Secretariat
International Seabed Authority
14-20 Port Royal Street
Kingston, Jamaica
(submitted via email to consultation@isa.org.jm)

November 16, 2017

RE: Working draft – Exploitation regulations (ISBA/23/LTC/CRP.3*)

Sir/Madam

Below, please find our Commentary on the (second) draft Exploitation Regulations issued in August this year.

As Group Lead, I submit on behalf of the **Deep-Sea Minerals Working Group of DOSI, the Deep Ocean Stewardship Initiative**. The list of the contributors is presented at the beginning of the document. Express Consent for sharing is granted.

Sincerely,

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COMMENTARY ON
"Draft Regulations on Exploitation of Mineral Resources in the Area"
issued August 12, 2017 by ISA

PREFACE

The **Deep-Ocean Stewardship Initiative ("DOSI")** is an interdisciplinary group of experts that seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdictions. DOSI gathers expertise across disciplines, jurisdictions and industrial sectors to foster discussion, provide guidance and facilitate communication. As a distributed network, DOSI has leads in the USA, Mexico and the UK and has over 700 members from 40 countries.

- DOSI was granted Observer Status at the 22nd Session of the ISA in Jamaica in 2016.
- DOSI gives Express Consent to the International Seabed Authority to make this submission publicly available.

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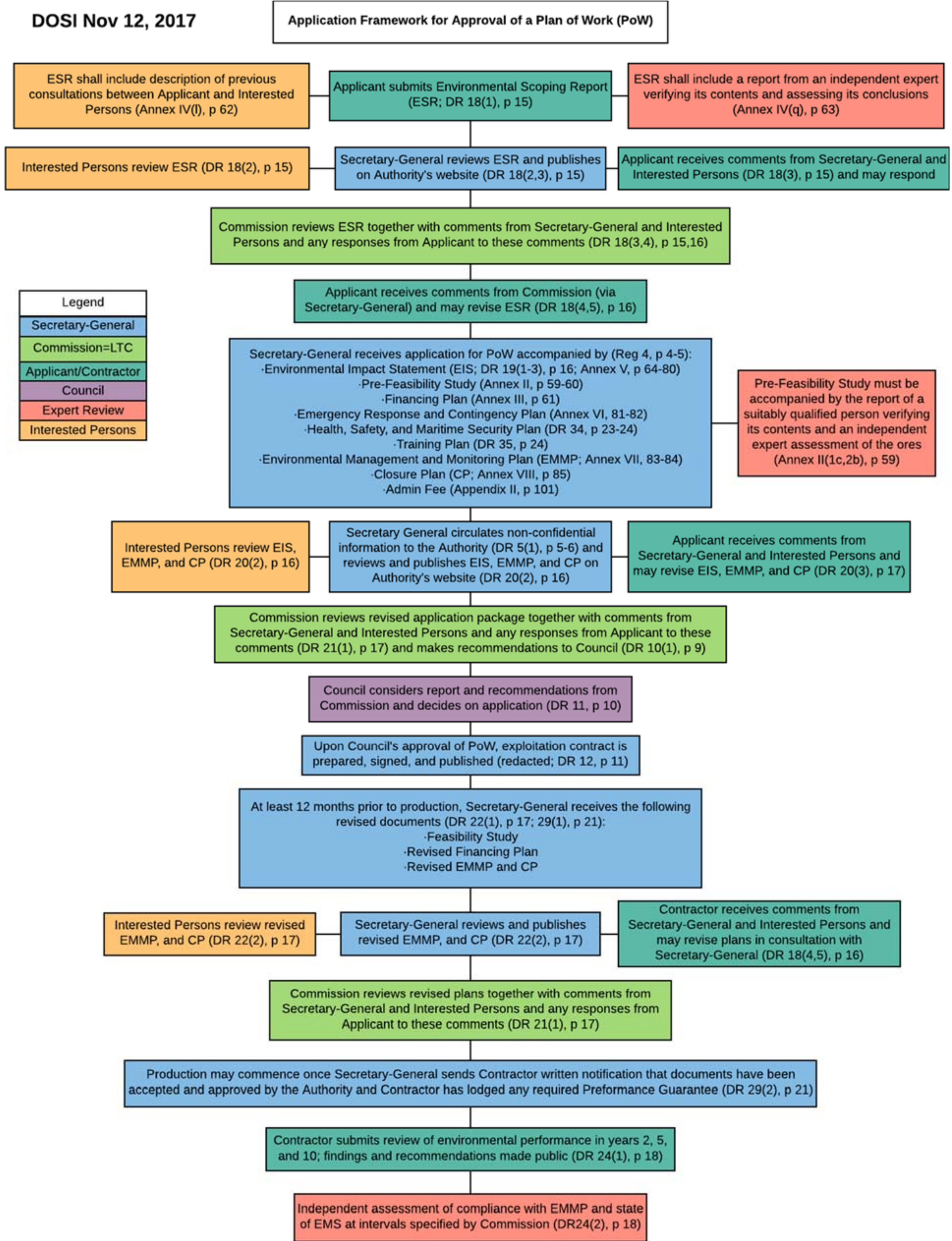
A. LEAD COMMENTS

