freight and refining costs	-
South Africa	28%	0.5% - 7%	Gross sales (rate linked to profitability)	-
Ad valorem royalty – rate varies by metal price				
Australia (Queensland)	30%	2.5% - 5%	Gross sales value less deductions – linked to average metal prices	-
India	33.99%	4.62% (Cu)	LME metal price	-
Kazakhstan	20%	2.5% - 7%	Average exchange price of extracted minerals	0-60%
Mongolia	25% (10% lower rate)	5% +0%-30% surtax	Values referenced to international market prices	-
Zambia	35%	6%	Based on LME cash price	-
Profit-based tax / Profit-based royalty / Hybrid				
Australia (NT)	30%	20%	Adjusted profit	-
Canada (British Columbia)	26%	2% 13%	Net current proceeds Net revenue	-
Canada (Quebec)	26.9%	1%-4% 16%-28%	Minimum mining tax (output value) Mining tax on profit (progressive)	-
Chile	20%	5%-14%	Special tax on mining (progressive)	-
Mexico	30%	7.5%	Mining royalty on profit (+0.5% precious metals)	
New Zealand	28%	2% 10%	Net sales revenue, or Accounting profits royalty, if higher	-
Peru	30%	1%-12% 2%-8.4%	Operating margin / income Special mining tax	-
USA	40%	c.5%	Net proceeds / adjusted gross revenues	-
Global average	23.6%			
Working paper average (mining States)	27.5%			

Table 1: Comparison of corporate income tax and royalty / mining tax rates across a selection of countries mining same or similar mineral resources in the Area (Source: various[12]).

[12] See above note 3.

4. Feedback from the Stakeholder Survey 2014

24. A number of questions in the Survey were directed toward the development of a financial mechanism. A summary of the responses received from stakeholders who replied to specific questions is presented below.

Q.1: In delivering a best revenue opportunity for the ISA and an overall fair and equitable system, which payment mechanism would you consider preferable for the ISA and Contractors and why?

Commentary

This question received submissions from 22 stakeholders. It is clear from the responses that stakeholders prefer a payment mechanism that is simple and transparent.

As to the actual mechanism there is clear support for both a royalty and profit-share mechanism. However, alternative royalty types were proposed ranging from a unit-based royalty (based on wet tonnes) to an ad valorem royalty based on the estimated value of the metal content to a light royalty on profit. Equally, it is recommended that the Authority consider a transitional mechanism toward a profit share or rent-based model as the industry matures.

Other alternatives include a three step mechanism involving an upfront payment combined with a royalty and profit sharing mechanism.

The Authority is requested to take account of the fact that this is an emerging industry with significant investment required in new and untested technology and associated risks. Consequently, it is suggested that any initial payment mechanism should support investment in the Area until the industry has proven to be commercially viable (say, first 5 to 10 years). Indeed, it is also noted that there is currently no international market for say polymetallic nodules and it is not known which contractors will undertake all aspects of the value production chain versus those who will simply recovery the mineral resource with no further treatment or processing. That is, the economics of the entire value chain has yet to be fully developed. Other stakeholders suggested an initial grace period during which only fixed rental fees are charged.

The Authority was asked to recognise that early investors have a higher risk profile than later participants and that this will translate into higher financing costs for those early investors.

Concern was also expressed that any profit mechanism could be subject to profit shifting thus reducing the return to the CHM.

Q.2: If a royalty mechanism is adopted for reasons of administrative convenience, how can a royalty mechanism capture, for example, economic rents over the life of an exploitation contract?

Commentary

This question sought to find a way of capturing economic rents through a simple royalty mechanism. Responses included:

- Adopting an "evergreen" contract where the formula is renegotiated every few years;
- An adjusting price mechanism related to the risk profile of the stage of development;
- A transition from a production-based mechanism toward a rent-based model;
- A focus on supporting the development of the industry before the Authority gives consideration on how to capture rents;
- Difficulties in applying any rent-based model to the industry before profitability and investor returns are known;
- That the payment regime be progressive with a low ad valorem royalty payable on all minerals produced together with a profit-based royalty to capture a fair and equitable share of economic rent once all capital expenditure is paid back.

