Briefing to the International Seabed Authority for the 24th Session

16-27 July 2018

Executive Summary

Transparency

The International Seabed Authority (ISA) needs to become much more transparent in its working methods. This includes making all information relevant to the potential or actual impact of mining activities on the environment publicly available and open to review including environmental baseline information collected by contractors, environmental impact assessments (EIAs) and monitoring plans under the exploration regulations and exploitation regulations, exploration and exploitation contracts, issues related to compliance with and possible breach of the regulations, open meetings of the Legal and Technical Commission (LTC), and the provision of detailed reports of LTC meetings including an explanation of the deliberations and rationale behind recommendations made by the LTC to the Council.

Regional Environmental Management Plans

No mining should be allowed in a region until a REMP is adopted for that region. REMPs should be legally binding and fully integrated into the regulations, thus requiring contractors to comply with REMPs. The process for developing and approving REMPs needs to be clarified. A systematic, transparent and scientifically robust strategy should lay out how the ISA proceeds from workshops to a final plan, who will be involved at what stages, what information is needed, who will have opportunities to provide input and review, and how the REMPs will be approved and adopted. Moreover, States should postpone applications for exploration and/or the LTC and Council should suspend approval of plans of work for exploration for the Mid-Atlantic Ridge, the western Indian Ocean ridges, the western Pacific seamount area and other relevant areas until after REMPs are adopted in these regions.

Environmental Impact Assessments

The EIAs should be subject to substantive independent, as well as procedural, review of overall impact of the proposed activities on the marine environment, any possible harm, and applicable mitigation measures. The ISA and sponsoring states should publish EIAs, as has recently been done for the EIAs submitted to the ISA by Belgian contractor Global Sea Mineral Resources NV (GSR) and the German Federal Institute for Geosciences and Natural Resources (BGR) for the testing of mining equipment in 2019. The EIAs should be open for public comment and input.

Strategic Plan

The revised draft Strategic Plan is a considerable improvement on the initial draft plan. However, while paragraph 25 on transparency includes transparency in “the internal

administration of the Authority, as well as its internal procedures, the procedures of its various organs and subsidiary bodies and its procedures towards States", this is not implemented in the Strategic Plan. Strategic Direction 3.3 is only to "[e]nsure public access to environmental information." It should instead read "3.3. Ensure public access to environmental information, participation by stakeholders in decision-making and in review and judicial matters." Strategic Direction 3.4 should read, taking into account Article 145 of the Convention, "Prevent, reduce and control pollution and other hazards to the marine environment, interference with the ecological balance of the marine environment, and prevent damage to the flora and fauna of the marine environment, including through developing appropriate regulations, procedures, monitoring programmes and methodologies."

Need for Public Debate about Seabed Mining

The joint submission to the ISA Strategic Plan signed by 45 NGOs noted that the Sustainable Development Goals (SDGs), and in particular SDG 12 "Ensure sustainable consumption and production patterns", and SDG 14 "Conserve and sustainably use the oceans, seas and marine resources", set the global frame for rethinking our economy. Unless we stop and recalibrate, we risk significant biodiversity loss and the degradation of deep ocean ecosystems which play a vital role in the health of our planet, for an obsolete dream of boundless growth. Article 145 of the Law of the Sea Convention clearly requires measures to ensure effective protection for the marine environment from harmful effects.

The ISA is developing exploitation regulations, but it should also actively facilitate a broader discussion about whether seabed mining should be carried out, the implications of seabed mining for biodiversity and how to ensure the effective protection of the Area as the common heritage of mankind.

Environment Committee

The Deep Sea Conservation Coalition (DSCC) recommends the establishment of a standing Environment Committee as a subsidiary body to Council, to assist it in its functions and to address the scientific and environmental functions entrusted the Council before full consideration of matters by the Council as mandated by the Convention. The Environment Committee could be entrusted with implementing functions such as the development of REMPs, development of the EIA and statement, environmental management and monitoring plans (EMMPs) and overseeing compliance and enforcement and possibly the inspectorate, or aspects of it. The Environment Committee should be mandated to obtain the best independent scientific information available through broad outreach and engagement with the international scientific community.