1. The consultative approach to the development of the ISA's Mining Code is commendable. DOSI's responses to the General and Specific Questions posed in the draft regulations follow. Below we provide some general observations and comments.
2. We do understand the pressures to move these Regulations forward; however, it is our opinion that the August draft exploitation regulations would have benefited from greater consideration before their release. It is unclear how the wide set of responses to the 2016 draft was considered and incorporated. In places, the different approaches to those offered in ISA Technical Study 17, and the February 2017 Discussion Paper on Environmental Matters is particularly concerning. Transparency, public participation, access to meetings, environmental objectives, and the precautionary approach now have only cursory coverage or are wholly omitted in the Draft Regulations, without explanation. Also missing are reflections of the two environmental workshops hosted by the Governments of Australia and Germany in partnership with the International Seabed Authority. It is unfortunate that the LTC did not assess this version of draft exploitation regulations before issuance.
   - Exploitation of the Seabed will affect all nations in perpetuity. A clear, open process to develop these Regulations is necessary. Perhaps now is the time to pause and consider 'how' this process should unfold rather than 'what' the regulations should contain.
3. The Preamble cites UNCLOS to support its mandate of Exploitation for the "benefit of mankind" with no reference to any constraints the Convention imposes around the activity. That mandate is embedded in rational management", including 'effective protection of the marine environment from harmful effects arising from mining related activities.
   - The Preamble is critical for framing the responsibility of Contractors, and should reflect the full context of the Convention.
4. "These Regulations may be supplemented by further rules, regulations and procedures, in particular on the protection and preservation of the Marine Environment" (Introduction (5)). While it can be argued that further rules, etc can be more flexible to change, their absence here and the use of the word '**may**' means the suitability of these Draft Regulations remains in question for achieving that aim.
   - It is unclear how these further unwritten provisions will be enforced as it is not clearly stated in DR 80 that further recommendations will be legally binding. DR 17(b) is a case in point. Although Annex X section 3(3) seems to suggest that all 'Rules of the Authority' will be binding. We recommend to harmonize the regulations and all annexes and to unambiguously state recommendations to be binding.
   - A decision on whether the content and structure of the regulations are acceptable, given that the provisions will be supported by technical and administrative guidance where necessary, would not be possible without seeing these guidance documents.
5. The application flow process detailed in these Regulations on the next page shows:
   - i) that there are few points of entry for external consultation, ii) a pivotal role rests with one person (the Secretary-General), and iii) the Council has little exposure to the details of the application process. We suggest greater role for external consultation both expert and public, and a broader distribution of responsibility between the Legal and Technical Commission and the Council, while deepening expertise of the Secretariat.


DOSI Nov 12, 2017
Application Framework for Approval of a Plan of Work (PoW)
ESR shall include description of previous consultations between Applicant and Interested Persons (Annex IV(l), p 62)
Applicant submits Environmental Scoping Report (ESR; DR 18(1), p 15)
ESR shall include a report from an independent expert verifying its contents and assessing its conclusions (Annex IV(q), p 63)
Interested Persons review ESR (DR 18(2), p 15)
Secretary-General reviews ESR and publishes on Authority's website (DR 18(2,3), p 15)
Applicant receives comments from Secretary-General and Interested Persons (DR 18(3), p 15) and may respond
Commission reviews ESR together with comments from Secretary-General and Interested Persons and any responses from Applicant to these comments (DR 18(3,4), p 15,16)
Legend
Secretary-General
Commission=LTC
Applicant/Contractor
Council
Expert Review
Interested Persons
Applicant receives comments from Commission (via Secretary-General) and may revise ESR (DR 18(4,5), p 16)
Secretary-General receives application for PoW accompanied by (Reg 4, p 4-5):
·Environmental Impact Statement (EIS; DR 19(1-3), p 16; Annex V, p 64-80)
·Pre-Feasibility Study (Annex II, p 59-60)
·Financing Plan (Annex III, p 61)
·Emergency Response and Contingency Plan (Annex VI, 81-82)
·Health, Safety, and Maritime Security Plan (DR 34, p 23-24)
·Training Plan (DR 35, p 24)
·Environmental Management and Monitoring Plan (EMMP; Annex VII, 83-84)
·Closure Plan (CP; Annex VIII, p 85)
·Admin Fee (Appendix II, p 101)
Pre-Feasibility Study must be accompanied by the report of a suitably qualified person verifying its contents and an independent expert assessment of the ores (Annex II(1c,2b), p 59)
Interested Persons review EIS, EMMP, and CP (DR 20(2), p 16)
Secretary General circulates non-confidential information to the Authority (DR 5(1), p 5-6) and reviews and publishes EIS, EMMP, and CP on Authority's website (DR 20(2), p 16)
Applicant receives comments from Secretary-General and Interested Persons and may revise EIS, EMMP, and CP (DR 20(3), p 17)
Commission reviews revised application package together with comments from Secretary-General and Interested Persons and any responses from Applicant to these comments (DR 21(1), p 17) and makes recommendations to Council (DR 10(1), p 9)
Council considers report and recommendations from Commission and decides on application (DR 11, p 10)
Upon Council's approval of PoW, exploitation contract is prepared, signed, and published (redacted; DR 12, p 11)
At least 12 months prior to production, Secretary-General receives the following revised documents (DR 22(1), p 17; 29(1), p 21):
·Feasibility Study
·Revised Financing Plan
·Revised EMMP and CP
Interested Persons review revised EMMP, and CP (DR 22(2), p 17)
Secretary-General reviews and publishes revised EMMP, and CP (DR 22(2), p 17)
Contractor receives comments from Secretary-General and Interested Persons and may revise plans in consultation with Secretary-General (DR 18(4,5), p 16)
Commission reviews revised plans together with comments from Secretary-General and Interested Persons and any responses from Applicant to these comments (DR 21(1), p 17)
Production may commence once Secretary-General sends Contractor written notification that documents have been accepted and approved by the Authority and Contractor has lodged any required Preformance Guarantee (DR 29(2), p 21)
Contractor submits review of environmental performance in years 2, 5, and 10; findings and recommendations made public (DR 24(1), p 18)
Independent assessment of compliance with EMMP and state of EMS at intervals specified by Commission (DR24(2), p 18)

B. GENERAL QUESTIONS FROM LTC

The Annex to the Draft Regulations document requests responses to six general questions; we address those within the expertise of our respondents.