Q.3: Are you aware of any alternative payment mechanisms that would merit consideration by the ISA?

Commentary

Some 15 stakeholders responded to this question. A number of alternatives were suggested by stakeholders including a fee or deposit system including a performance bond to ensure the meeting of best practice and to cover default, a "payment-in-kind" mechanism and a suggestion for the replacement of the royalty-based mechanism with a flat concession fee and a percentage of the final return capacity (to capture economic rents). Other stakeholders suggested the utilisation of production agreements common to the oil and gas industry. However, there was also a general comment made that other alternatives could be overly complicated and create onerous administrative burdens on both the Authority and contractors.

The issue of alternative mechanisms is not to be discounted, however further detail would need be to advanced in respect of some stakeholder suggestions as it was not clear from the level of detail provided as to how certain alternatives could be developed.

Q.4: In your view, how frequently should any payment mechanism be reviewed from a regulatory viewpoint?

Commentary

This question drew diverse responses from 18 stakeholders, with a majority of stakeholders answering this question expressing preference for a 5-year review period. Others considered that reviews should occur more frequently in the early stages. One stakeholder suggested that as part of any 5-year contract reviews a renegotiation of the payment mechanism could be considered. Another stakeholder commented on the number of market and industry-specific forces that drives the need for a continual review of the mechanism. It was also suggested that the payment mechanism could be reviewed at any time but any changes applied to new and not existing contracts.

Q.5: Consider and advise which valuation point(s) the ISA should consider in determining an arm's-length value for the purposes of calculating the fair value of the mineral and metal resources. From an administrative viewpoint, which valuation point would be the simplest to determine?

Commentary

The responses received from 16 stakeholders suggest that it may be some time before an arm's length (third party) valuation point can be properly established. However, the following valuation points were noted:

- Point of sale to third parties;
- When landed on a barge;
- A free-on-board value for export;
- When landed at a port;
- The valuation point may vary depending on the nature of the mineral(s) in question and the transportation system.

As identified by one stakeholder, any valuation point(s) should be restricted to auditable results. Another that production can be monitored at the point the ore is transferred into bulk carriers and the use of electronic monitoring systems. However, as observed by a number of stakeholders, the market for the mineral resources in the form of polymetallic nodules is yet to be established. One suggestion was to estimate the value of the minerals using estimated grade of the metal, recovery rates and international reference pricing. As to a profit sharing regime, there may very well be different valuation points.

Stakeholders generally recognize the difficulties and complexities in valuing the metallic content and that this becomes more problematic in respect of valuation points further along the downstream process, specifically relating to transparency, transfer pricing and enforceability issues.

Q.8: In your view, how can the regulatory framework be structured to encourage optimum extraction of low grade mineral resources?

Commentary

This question was addressed by 16 stakeholders and speaks to the issue of "high-grading". This is clearly an area that requires further discussion with stakeholders as regards production policy. However, the question is relevant to a payment mechanism. As highlighted by one stakeholder, the charging of a unit-based royalty could benefit operators targeting high-grade resources. Some stakeholders articulated that there should be an incentive or stimulation mechanism to encourage the extraction of low-grade mineral resource such that a balanced average grade is achieved. Others suggested that this is a commercial decision and given the level of investment to be made, high-grade areas should be exploited first to facilitate a quicker payback on capital costs. Additionally, it may not be economic to extract low-grade resources depending on the economic cut-off point. Equally, a number of stakeholders noted that *some* high grading might deliver environmental benefits.

The issue of "grading" requires further discussion. The wording "high-grade" and "low-grade" is a relative one and a full understanding of exploitation economic and financial models will be needed, including cut-off grades (which will vary by operator).

The point in issue here is that a financial mechanism can influence cut-off grades, particularly the type and quantum of any royalty mechanism under discussion.

5. A fair return?

25. A fair financial return is one that takes account of and balances the economic and financial interests of the CHM and that of contractors and investors.

26. **A fair and equitable share remains at the very centre of the discussion over financial terms development for the Area.** A fair financial return is often cited as the primary objective for a resource owner followed closely by the appropriate level of risk-sharing between the resource owner and miner. A fair and equitable share has become a matter for public debate following various transparency initiatives in the extractive industries sector. A system of payments should not have a distortionary impact on reasonable commercial reward; that is, financial regimes should be neutral to investment decisions.