Liability

A liability regime needs to be established before the exploitation regulations are adopted. This must include:

- rules around responsibility and liability for the Authority, sponsoring States and contractors;
- the standard of care for the Authority, for Sponsoring States and for Contractors – absolute liability, strict liability, of fault based and the standard of liability for breach by sponsoring States of direct obligations;

- the meaning of 'wrongful' acts by contractors: whether that term encompasses breaches of regulations, breach of contract, negligence, or liability for all damage, whether caused by negligence or however caused;
- the form reparation may take: restitution, compensation, satisfaction or a combination of the three;
- the role, form and substance of bonds and insurance; and
- the definition of effective control.

The liability and sustainability funds must be established.

Standards and Guidelines

Important issues include a list of standards and guidelines that will be developed; how a decision will be made on which items will be standards and which will be guidelines, and on what basis; confirmation of the binding nature of the standards and guidelines, and consequent compliance and enforcement issues; who will be involved in developing, reviewing, and approving the standards and guidelines and what will the process be for reviewing and updating the standards and guidelines; and confirmation that no exploitation can start unless and until necessary standards and guidelines are in place.

Exploitation Regulations

The regulations and their framework must be robust and include:

- clear conservation and management objectives;
- transparent and enforceable procedures including access to information, public participation, and review procedures;
- requirements based on the precautionary and ecosystem approaches and the polluter pays principle;
- publicly available, comprehensive, prior EIAs, based on extensive, high quality environmental baseline information, public and independently scientifically verified environmental management and monitoring programs and independent, effective and accessible review procedures;
- the requirement that protected areas must be established to achieve objectives established for the areas;
- the requirement that the development and adoption of any deep-sea mining exploration and exploitation regulations be transparent and participatory;
- the requirement that any mining activities permitted must respect the common heritage of humankind.

The DSCC makes specific recommendations on the draft regulations released in May.

Briefing to the International Seabed Authority for the 24th Session
16-27 July 2018

Contents

Briefing to the International Seabed Authority for the 24th Session

16-27 July 2018

Introduction

This briefing is submitted by the DSCC, a coalition of over 80 non-governmental organizations concerned about the deep sea. The DSCC has been an observer organization to the Authority since 2014.

The deep ocean is a vital force within the Earth's system and must be protected from harm.[1] In keeping with the United Nations 2030 Agenda, the priority global approach to the consumption of mineral resources should be one of sustainability, reuse, improved product design and recycling of materials. If deep-sea mining is permitted to occur, it should not take place until appropriate and effective regulations for exploration and exploitation are in place to ensure the effective protection of the marine environment, and that the full range of marine habitats, biodiversity and ecosystem functions is protected, including, but not limited to, through a network of marine protected areas and reserves.

Transparency

The ISA needs to become much more transparent in its working methods. This includes making all information relevant to the potential or actual impact of mining activities on the environment publicly available and open to review including environmental baseline information collected by contractors, EIAs and monitoring plans under the exploration regulations and exploitation regulations, exploration and exploitation contracts, issues related to compliance with, and possible breach of, the regulations, open meetings of the LTC, and the provision of detailed reports of LTC meetings, including an explanation of the deliberations and rationale behind recommendations made by the LTC to the Council.

It is particularly important that the LTC should operate with greater transparency. It should hold its meetings in open session, with the sole exception being where it is necessary to hold closed meetings to discuss matters of commercial confidence. In the latter situation, observers should still be able to attend, subject to observers giving appropriate confidentiality assurances. This would be consistent with the practice in multilateral environmental agreements (MEAs) and regional fishery management organizations (RFMOs) worldwide.