B.1. Structure and flow

The draft regulations follow, mostly, a logical structure and flow. Most users will not work from beginning to end, but will consult the relevant section for the task at hand.
Recommend:

- Switch order of DR 9 and DR 10.
- The Duties/Obligations of the Sponsoring State do not arise until the Enforcement section in Part XII - perhaps not even consulted carefully at first contract application. An earlier reference in Part V may reduce risk of misstep.
- The structure (numbering and lettering) of DR 75(d) is awkward. Suggest reworking.

B.2. Clear, concise and unambiguous manner?

There is confusion around what is needed for environment protection and around financial matters. Problems often stem from vague text and lack of definitions. For example: "reasonable and practical measures" in DR 23 leaves much open to interpretation. There is no explicit requirement for all environmental data to be made public – just implicit.

The use of verb forms that do not compel are frequent; please re-assess. For example, in DR 17: "Access to data and information…shall be encouraged." Non-anglophones have difficulty with poor punctuation and long sentences in places.

In addition, many smaller issues should be addressed to be 'clear, concise and unambiguous'. For some suggested revisions, see **Section E**: Itemized Comments for detail.

B.3. Consistency with the Convention.

Mostly we did not scan for this answer. However, please note General Comment #3 above.

It appears that it is not a condition of Application approval that the fundamental UNCLOS mandate of Exploitation be met: that the 'benefit of mankind' is evident. We foresee operations that provide financial returns for the Contractor, the Sponsoring State and for ISA but could return little to Developing States or others.

The Regulations should specify how the ISA intends to give effect to the common heritage of mankind principle, including its social, financial, and environmental dimensions'Common Heritage of Mankind' is mentioned in the Preamble and appears once in the regulations, whereby it is stipulated that the Contractor shall:

> "Manage the Resources in a way that promotes further investment and contributes to the long term development of the common heritage of mankind." (DR 3(3)(k)).

However, as outlined UNCLOS the principle is much broader, and invokes governance requirements beyond normal business investment, particularly concerning fair and equitable benefit-sharing, and protection and preservation of the marine environment.

B.4. A stable, coherent and time-bound framework?

Too much uncertainty remains. Too many times, the 'framework' is left to definition by Contractors under the rubric of "Good Industry Practice". We recommend developing clear standards and rules that guide such practice to ensure regulatory certainty for all actors.

The need for overarching Strategic Environmental and Management Plans (SEMP and REMP) is not addressed. Also, there is no direct reference to the Environmental Guidelines that are supposed to be linked to this document and that should be legally binding.

B.5. Balance of content of the regulations and that of the contract

The contract reflects the current content of the draft regulations. However, many important sections from previous drafts are missing in the current version making assessment of the contract difficult.

The migration of several provisions from the contract to the Regulations would allow greater enforcement by the Authority without renegotiating individual contracts, which is welcomed.

C. SPECIFIC QUESTIONS from LTC

The Annex to the Draft Regulations document requests responses to seven questions on the topics below.

C. 1 The Role of Sponsoring States

Annex III, Article 4(4), of the Convention says that the State is not liable if it has adopted laws and regulations and taken administrative measures that are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction.

- It would be useful if the Regulations added detail to this general provision in light of the Advisory Opinion of the Seabed Disputes Chamber (i.e. riskier activities require a higher standard of due diligence).

These Regulations are a good place to specify more clearly the role of Sponsoring States in collaborations with ISA in areas of data sharing, monitoring oversight, and sharing of benefits to Developing States and beyond.

C.2: Concept of "Contract Area"

The definitions for "contract area" and "mining area" should be included in DR 51 (Definitions). Mining area is fairly clear, but Contract Area is not delimited in the regulations. There may also need to be a reference to "Impact Area" that reflects an area of potential impact to be monitored and managed as this may fall outside the "mining area" but inside the "contract area".

In the context of the current ISA exercise to develop IRZ/PRZ areas, reference is necessary in these Regulations.

C.3. Plan of work

The content of the Feasibility Study should be set out in the Regulations. What is the binding nature of this study; how will it be used to assess the Plan of Work?

C.4. Confidential information

Confidential Information should be defined more clearly. We agree with the ISA's proposal for a list of non-confidential information, and further suggest that two lists identifying what constitutes both confidential and non-confidential information would help in a process open to stakeholder input, with a presumption that all information is non-confidential unless clearly justified. Otherwise, there is too much room for interpretation between Applicant

and Secretary-General. These lists however should not be seen as exhaustive. Any amendment to make data confidential should undergo a review process by the LTC. Currently, the process has low transparency.

Proper assessment and discussion of environmental impacts will require that many details in the proposed Plan of Work are released. The applicant's perspective of what is confidential may, at times, be at odds with good environmental management. To make good choices on procedures and equipment in the context of environmental management, it may be necessary to share information in this nascent field of exploitation.

Recommendations are in bullets below and in Specific Comments.

- **Re-assessment of the Confidential Information in the Exploration phase is necessary.**
- **Restructuring of DR 75 is necessary. It should include a statement that all information is non-confidential except for….**
- All plans, studies and data related to environmental information should be publicly available. Without disclosure of these data and standardized procedures, the environment may not be protected in an efficient way.
  DR 17 is not adequate: making environmental data available must be required.
- DR 5(1)(c) 'Information of a general nature' wording leaves open the possibility that specific details in the application concerning, for example, risk assessment, monitoring, mitigation and restoration could be seen to be confidential. This could greatly hamper the ability of member States, Observers, stakeholders and experts to review the Plan of Work and assess its environmental merits.
- Determination of what constitutes confidential data should be a matter for the LTC with Council approval – too much discretion is given to the Secretary-General. How will disclosure risk for competition reasons be weighed against environmental reasons?
- Modifications of Plan of Work (also minor) should be non-confidential and made publicly available.
- Provision 1(d) will set up differences among Contractors for disclosure and allow later State enactments to supersede; perhaps agreement is required first if markedly different laws prevail.
- **We do not agree that there are any bona fide academic reasons to withhold data that may otherwise support protection of the marine environment. (DR 75(d)(f)).**
- Annex II (Pre-Feasibility Study), Annex IV (Environmental Scoping Report), Annex V (Environmental Impact Statement Template), Annex VI (emergency response and contingency plan), Annex VII (Environmental Management and Monitoring plan), and Annex XIII (closure plan) should always be non-confidential and made publicly available.