27. However, the discussion over risk sharing and how risk is allocated has yet to be articulated for the Area. Any contractor is faced with the risk of not recouping its capital investment together with the impact of regulatory obligations. The CHM carries risk too: the legal obligations of the Authority to develop appropriate rules, regulations and procedures and if a payment system is based on profitability a risk that financial payments may never materialise. A sponsoring State assumes risk under its “responsibility to ensure” obligation. This division of risk requires discussion and analysis.

28. For the CHM, the following considerations are believed to be relevant in determining a fair return:-

i. A recognition that the mineral resources of the Area are non-renewable and provide a potential source of high grade minerals;

ii. The need to attract investment and technology in the Area;

iii. The flexibility to fairly adjust and modify the financial mechanism as the industry grows and develops to optimize the financial return to the CHM;

iv. That a minimum return is always assured to the CHM for the recovery of its minerals; and

v. That the CHM shares in any progressive and profitable upside, particularly that of economic rents.

6. Further discussion and considerations for stakeholders

29. This section presents a number of considerations relevant to the development of financial terms and a payment mechanism. The Authority would appreciate additional comment from its stakeholder base. It may be the case, following feedback from stakeholders in the 2014 Stakeholder Survey, that some of the points simply cannot be addressed effectively at this early stage. However, it is hoped that the points below provide some direction to a discussion on the development of a financial regime. Simply, there has to be a starting point to that discussion.

30. The following paragraphs present a number of observations, assumptions and suggestions for the development of financial terms and a payment mechanism for the Area. Stakeholders are asked to express their views and opinions freely and, where applicable, confirm whether (1) stakeholders agree or disagree with any assumptions made; (2) any assumptions require further discussion or investigation in the context of activities in the Area and / or (3) provide any additional input on specific questions posed and statements made.

31. ***Intrinsic value:*** in theory, any royalty payment levied in respect of mineral resources extracted should be targeted at the intrinsic value of the mineral resource. That is, value adding processes post recovery / extraction should not, in theory be included in any value determined under the financial mechanism. That said, attaching a value to the mineral resource at the point of recovery is difficult and some regimes consider a number of points of valuation.

32. ***Standard financial terms:*** the financial mechanism to be developed should be applied consistently and uniformly across the Authority's contractor base. That is, financial terms will be developed and incorporated as a standard term(s) under the headline exploitation regulations and standard contract for exploitation as opposed to their individual negotiation.

33. ***Phased approach:*** it is proposed that the Authority adopts a staged or transitional approach toward the development of a financial mechanism. This would seem to be supported by comments made in the 2014 Stakeholder Survey. Defining the absolute terms and parameters of a financial mechanism now runs the risk of an impact on the longer-term optimal revenues for the CHM and potentially dampening the appetite for investment in the Area. However, general principles can and should be formulated to provide some degree of certainty and predictability for investors and the CHM.

34. ***Annual fee:*** the Agreement stipulates that an annual fee is to be determined by the Council. It is payable from the point of commercial production and creditable against payments made under the financial mechanism. It is assumed that part of its rationale and purpose is to contribute to the running costs of the Authority. The amount originally proposed in the Convention was USD 1 million and was aimed at encouraging "serious miners" only. Many national regimes apply administration fees and surface rentals. However, given the potentially greater size of exploitation areas in the Area, automatically carrying over say land-based rentals could result in a disproportionately high annual fee. What criteria should the Authority consider in determining an appropriate fixed annual fee?

35. ***The system of payments:*** it is proposed at this stage that a focus is placed on developing a royalty or royalty and profit share system. As noted at page 16 above, this is not to ignore alternative mechanisms for consideration that could capture a fair share, potentially address socio-economic and environmental considerations. However, as highlighted in the Survey, alternative models could be more onerous to administer compared to the traditional royalty and profit share models.