The Assembly in 2017 in ISBA/23/A/13[1] specifically encouraged "the LTC to hold more open meetings in order to allow for greater transparency in its work." It was therefore

[1] ISBA/23/A/13. Decision of the Assembly relating to the final report on the first periodic review of the international regime of the Area pursuant to article 154 of the United Nations Convention on the Law of the Sea. 18 August 2017. At https://www.isa.org.jm/document/isba23a13.

surprising to note the LTC Chair report in ISBA/24/C/9[2] that while the Commission "reaffirmed the importance of transparency with regard to issues that were of general interest to members of the Authority and that did not involve discussions of confidential information", "[c]onsidering the Commission's agenda and expected workload for part II of the session, together with the schedule of meetings for the Commission and the Council, as well as the joint meeting with the Finance Committee, the Commission concluded that it would not be feasible to host an open meeting in July." The Commission requested the secretariat to "prepare a discussion paper on how open meetings could be best structured in the future to facilitate meaningful input and exchanges in respect of particular subjects, including regulatory development."

The Assembly recommendation followed the Article 154 Review,[3] and, according to Article 154 of the Convention, "In the light of this review the Assembly may take, or recommend that other organs take, measures in accordance with the provisions and procedures of this Part and the Annexes relating thereto which will lead to the improvement of the operation of the regime." The Assembly recommendation under Article 154 was such a recommendation, and should be implemented.

The DSCC would also note that transparency is not limited to matters "of general interest to members of the Authority": nowhere is such a restriction mandated or warranted. Moreover, the LTC's undoubtedly heavy workload is not a reason to hold closed meetings. MEAs and RFMOs worldwide have heavy workloads but this is never used as a reason to close meetings. In fact the reverse is true: transparency can result in more effective meetings since observers can bring useful information to the attention of the meeting.

The DSCC looks forward to the open meetings requested by the Assembly and signaled by the LTC. This matter is increasingly important as discussions about exploitation move forward. We would also observe that meetings should be participatory, with observers being able to present documents and make brief interventions.

Effective engagement includes the need to build in robust transparent procedural mechanisms. The Aarhus Convention[2] not only provides international best practice in transparency[3] but is incorporated in the Clarion Clipperton Zone Environmental Management Plan (CCZ EMP),[4] and as such its provisions provide strong guidance for procedures to implement transparency. The Aarhus Convention has three 'pillars':[5] access to information, public participation and access to justice.[6]

In the context of the ISA, this would imply access by accredited observers to meetings of all governing bodies, including the Assembly, the Council and the LTC, and any subsidiary bodies, which should be open unless specifically closed for defined purposes unless there is a reasonable basis to exclude such participation (such as when matters of commercial confidence are being discussed) according to transparent and clearly stated standards that are made available in advance.

---

[2] ISBA/24/C/9. Report of the Chair of the Legal and Technical Commission on the work of the Commission at the first part of its twenty-fourth session. 26 April 2018. At

[3] SBA/23/A/3. Letter dated 3 February 2017 from the Chair of the Committee established by the Assembly to carry out a periodic review of the international regime of the Area pursuant to Article 154 of the United Nations Convention on the Law of the Sea to the Secretary-General of the International Seabed Authority. 8 February 2017. At https://www.isa.org.jm/sites/default/files/files/documents/isba-23a-3_1.pdf.

It would also mean other bodies such as working groups (including the Liability Working Group) be open to States and observers, as is the practice in most MEAs and RFMOs. The DSCC welcomed the invitation to the recent COMRA workshop on a REMP for the Triangle area and welcomes the will of the Council expressed by the President in ISBA/24/C8 where "Council emphasized the need to hold workshops in a transparent and open manner."[4]

The DSCC also suggests that the LTC reports should provide more detail on agenda items covered, key topics of discussion, including areas of agreement and disagreement (the UN style that "most/a majority/some supported X for this reason, others supported Y for that reason…" would be appropriate); decisions and the reasons for those decision. Apart from being an aspect of good governance, this would provide the Council with the information to carry out the oversight role mandated to them under UNCLOS, and would provide confidence in for the work of the Authority.

In conclusion, the ISA should move towards transparency by holding LTC meetings in public, extending open invitations to workshops, mainstreaming transparency in the exploitation regulations and ensuring the release of non-confidential data and reports.

Regional Environmental Management Plans

DSCC representatives attended the workshop on the Development of a REMP for the Cobalt-Rich Ferromanganese Crusts in the northwest Pacific Ocean in Qingdao, China, from 26-29 May 2018, and the Workshop on Development of a Framework for REMPs for Polymetallic Sulphide Deposits in Szczecin, Poland from 27-29 June 2018.