C.5. Administrative review mechanism

Expert advice is essential for good process. **The lack of explicit availability of experts to the LTC is particularly worrisome in the consideration of applications and the many associated documents and studies.**

External review can be very useful to provide alternative points of view. For example, review of compliance notices (DR 89) can exploit the mechanism proposed in DR 92 with an external expert/panel. Such compliance decision should be binding. Disputes surrounding

environmental practices and serious harm require independent external experts agreed on by both Parties.

- Contract termination for cause appears to be addressed fleetingly in DR 89; 'cause' should be defined. This circumstance should have independent expert opinion that is submitted to the Chamber if a challenge is tendered.
- Currently, only Coastal States can challenge activities – assuming their waters are affected. **Any State should be able to bring a challenge against either ISA or the Contractor to the Disputes Chamber in the event of possible Convention violation.**

The term of the contract for 30 years is excessive for two reasons: i) Our understanding of resources and the deep-sea have changed dramatically in the last 30 years but is still incomplete. 30 years is much too long a period to lock in; and ii) while terms can be extended, they cannot be shortened; a cautious approach to a very new venture is recommended.

C.6. Use of exploitation contract as security

The use of exploitation contracts as security raises many complex issues. While private sector contracts are usually used in this manner, government licenses often cannot be used. Thus, in the US for example, federal statutory law specifically prohibits the assignment or other transference of Federal Communications Commission (FCC) licenses absent the FCC's consent. The Communications Act provides that "[n]o…station license, or any rights thereunder shall be transferred, assigned, or disposed of in any manner" without the advance approval of the FCC.

- It therefore needs to be considered carefully whether the granting of security would, for instance, in any way limit the control of the ISA over the process of assessing whether the lender would be an acceptable alternative owner and operator of the contract. As the ISA will continue to have unfettered discretion over any assessment of potential Contractors, it is not clear how legally such a mortgage could be enforced. Given the complexities of this topic, it would be preferable for the issue to be analyzed further by independent legal counsel.

See Section D "Additional Financial Considerations".

C.7. Interested Persons and public comment

As defined here, an Interested Person must i) meet the Authority's opinion test, and ii) be "directly affected" by Exploitation Activities or have "relevant information or expertise." Given that the activity is to be 'for the benefit of mankind as a whole', every person has an interest, therefore no person should be excluded. Nonetheless, guidelines on the type of submission acceptable can be developed.

- The pathways for Interested Persons are very limited (see diagram) and reduced from previous documents (e.g. Risk assessment is no longer subject to review by Interested Persons). The Legal and Technical Commission rarely considers any external input such as at Plan of Work stage (DR 10).
- What are the obligations of the Contractor following comments on the EIS from Interested Persons (DR 20)? DR 22 does not include revised EIS. What if wrong sampling or analytical methods have been used in the EIA resulting in wrong conclusions in the EIS?

- Annex IV requires Contractor to include descriptions of previous consultations with Interested Persons, but does not require such consultations. DR 18(3) states that the applicant "may respond in writing to the Secretary-General" with respect to comments on the Scoping Report. Given that the Environmental Impact Assessment is to be based on the scoping report, this light treatment of input from Interested Persons could have profound implications. Third party input could be very beneficial and should be sought.

Since "the Area" is the common heritage of mankind, the Sponsoring State should seek public comment prior to application for mineral exploitation. We are embarking on a major new initiative; wide participation can bring wisdom and much needed knowledge.

- The ISA is the ultimate arbitrator of, and holds the final responsibility for, decisions taken on exploitation. It runs a large reputational risk if procedural issues surface or a major negative event occurs at sea sea or mining turns out to cause greater harm than predicted. **The greater the transparency of the organization, through public collaboration, the better the perception of its operations. While such collaboration is onerous at times, public support will be valuable.**
- Publication and Review of Environmental Impact Statement: Public review time of 60 days is too short: at least 90 days is recommended. It should also be ensured that there is no potential for overlap in the two time periods in Draft Regulations 4 and 20. Currently, it appears a situation could occur where the Interested Persons consultation period could occur after the Commission is already in session or has finished reviewing an Application. Therefore, it would not be possible for the Commission to assess the Environmental Impact Statement in light of comments made by Interested Persons. It must be ensured that all the Interested Persons' comments are collated and available to the Commission when they received the Application for review.
- Currently, Legal and Technical Commission) meetings, where most of the discussion on environmental matters takes place, are closed. The Feb. 2017 Discussion Paper supplied a provision for open meetings of the LTC directly connected with environmental matters (10(2)). Commentary within that Discussion Paper suggested that open meetings will be necessary with regard to environmental decision-making (DP 40). However, the Draft Regulations has no provision for open LTC meetings.

SECTION D: ADDITIONAL FINANCIAL CONSIDERATIONS

D1. General Comments

We note that, as per the Secretary-General's accompanying report, the financial terms remain a "work in progress", and look forward to the separate consultation exercise on these matters. We stress the need for a comprehensive and inclusive discussion at that stage.

A wide range of views was expressed at the external workshops connected with the development of a payment mechanism, the most recent being April 2017 in Singapore. Views relate to the components, structure and format of the potential financial mechanisms as well as to financial models reflecting the issues concerned. The approach outlined in the workshop summary does not appear sufficient to address the broad range of financial aspects

that will need to be considered by the ISA to assess all the financial implications of entering into the exploitation phase.