36. ***Comparable "rates of payments"***: it is assumed, based on the premise that the Authority should adopt either "a royalty or royalty and profit share system" that in considering prevailing "rates of payments", land-based royalty rates and profit-related taxes are of relevance here. That is, excise taxes (say, import and export duties), sales taxes (including value added-type taxes), environmental taxes and withholding taxes are excluded when considering an aggregate equivalent rates of payments. Many excise duties are reduced to encourage investment in any event. Equally, withholding type taxes on profit remittances (dividends) are generally a tax on a shareholder and not the profits of the paying company.

37. ***Shorter term mechanism: Ad valorem royalty versus unit-based royalty:*** in the shorter term, the Authority should implement a royalty-based mechanism to guarantee a minimum revenue flow from production.

38. This prompts a discussion from the Survey as to whether this should be a unit based royalty ($x per wet / dry tonne of ore) or an *ad valorem* (value) based royalty. At this stage of understanding a unit-based royalty would be simpler to apply and administer, subject to an auditable verification of tonnage. This was suggested by a number of stakeholders as the lack of any defined, practical point of valuation for value-based royalties does pose a challenge.

39. However, in a land-based environment, unit based royalties are generally applied to low value, bulk commodities (e.g. iron ore) with *ad valorem* royalties

applied to higher value minerals. While a valuation point may be unknown at this stage, it seems reasonable to assume that at the point of future commercial production, there should be an identifiable point of valuation for royalty purposes.

40. From the viewpoint of the CHM, an ad valorem royalty is preferable. This is not to fully discount the simplicity of a unit-based royalty. However, such a mechanism does not adequately capture the value of the mineral content. Equally, and subject to a further discussion connected with the concept of “high-grading”, a unit-based royalty could unfairly favour those contractors pursuing a high-grading policy versus those contractors seeking an average balanced grade, however this is to be defined.

41. A royalty needs to be set at a rate which allows the life of an exploitation area to be optimized and does not make a mining project uneconomic after its application. An *ad valorem* royalty in the 2 per cent to 4 per cent range on an “export” value[13] basis would appear consistent with practice and within a range of prevailing rates. It presents a base point for discussion

42. There are a number of challenges and points for further consideration. One challenge is that of determining a value at the point the mineral resource is extracted. There is generally no sale at this point. It is likely that a number of theoretical points of valuation exist in the downstream process. However, as noted in the Survey, preference should be to identify a point of valuation that reflects a transfer to a third party, arm’s length purchaser. This should provide an audit point with relevant documentation (invoice / contract pricing). Though third party points of valuation and product transfers will vary by contractor depending on how vertically integrated the value chain process is.

43. Equally, there will be a number of processing (and value-adding) steps before the mineral resource is sold in a final, refined condition. Generally a higher royalty rate applies further in the upstream processes, before significant processing occurs.[14] That is, royalty rates should be higher in respect of dewatered ores or concentrated ores compared with lower rates in respect of refined mineral products. Consequently, there may need to be different royalty rates depending on the condition of the product (unrefined / refined) or a process that allows for the netting back of a downstream value. The simplest mechanism is preferred.

44. However, a “one size fits all” is challenging. Similarly, should the same royalty rate(s) be applied to a valuation base across all categories of mineral

[13] That is a value as close to the point of extraction e.g. delivery onto a barge. However, this may not be a point of first sale.

[14] For example, in South Africa, maximum royalty rate percentages are higher for unrefined minerals at 7% and lower for refined minerals at 5% (a minimum royalty of 0.5% is payable with a variable amount up to the maximum linked to profit).

resources recovered from the Area? For reasons of administrative simplicity, the answer is yes. However, each category of resource (that is, polymetallic nodules, colbalt-rich crusts and seafloor massive sulphides) is likely to have different economic and production cost characteristics. A royalty must be non-distortionary when applied.

45. Finally, within each category of resource is the application of a single royalty rate "fair"? That is, should there be different royalty rates for the constituent metals and minerals? This would add a further layer of complexity to administration and calculation but the question needs to be addressed. There is a general trend for a single royalty rate to be applied at least as regards categories of metals and minerals e.g. base metals or precious metals.

46. ***Commencement date for payment:*** the Agreement does not refer to a commencement date for say a royalty mechanism. It does however make reference to the payment of an annual fee from the commencement of commercial production. Consequently, royalties should be applied from the date of production.