Scientific information is increasingly showing that ensuring effective protection will require assessment and action at a regional scale, which requires REMPs. REMPs are essential to assess regional environmental issues, frame EIAs and put into place regional protection mechanisms.

Each REMP should include a network of large no-mining areas to protect ocean biodiversity (in the region of 30-50% of the management area) as well as rules-based and region-specific environmental standards. The network of protected areas should include all of the habitat types in the region, and each protected area should be large enough to support viable populations. Protected areas should not be time limited and should be protected for as long as any mining impacts persist in the region

REMPs should be legally binding and fully incorporated into the exploitation regulations to ensure, *inter alia,* that contractors comply with REMPs.

Rather than an *ad hoc* series of meetings, a strategy for REMP development needs to be in place to lay out how the ISA will get from workshops to a final plan, who will be involved at what stages, what information is needed, who will have opportunities to provide input, and review, and who would approve the REMP. REMPs should be developed with the involvement of all stakeholder groups: independent scientists, non-government organizations (NGOs) and non-sponsoring states, as well as contractors and sponsoring states. As a number of States have noted, it is important that REMPs are

[4] ISBA/24/C/8 Statement by the President of the Council on the work of the Council during the first part of the twenty-fourth session. 13 March 2018. At https://www.isa.org.jm/sites/default/files/files/documents/isba24c-8-en.pdf.

integrated with the regulations, and it is also important that no applications are accepted until an REMP is in place.

Moreover, States should refrain from further applications for plans of work for exploration and/or the LTC and Council of the ISA should refrain from approving further applications until after REMPs are adopted for the region in question, including the Mid-Atlantic Ridge, the western Indian Ocean ridge systems and the western Pacific seamount area.

Environmental Impact Assessments

EIAs will be a crucial aspect of the exploitation regulations, but they are also important as part of the exploration regulations, particularly when contractors carry out tests of mining equipment. Yet at present, processes for review and approval are lacking. Belgian contractor GSR is planning a test of pre-prototype nodule collector vehicle equipped with a launch and recovery system in its area, as well as in the contract area of Germany's BGR, both in the CCZ, in April 2019. Both have sent EIAs to the ISA. Having stressed that the EIAs must be public and transparent, the DSCC is pleased to see that both have been posted to the ISA website and that Belgium has initiated a process for taking onboard public comments. This is an important test of the developing regime.

The Secretariat Note to the LTC SBA/24/LTC/7[5] outlines the process of review of the EIAs, which is subject to Recommendations ISBA/19/LTC/8.[6] The Secretariat Note states that the EIAs will be reviewed by the Commission for completeness, accuracy and statistical reliability and be peer reviewed by at least two internationally recognized experts prior to the meeting of the LTC in July. This external peer review should also be made public.

These measures are necessary but not sufficient. Equipment and component testing may be useful in developing a clearer picture of mining's likely environmental impacts in the Area as is recognized in the Recommendations, but close monitoring is needed to ensure that testing does not itself result in significant adverse environmental impacts. In the face of increasing activities in the Area, stakeholder support will be critical to ensuring the Authority's ability to fulfill its mandate for the protection of the marine environment.

The EIAs, including the plan for monitoring the test area and impacts prior to, during and after the testing, should be subject to substantive independent, as well as procedural, review of overall impact of the proposed activities on the marine environment, any possible harm, and applicable mitigation measures.

Further, if it is determined by the ISA that a proposed activity is likely to cause an adverse environmental impact, it is unclear what will be the consequences of that determination. Since at present LTC involvement seems limited to a reviewing role, the task of approving or disapproving the EIA and any mitigation measures should logically sit with Council.

---

[5] ISBA/24/LTC/7. Review of environmental impact assessments for the testing of collector components in the exploration area. 18 May 2018. At https://www.isa.org.jm/document/isba24ltc7.

[6] ISBA/19/LTC/8. Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area. 1 March 2013. At https://undocs.org/ISBA/19/LTC/8.

The EIAs should be posted to the ISA website and should be open for comment to the ISA by members of the public, consistent with the nature of the Area as common heritage of mankind. We are encouraged to see that Belgium has established a public comment process[7] and the ISA should do so as well. That would ensure efficiency, consistency and the development of expertise.