D2. Specific Comments

The draft regulations identify a number of components for the Form of applications and information to accompany a Plan of Work. DR 4(3)c refers to "A Financing Plan prepared and based on the Pre-Feasibility Study, in accordance with Annex III to these Regulations".

- Given the complexity, scale and challenges the contracting party will face, we propose insertion into the list of requirements the need of confirmation that the Applicant is at least of investment grade (or can substantiate that it has equivalent financial strength). Only entities of that level of financial solidity can be deemed capable to assume and deliver on the wide range of obligations necessary. For example:
  (j) Confirmation of the applicant's investment grade credit rating or proposed mechanisms to achieve equivalent status in order to deliver cost-effective financing of proposed capital expenditures.

Source of financing for inspectorate function of the ISA should be clarified. Is this covered by the administrative fee?

- Consider including financing (% of royalties) for remote supervision of the Contractor by AUV and mooring technologies in addition to inspector visits. Technologies are rapidly developing to make this approach feasible. Also include in DR 85.

Other areas will need financial support:

- Financing to investigate the environment in areas of particular interest (APEIs); recommend that a fixed amount (% of royalties) should be available for application here.
- Recommend that a fixed amount (% of royalties) should be available for financial compensation to account for ecosystem service loss, as mining will modify the environment on a geological time-scale.

Currently, there are only penalties for unpaid royalties (DR 68). Suggest including monetary penalties for failure to follow monitoring plans, etc. as detailed in contract.

An annual fixed fee based on total size of the Contract Area will be an incentive to cherry pick small, good sites. **It has greatly unequal implications for nodule versus sulphide operations: widely-dispersed versus 3D chimneys**. Options relate to deposit volume.

SECTION E: ITEMIZED COMMENTS

Preamble

p2: "The objective of this set of Regulations is to provide for the Exploitation of the..."

- Suggest including mention of need for regulations to be consistent with Convention regulations and reference to effective protection

Part I

D R 1(4): What is the process for independent research in contract area? Who decides what may constitute "reasonable regard" by both the Contractor and the researcher?

Part II

DR 2(1)a: How can the Enterprise receive an independent review by ISA?

DR 2(1)b: Further elaboration of "effective control" needed.

DR 2(3)a: "…the applicant is effectively controlled…"

- This is circular as it lacks a test for effective control, simply assumes it.

DR 3(2): "Where an applicant has the nationality of one State but is effectively controlled by another…" Again, need a definition of effective control (this time to inform the Contractors).

DR 4: What is the assurance the Commission will have the expertise to carry out all assessments? Access to Expert input is critical.

DR 4(5) One set of documents: presupposes loose Environmental and Monitoring Plans that are not site-specific.

DR 4(2)b Control of the Contractor by the Authority should not be confidential but visible. Currently no statement on visibility

DR 7(1)c: "Has satisfactorily discharged its obligations in relation to any previous contract…"

- Please define "satisfactorily".

DR 7(1)e: EIA requirements are now reduced to "Recommendations"… Need to be Regulations.

DR 7(1)d: "Has, or will have, the financial and technical capability to carry out…"

- Is there any scrutiny of the ability of the sponsoring state to meet any financial or administrative challenges of supervising performance?

DR 7(3)c: "Established the risk assessment and risk management systems necessary…"

- Risk is not the issue here, it is cumulative impacts and ability to monitor and respond. Need to investigate further.

DR 7(4)c: "Following the Commission's examination under regulation 21, provides for…"

- Article 7(4) and DR 21 are circular and do not add substance or criteria for approval. There is no means to assess whether the Applicant has met the criteria required in Article 7(4) other than the very vague reference to Best Environmental Practices and the precautionary approach.
- Also it is not clear that the Commission is to apply the precautionary approach that the proposed Plan of Work will ensure effective protection.

DR 7(5): "In considering a proposed Plan of Work, the Commission shall have regard to…"

- Should "apply the principles" not just have regard to them. Should also prepare written report on how the principles, policies and objectives are applied.
- Only Objectives are those of Convention – must refer to ISA's Env'l Objectives (which are notably missing from the entire process).

DR 7 & 8: Nowhere here is the Commission even given the scope to consult any Expert!

DR 9(1): "The Commission may recommend to the Council that, as part of the terms…"

- Performance guarantee should be mandatory, not optional.

- How are the Authority's guidelines to be developed? Could also be useful for DR 7(4)
- Would 'environmental performance' be included in the obligations under any Performance Guarantee recommended by to the Council?

DR 10(1): "If the Commission is satisfied that the applicant meets the criteria listed in…"

- Again, need more specific criteria, and guidelines for how the Commission deals with uncertainty and the precautionary approach, and how determining whether the proposed Plan of Work is sufficient to achieve effective protection.

DR 10(2): "The Commission shall not recommend approval of a proposed Plan of Work if…"

- Add an additional condition: shall not approve the proposed Plan of Work if applicant has not demonstrated that it will be able to achieve effective protection and avoid serious harm to the marine environment.

DR 10(2)c: "An area disapproved for Exploitation by the Council pursuant to Article …"

- Suggests this disapproval needs to happen prior to the application. What about Serious Harm or ensuring effective protection?

DR 10(4): "If the Commission is not satisfied that the applicant meets any of the criteria…"

- Threshold is only that the Commission needs to be satisfied? Is there a more direct way to say this? Has determined that the applicant has met all the criteria?

DR 10(5) What about input other than the applicant? "Interested Persons"?

Part III

DR 13(3)b: "The Contractor is in compliance with the Rules of the Authority;"

- Should also be required to be in full compliance with exploration regulations, as in earlier section.

DR 13(3)c: "The Contractor is in compliance with the exploitation contract;"

- Possible to insert requirement here that Contractor is able to demonstrate continued ability to ensure effective harm and that no serious harm has occurred or is likely to occur due to cumulative effects?