47. ***Commencement of commercial production***: the date of commencement of commercial production requires consideration. The Convention deems this to be the point of "sustained large-scale recovery operations" yielding a quantity of materials indicating the principle purpose is large-scale production.[15] In a land-based context, the line between development and production is not always clear. Objective criteria should be developed which, as far as practicable, clearly establish that commercial production has been achieved. These could be related to achieving a pre-determined percentage of capacity or a revenue threshold. What criteria would be appropriate for exploitation activities in the Area?

48. ***Medium to longer term, a progressive model:*** in the medium to longer term, international norms dictate that the financial mechanism should develop into a fully progressive (royalty and profit-share) model to capture normal and economic rents. That is a minimum guaranteed return to the CHM and a share in project profitability. While this may currently appear more complicated, it is the model that has emerged in a land-based context and supported in the Survey.

49. The valuation point for any profit model has yet to be determined and requires further consideration. That is, for activities in the Area, the boundary point for financial terms is unclear. A discussion of the absolute terms of a profit-share arrangement is outside the scope of this paper, not least a definition of "profit" and what form an actual profit-share mechanism will take. A number of land-based

[15] Annex III, Article 17(g) of the Convention.

models present themselves for consideration and discussion in due course following financial modeling.[16]

50. As to a range of rates, corporate / provincial income tax rates for selected mining regimes identified in the working paper ranged from 16% to 40% with a median point of 28%, excluding additional profit taxes levied by some mining States.

51. At this time, it is not recommended that the Authority consider an economic rent-based model. Such a model is complex when financial and economic parameters are actually known and understood. In the case of deep seabed mining, these are yet to be tested. Setting hurdle or uplift rates of return is particularly challenging as rates will be investor and project specific. However, the development of and trends in rent-based models under land-based regimes should be monitored as part of the prevailing range of rates of payments. A longer-term mechanism may benefit from a resource rent royalty or share, particularly as it attempts to reflect cash flows rather than accounting profits.

52. ***Recoupment of "investment":*** under most progressive models (including corporate income tax, additional profit tax and resource rent tax models) special rules normally apply in the mining sector. These permit the recoupment of a reasonable proportion of a contractor's expenditure, including capital expenditure (exploration and development expenditure) to the point of production. The methodology to be applied requires careful consideration and analysis. In addition to the range of rates identified in paragraph 50, the calculation of the profit base is a significant factor.

53. The PN Regulations speak to a claim by a contractor of "actual and direct exploration expenditures" as part of a contractor's development costs.[17] However, as time elapses, the "quality" of brought forward amounts also declines, not least the remoteness of "early" investment from potential exploitation areas. This needs to be discussed to ensure an equality of treatment among the contractor base.

54. ***Predictability:*** given the uncertainties in formulating an absolute financial mechanism in the short term, it is proposed that the Authority in discussion with stakeholders establish an appropriate, target benchmark for the CHM's fair share

[16] See pages 94 to 106 of the working paper *Developing Financial Terms for Deep Sea Mining Exploitation* (note 3 above) for a discussion of selected land-based mechanisms including their advantages and disadvantages.

[17] Annex IV, Section 10.2(c), Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, IBSA/19/C/17. See also ISA *Recommendations for the guidance of contractors for the reporting of actual and direct exploration expenditures as required by annex 4, section 10, of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, ISBA/15/LTC/7, 25 May 2009 at paras 12 and 13 that considers the words "direct" and "actual" respectively.

(e.g. a percentage of accounting profits, as defined)[18] against which to assess the constituent elements of the ultimate payment mechanism and within the range of land-based rates of payment***.*** In land-based mining regimes, this equates to an effective headline share or indicative government take of 35 percent to 55 percent including royalties, corporate income tax and additional profit / rent taxes.[19] Do stakeholders feel that it is appropriate to establish a target benchmark based on comparable land-based mining regimes?