DR 14(4): "A sponsoring State is not discharged from any obligations accrued…"

- Suggest: "A sponsoring state cannot avoid obligations accrued…"

Part IV

DR 17(a): Who is developing these environmental objectives? Who is applying them?

DR 17: "…implement and modify measures necessary…by applying the following principles"

- This is backwards. Talks about measures necessary for activities in the Area, not about taking of measures necessary to secure effective protection, and then talks about principles to inform the development of environmental objectives, but does not include them as legally binding elements.

DR 18(5): There is no consideration of public comments by the Commission and no requirement on the Contractor to address them.

DR 19: EIS is public with results of EIA … but EIA methods and details are not: inadequate.

DR 19(2)b: "An environmental risk assessment in accordance with Good Industry Practice;"

- How is good industry practice defined in a new field?

DR 19(2)e: What 'Recommendations'?

DR 20(3): A key step missing is the Secretariat's summary of the adequacy of Env. Baseline Information by the applicant. Having adequate baseline info is a crucial precondition and should be a specific procedural safeguard.

DR 20(1): "The Commission shall as part of its examination of an application…"

- Need a better description of the review process by Independent Persons.

DR 21: There must be formal review of EIS and Plans by an expert, external panel as nothing here is enforceable without non-conflicted input. The LTC appears no longer to have the option to obtain expert advice, which is crucial.

- An important step missing here. Once the Commission reviews the revised EMMP and CP, the Council should APPROVE/REJECT them. That is part of having procedural safeguards, i.e. points in the decision-making process, where the ISA can stop a Contractor, if needed.

DR 21(2): "…criteria specified in Regulation 7(3) and 7(4)"

- The criteria in DR 7(3) and DR 7(4) are insufficient to ensure effective protection as they simply repeat Article 145, plus a reference to the precautionary approach and Best Environmental Practices.

DR 22(8): "The Commission may:…"

- Where is option to decline? And where is follow-up to see if conditions for approval are fulfilled?

DR 23: Some serious issues here related to boundary conditions of activities. What aspect of the Reg invokes a stop order?

DR 23(2): "…unless the Contractor takes all reasonable and practicable measures to prevent…"

- This is not consistent with "taking the necessary measures to ensure effective protection".
- It should be made clear from the start that if reasonable and practical Mitigation measures are insufficient to achieve effective protection or avoid serious harm, then the Plan of Work should not be approved. If the Plan of Work is approved, and after work commences it is shown that assumptions with respect to the seriousness of the harm were underestimated, it should be the obligation of the Contractor to find mechanism to avoid serous harmful effects, or suspend operations until such time as they are able to do so.
- Also applies to 23(3)

DR 23(6): How small a piece of 'mining equipment'?

DR 23(7): "A Contractor shall maintain the currency and adequacy of the Environmental…"

- Who decides what is current and adequate? Will there be a process for frequent review?

DR 23(8): "…prompt execution and implementation of the Emergency Response and Contingency Plan…"

- Emergency measures may not be so helpful if only in response to incidents that threaten serious harm. What about cumulative impacts?

DR 24(2): How will independent assessments of compliance with Environmental Management and Monitoring plans be undertaken? Will these be based solely on information provided by the Contractor? Or will the independent assessor have access to the site to collect their own data?

DR 25(6): Will the scope and focus of post-closure monitoring be included in the final Closure Plan? Post-closure monitoring needs will likely differ from that during operations.

Part V

DR 30: What 'margin of error' is allowed in the Plan of Work?

DR 31(1): What will be the standards for electronic monitoring systems. Will there be real-time reporting to the ISA?

DR 32(4): Does this imply that there will be separate monitoring programs in the operations and closure plans?

DR 33(3): Is there no monitoring or reporting of any activity other than on the seabed? How is 'production' of metals assessed independently? What if the State where processing occurs is not a member nation?

DR 40(2)a: "The Contractor shall, upon becoming aware of an incident, notify the Secretary-General." There is no comment on whether this information is kept confidential. This information should be made public to avoid future incidents and to react quickly to potential environmental harm (negative example of oil-spill in Gulf of Mexico).

Part VII

DR 49(2): "The Council shall establish such annual rate for each Calendar Year"

- For visibility amongst Contractors it is suggested that this information is non-confidential. (change of DR 74(1) necessary)

DR 47(4): There should be opportunity for public input on the scope and intervals of reviews during the initial Plan of Work review process.

DR 74(1): "The Secretary-General shall keep confidential all Information provided to the Authority in the course of its administration and management of this Part VII …"

- Some transparency between Contractors (paid fees) should be guaranteed. Especially because under DR 72(2) "system of payment may be revised…by agreement between Authority and the Contractor".

Part VIII

DR 75(1)c: Independent review prior to Secretary-General decision on data disclosure is necessary in order to determine whether information withheld for economic reasons is causing harm to the environment (review process important to guarantee that DR 75(1)d(d) is followed).

DR 75(1)d(f): Environmental information to protect the marine environment may not be withheld from other Contractors as it may improve regional environmental management.

DR 75(1)(d)(g): What is meant here?

DR 77(2): "Secretary-General shall specify the data and information to be submitted…"

- It is not stated which data must be submitted with termination. This should not be confidential, and should not be discussed individually between the Secretary-General and Contractor but should be clearly stated in the regulations.

DR 78: There needs to be a time constraint for delivery of this information.

Part IX

DR 82: There is currently no regulation for rights of Contractors.

DR 82: The requirement of preventing Serious Harm is not stated so strongly for the Area; punctuation is poor thus hard to understand.

DR 82(2): Coastal states have the right to accuse ISA in case serious harm in their coastal water is caused due to mining. The same should be true for Contractors (i.e. mining plume is travelling from one to the other Contractor).

DR 85(f): Will "remote monitoring equipment" include deployments to monitor on the seafloor and in the water column around the mine site?

Part XI

DR 88: The Inspector's Report should not be confidential. No mention on structure of report or on minimal observation an Inspector has to carry out.

DR 89(5): Compliance notice - No mention if there is a review process for suspension or termination of contract.

Part XIV

DR 94(2): Currently, State Party, LTC, Contractor through State may request revision of regulation. Currently no mention that any Interested Person may have this right as well.

F. THE ANNEXURES

General Comments

As detail on Environmental Regulations is now omitted from the draft document, and we have not seen the Environmental Guidelines and Recommendations documents that will be legally binding, it is difficult to comment on some specifics here.

There is too little transparency in the process around environmental matters. It will not make life easier for Contractors who do their best but a perceived shroud of secrecy can only raise concerns. "Independent review" through the Contractor is a conflict of interest. Openness to public scrutiny is rather important to ensure the heritage of mankind is shared. What are the

'tipping points' that close an operation? We suggest that running scenarios with all stakeholders may be very enlightening.

Annex II - Pre-Feasibility Study

This Annex lacks the requirement of a Contractor to carry out an environmental feasibility study. The onus is to prove that mining can occur without causing serious harm to the environment and that the Contractor can ensure effective protection.

Documentation includes the financial and intellectual capacity of the applicant to study the environment in a sufficient way in order to be able to fulfill requirements in Annexes. It also includes assessment of identified special habitats (eg.EBSAs) within the contract area that shall not be impacted.

Annex IV Environmental Scoping Report

We welcome the requirement that an applicant submit a scoping report prior to conducting an environmental impact assessment (previously listed as optional) and to the subsequent delivery of an environmental impact statement.

a) How will these environmental objectives be defined and by whom? The Contractor needs specific guidance and reference to (non-existent) Authority Environmental Objectives.

a, b, c) How detailed are these descriptions? What aspects of the Marine Environment need to be addressed? Guidance is needed.

f) Need to include "and uncertainties"

j) Against what objectives will mitigation be measured? There is a need to include plans for monitoring the effectiveness of those mitigation measures when used.

m) In what detail should nature, scope and methodology be described?

p) The cited document is in the process of being updated to deal with several shortcomings.

q) It is inappropriate to have a non-independent (=selected by Contractor) expert. Environmental Matters Discussion Paper proposed that the Secretariat seeks expert opinion.

Precautionary approach

The precautionary approach is mentioned but twice in the Draft Regulations (7(4)(c), 17(c)), without elaboration. In contrast, the precautionary approach is the focus of a specific regulation (7) in the Feb. 2017 Discussion Paper, and in many places in that document. The 'Application of the Precautionary Approach' in the Discussion Paper Scoping Report template is absent from these Draft Regulations (see DP, ESR template point 11). We suggest re-incorporating the precautionary approach back into the Draft Regulations.

Annex V - Environmental Impact Statement Template

General

A standardized protocol to measure the abiotic and biotic environment is missing. Without a standardized protocol (separately for nodules, sulfides, crusts) results from Contractors even within a region may not be comparable, and thus be of low use. An independent environmental committee (consisting of scientists of diverse disciplines – biology, chemistry, geology) could develop these *standardized environmental protocols*. Protocols should cover methods, spatial and temporal scale of environmental investigations. These protocols should be integrated in Annex V.

- Missing are the over-arching strategic objectives to inform the underlying EIA.
- Ensuing sections include lots of "etc." inserted. Will the "etc.'s" be elaborated?

Executive summary

- What is meant by the bullet point "end-use plans for the development activity" apart from the listed closure?
- Missing are key terms used in the EIA template developed for the Griffith/ISA Workshop "(direct/indirect, reversible/irreversible)".
- Obligation is more than just minimizing environmental impacts, but also to "ensure effective protection" and avoid serious harm.
- Should include benefits for a variety of stakeholders beyond access to a new supply of metals.
- Griffith/ISA Workshop Template uses "a consultation program", not just consultation.
- ISBA/19/LTC/8 states that "it is important to note that these baseline, monitoring and impact assessment studies are likely to be the primary inputs to the Environmental Impact Assessment for commercial mining". Environmental Baseline Studies from the Exploration Contract should be assessed for their completeness and adherence to the exploration contract conditions and associated reccommendations and guidance documents and should be highlighted in the EIA requirements.

1.2 Project Viability

This header is in the Griffith/ISA Workshop EIS Template and would be useful to have here.

> "The purpose of this section is to ensure that only development activities that are in line with the country's goals and objectives are considered for approval. This section should provide information on the viability of the proposed development. Include economic context, why the project is needed, benefits to sponsoring state (in line with common heritage of mankind)."

- IMPORTANT: There is need to elaborate on the benefits of the proposed development beyond simply an "etc" The provision should include a description of benefits to the sponsoring State, the Authority, developing countries and humankind as a whole.

2. Policy, Legal and Administrative Context

2.2 Other applicable legislation, policy and regulations

The new text cuts short an important list that is in the Griffith/ISA Workshop EIS Template: "(e.g. shipping regulations, offshore mining certificates, Maritime declaration, foreign investment, marine scientific research, occupational health and safety, climate change etc.)." Climate change is particularly important, as fuel consumption and CO_2 emissions should be part of the EIA.

- Would this be the place to add a reference to CBD and the World Heritage Convention: the Sustainable Development Goals? (to which ISA submitted).

2.4 Other Standards

This list can include EITI standards (Extractive Industries Transparency Initiative).

3. Description of the Proposed Development

3.3.3 On-site processing

"….the disposal of waste, [Add:*including overburden sediment and any forms of destroyed benthic life associated with discarded sediment and*] handling and disposal of hazardous materials."