55. ***Review[20] of mechanism:*** in line with comments made in the Survey, the approach above dictates a continued and frequent review of the payment mechanism, with perhaps a modification / review of the payment mechanism every 5-years. However, this presents a conundrum for the Authority and contractors in the early stages of the industry. Certainty in contract terms should be a key feature of the regulatory regime. However, a transitional mechanism may result in "early" contracts for exploitation benefiting from a lower payment burden to the CHM. It may shift profits from the CHM to a taxing State. Balanced against this, is the risk that the early contractors take in the development of the industry. Any review periods set under the regulatory framework could also include a renegotiation of payment terms. This is potentially an area that is also relevant to contract duration and the ability of the Authority to amend terms and conditions in the light of amended rules, regulations and procedures. Comments would be appreciated from stakeholders as to how a fair and equitable balance can be achieved here.

56. ***Interaction with State taxing regimes***: as noted above, too lenient a financial model in the Area could shift profits toward a national taxing regime at the expense of the CHM. This would clearly undermine the Authority's ability to optimize revenues for the CHM. As noted in the previous Section 5, a discussion over risk-sharing and consequently financial reward between all the actors (Authority/CHM, contractors, sponsoring States and taxing States) has yet to take place. This is a difficult discussion but the issue of "who takes what" is a fundamental consideration. Can stakeholders offer any suggestions as to how this issue is best addressed to ensure that the CHM receives a fair share for resources recovered from the Area?

[18] For example in a recent consultation paper, New Zealand aims to target a government share (royalty and profit taxes) of between 30% and 40% of accounting profits. See Ministry of Business, Innovation & Employment (NZ) *Review of the royalty regime for minerals,* Discussion paper, October 2012.

[19] While additional profit taxes are relevant as being "within a range", their longer-term application under national regimes warrants discussion.

[20] As distinguished from *Revision of contract*. Financial terms could "render the contract inequitable or make it impracticable or impossible" to achieve objectives. See Annex III, Article 19. This will be considered under the draft framework document.

57. ***Double "taxation"?*** Furthermore, there is a question over the treatment of payments made to the Authority by contractors and how these will be treated under national tax systems for the purposes of assessing contractor tax liabilities. This is however a matter for sovereign States to address.

58. ***Processing:*** it may be the case that any proposed processing and treatment technology does not provide for the economic extraction of all metals. This may be influenced by world demand and commodity prices. A policy objective for the Authority is to promote the orderly development of the industry together with sound principles of conservation and the avoidance of unnecessary waste. While it is appreciated that the industry is in its very early stages of development, how can or how should the payment mechanism be constructed or adjusted to promote conservation of the natural resources?

59. Similarly, where it is currently uneconomic to extract a particular metal or metals from the ore this does not rule out their future economic extraction or use from processing waste. How can / should this be monitored and payment accounted for to the Authority?

60. ***Other issues:*** there are a number of other issues that are relevant to the development and implementation of financial terms. These are considered below.

61. ***Trigger point(s)?*** in principle all minerals recovered from the Area should be subject to say a royalty. Minerals may be subject to an identifiable sale (and price) under a contract or otherwise. Other possibilities need to be considered in the process for example if the mineral resources are used in a commercial or industrial process but there is no sale, but an exchange, transfer or disposition. A provision will be needed to clarify this. For example, the Model Mine Development Agreement refers to "all Minerals produced, saved and sold or otherwise disposed of from the Mining Area".[21]

62. ***Payments to the Authority – no withholding?*** it is understood that any payments made to the Authority by contractors, whether they are States, State enterprises or private investors will be free of any deductions, including any withholding or other taxes normally levied by a taxing State. Confirmation of this is sought from relevant stakeholders.

63. ***Thresholds:*** for administrative and other purposes it may be appropriate to provide both a royalty amount and a profit level threshold, below which no payment would be triggered in a period. A number of regimes apply a *de minimis* threshold.

64. ***Transfer pricing and general anti avoidance:*** provision will need to be made in connection with any payment mechanism chosen, royalty and profit share,

[21] MMDA at 4.1 (page 33).

for the Authority to able to adjust non-arm's length pricing (revenues and costs) by reference to an third party and / or international market index pricing, where available. Equally, there should be a general anti-avoidance provision where "arrangements" are in place to avoid royalties or to obtain a royalty benefit.