The section on Hazardous material management from the Griffith/ISA Workshop EIS Template is now inadequately addressed the last clause above. Please add:

- Hazardous materials management
- Description of hazardous materials
- Transportation
- Storage, handling and disposal

3.4 Commissioning

We expected to see something here about exclusion zones around mining vessels. Exclusion zones have legal requirements.

3.7 Other alternatives considered

Another place where "etc." carried a rather large load. Please add:

- Alternatives considered and rejected from analysis
- Site selection process
- Information on methods of site selection including alternatives investigated.
- Mining production scenarios
- Transport/materials handling
- On-site processing
- No-mining alternative

Important: Include some defining objectives, standards, indicators and thresholds, and an assessment of how what is being proposed meets those and why the alternatives were rejected.

4. Description of the Existing Physico-Chemical Environment

It is the role of the ISA's SEA and regional plan to set the context for the Contractor reports especially as multiple EIAs may need to be considered together (see CHAPTER 7.6) (from Berlin Workshop report).

Include a section on Special considerations for site

- Description of any notable characteristics of the site, such as hydrothermal venting, seamounts, high-surface productivity, eddies etc. Include site-specific issues and characteristics, particularly for rare or fragile environments.

4.3 Studies Completed

- Seasonal oceanographic variability must be demonstrated, (supported by at least three years of monitored data).

4.8 Seabed substrate characteristics

- include microbially-mediated processes with sediment characteristics (matched to profiles).

5. Description of the Existing Biological Environment

- "divided by depth regime" … what is meant here?
- It is much more important to describe fully the biota of the water column in conventional ocean terms that will vary according to where the particular mine is. Illustrate the biological connections and interactions that are continually going on between surface and bottom at that site.
- Such information will then feed into 5.4. Impacts/effects are likewise connected throughout the liquid column and not divided by depth layers.

5.4 Biological environment

- Microbial assessments are also necessary.

5.4.2 Midwater

- Insert "nekton" to include all biota (large invertebrates are the major fauna here).

5.4.4. Ecosystem/community level description

- Add: Special attention should be given to larval, recruitment and behavioural studies.

6 Socio-Economic Environment

6.2 Existing Uses

- Add transboundary issues for Contracts that have potential impacts on neighbouring EEZs.

6.2.1 Fisheries

- ….used by fisheries or where spawning, larval development or recruitment of commercial stocks takes place, or where known forage species of the commercial stocks occur, then this needs to be described here.

6.2.5. Conservation Areas

Another 'etc.': add VMEs, EBSAs, proposed conservation areas.

- What is the definition of 'nearby'? It should include all those that are within a distance of possible impact.

6.2.6. Other

List also sites that will be affected by shore processing sites and their effluents (e.g. sites where other industries requiring non-pollution operate, such as aquaculture, tourism)

7. Assessment of Impacts on the Physico-Chemical Environment and Proposed Mitigation

7.6. Chemical oceanographic setting

- "…….plume generation ([Add: frequency, spatial extent], composition and concentration)…"

7.13 Cumulative Impacts

- "...interactions between various impacts [Add: on both spatial and temporal scales during the lifetime of the mine]" ...

8. Assessment of Impacts on the Biological Environment and Proposed Mitigation

8.4 Midwater

- Add "all nekton" or "other midwater invertebrates (majority of pelagic inhabitants)".

8.7 Cumulative impacts

Add: the temporal persistence (intensity) of mining impacts on one mining area at *the proposed rate of mining* must be discussed and considered in all estimations of cumulative impacts.

Note: it is dangerous to estimate cumulative effects from (quote from 8.2 *" lessons learned from activities during the exploratory phase of the program (e.g. mining system component tests)."* because cumulative impacts are exponential rather than linear. Test mining experiments cannot simply be extrapolated to assess cumulative effects.

11. Environmental Management, Monitoring and Reporting

This section on monitoring is poorly developed. A temporal (pre, during, post mining) and spatial scale must be set. A standardized protocol to measure the abiotic and biotic environment is missing and must be included in regulations.

11.3.2

- Include independent review of monitoring program (reviewer not appointed by Contractor).

12. Product Stewardship

- Include standards met for environmental management program.

Annex VI Emergency Response and Contingency Plan

(d)xvi: Not just incidents but also cumulative effects that may be of most concern.

Annex VII Emergency Response and Contingency Plan

Difficult to comment on this annex as it is all theoretical wording, in its present form. The EMP should receive stringent review by independent experts, and there must be independent (of the Contractor) participation in all aspects of the EMP if it is to serve any purpose. The Contractor must demonstrate capacity in place for monitoring the required parameters.

(a) What level of description is required?

(b) Should these be based on regional objectives, triggers, indicators generated by the Authority?

(e) Goal is only to minimize harm—not to ensure effective protection; thus, inadequate.

(s) A general common framework or template for developing Environmental Management Systems and Performance Indicators would go a long way to developing a uniformity of approach to environmental monitoring and would provide focus for Interested Party feedback on Environmental Management and Monitoring plans.

Annex VIII Closure Plan

(g) Does this mean the state of the Environment post mining but prior to closure? If not, that needs to be included.

(h) Are there details on how frequently and the spatial scale of post-closure monitoring? Who will ensure that this happens?

Appendix 1 Notifiable Events

Should include deadly encounters with marine mammals;

Environmental reporting appears inadequate: should include unauthorized destruction of contraindicated marine habitats or organisms.

Appendix III Monetary Penalties

Please add penalty related to environmental damage.

Schedule 1: Terms and Scope

Environmental performance: Environmental objectives—need to refer to Authority larger Objectives plus those set by Contractor under the EMMP.

Good Industry Practice: Now includes the ISA rules, regulations and procedures, and any other standards adopted or endorsed by the Authority. Reference to “from time to time” should include ability to update and upgrade regulations for Contractors. Need to make sure this stays.

Serious Harm: This term urgently needs to be defined by environmental experts and included in the regulations. With the current definition, the Authority judges what is acceptable.

END