65. ***Return reporting periods and payment:*** the frequency of return periods and payments will impact the efficient administration of a financial mechanism for both the Authority and contractors. It is recommended a return is provided and payment is made every 6 months (and within 90 days of the end of each 6 month period). Reporting would be on a calendar year basis.

66. ***Penalty mechanism:*** the Survey (question 6) considered a penalty mechanism for overdue payments. Responses ranged from applying a rate of interest to fixed daily amounts. A desktop review of existing regimes will be undertaken and a fair mechanism proposed. Equally, and as noted by a number of stakeholders, failure to make payment should ultimately, following appropriate enforcement and dispute resolution procedures, lead to suspension or termination of a contract for exploitation. Financial payment should be considered a fundamental term under a contract for exploitation.[22]

67. ***Transparency in reporting***: the implementation of the Extractive Industries Transparency Initiative with regards to the reporting of payments made / received, should, as a minimum be adopted by the Authority and other participants in the Area regime.

68. ***Right to audit:*** a general right to audit should be provided. However, the practicalities of this compared to fiscal audits under national regimes needs thought. This may need to extend to an exchange of information between the Authority, sponsoring States and taxing States and provision of assistance.

69. ***Consistency of and in financial reporting***: adoption of International Financial Reporting Standards by contractors.[23] However, where practicable and appropriate, expert guidelines should be drawn up on specific accounting and reporting for DSM activities. This should allow for both visibility and comparability and ease administration of any payment mechanism adopted.

70. ***Ring fencing:*** this is a policy adopted under a number of mining tax regimes which prevents an enterprise from combining profits and losses on all its mines to calculate a tax base. Its applicability to the CHM financial mechanism

[22] See also related issue of legal title to minerals in *Report to Members of the Authority and all Stakeholders* (note 4 above) at page 20.
[23] See ISA *Recommendations for the guidance of contractors for the reporting of actual and direct exploration expenditures as required by annex 4, section 10, of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, ISBA/15/LTC/7, 25 May 2009 at para 5.

merits consideration as a better understanding of the exploitation process and its economics unfolds.

71. ***Periods of commercial inactivity:*** the draft framework presented to stakeholders on 23 March 2015 suggested at page 23 that during any periods of commercial inactivity (post an estimated date of commencement of commercial production) a surface rent ("dead rent") could be payable. The rationale for such a rent, depending on the circumstances of inactivity, is that exploitation of the mineral resources, and return to CHM, remains idle. If considered appropriate, how should such a "rent" be calculated given there may be loss of revenue to the CHM?

72. ***Guidelines:*** in due course, detailed guidelines will need to be prepared to support the financial terms and conditions contained in the exploitation regulations and standard contract for exploitation.

73. ***Conclusions:*** the development of a financial mechanism for the Area is complex. That complexity is compounded by a number of different actors involved in the process and their interaction. However, the starting point to this exercise is to gain a better understanding of the anticipated value chain for exploitation activities, together with its main financial and economic drivers. Various scenarios can then be modeled and presented.

7. Making a submission

Should you wish to make a submission, please read the following:

Submission details

Submissions should be sent by post or electronically as follows:
Report to Stakeholders (ISBA/Cons/2015/2)
International Seabed Authority
14-20 Port Royal Street
Kingston
Jamaica

Email: consultation@isa.org.jm (format: PDF or Microsoft Word document).

Closing date

The closing date for submissions is Friday, 29th May 2015 at 1800hr (EST).

Online submission publication and confidentiality

In the interests of transparency and to promote and encourage further discussion, the Authority may publish all submissions on a dedicated area of its website at http://www.isa.org.jm/en/home.

However, the Authority requires your express consent and approval to make submissions publicly available (i) including your name and organization as appropriate or (ii) to make your comments without disclosing any of your personal details. Please include such express consent in your submission where applicable. The default position is that your comments and personal details will be kept confidential without attribution.

Future engagement and privacy

The Authority will retain your personal contact details securely and in-confidence (except for any disclosure consented to above) with a view to contacting you solely in respect of future surveys, consultations and engagement.

Should you no longer wish the Authority to store your personal details, please advise us by sending a request to remove your contact details to the email address above.

Anonymous submissions

Please note any submissions made anonymously will be disregarded for the purposes of this Discussion Paper.

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