Regulation 38 of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area provides for the LTC to issue recommendations of a technical or administrative nature for the guidance of contractors to assist them in the implementation of the rules, regulations and procedures of the Authority. The DSCC suggests that if such recommendations are necessary, or if an amendment to the current Recommendations is necessary to accomplish a thorough public review, and clarity of the applicable procedures, then this should be done as a matter of urgency.

Strategic Plan

The revised draft Strategic Plan ISBA/24/A/4[8] is a considerable improvement on the initial draft plan. However, while the paragraph 25 on transparency includes transparency in "the internal administration of the Authority, as well as its internal procedures, the procedures of its various organs and subsidiary bodies and its procedures towards States", this is not implemented in the Strategic Plan. Strategic Direction 3.3. is only to "Ensure public access to environmental information." The DSCC suggests that it should instead read "3.3. Ensure public access to environmental information, participation by stakeholders in decision-making and in review and judicial matters."

Strategic Direction 3.4 currently reads "Develop scientifically and statistically robust monitoring programmes and methodologies to assess the potential for activities in the Area to interfere with the ecological balance of the marine environment." While Article 145 discusses ecological balance, it requires the Authority to adopt appropriate rules, regulations and procedures for "the prevention, reduction and control of … interference with the ecological balance of the marine environment" as well as to "ensure effective protection for the marine environment from harmful effects which may arise from such [mining] activities"; "protection from harmful effects of such activities"; "the prevention, reduction and control of pollution and other hazards to the marine environment"; and "the prevention of damage to the flora and fauna of the marine environment".

Therefore Strategic Direction 3.4 should read: "Prevent, reduce and control pollution and other hazards to the marine environment and interference with the ecological balance of the marine environment, and prevent damage to the flora and fauna of the marine environment, including through developing appropriate regulations, procedures, monitoring programmes and methodologies."

---

[7] https://economie.fgov.be/nl/themas/ondernemingen/specifieke-sectoren/diepzeemijnbouw/workshops-en-openbare/milieueffectenverklaring-van and https://economie.fgov.be/en/themes/enterprises/deep-sea-mining/workshops-and-public/environmental-impact-statement.

[8] ISBA/24/A/4 Consideration, with a view to adoption, of the draft Strategic Plan of the International Seabed Authority for the period 2019–2023. 21 May 2018. At https://www.isa.org.jm/document/isba24a4

Environment Committee

The DSCC has for a number of years recommended that an Environment Committee be established. We refer to our 2017 briefing to the 23rd Session for examples of other similar committees, and relevant empowering provisions in the Convention and 1994 Agreement. It seems clear that the working methods of the Authority will need to adapt to meet the increasing demands on the ISA, including the development of exploitation regulations, developing and implementing REMPs, assessment of applications including baselines, EIAs and statements, EMMPs, compliance and enforcement and liability functions.

The DSCC therefore suggests that consideration should be given to the establishment of a standing Environment Committee as a subsidiary body to Council, to assist it in its functions and to address the scientific and environmental functions entrusted the Council before full consideration of matters by the Council as mandated by the Convention.[7] The Environment Committee could be entrusted with implementing functions such as the development of REMPs, development of the EIA and statement, EMMPs and overseeing compliance and enforcement and possibly the inspectorate, or aspects of it.

The LTC would then be free to deal with its functions such as reviewing (as opposed to developing earlier stages of) Plans of Work, contractors' reports and making recommendations to Council.[8] The function of an Environment Committee could be advisory, dedicated primarily to advising on specific issues given to it by the Council, freeing the LTC for the high level recommendatory functions granted to it by UNCLOS. The Environment Committee could assist and advise the Council on:

a. the regulation, monitoring and control of the environmental impacts of seabed mining;
b. the development, review and implementation of regional environmental management plans;
c. the development, review and implementation of rules, standards, recommended practices and procedures and guidelines; (e.g. environmental regulations as well as standards, guidelines etc.);
d. the assessment, review and revision of EIAs, environmental management plans, and any other matters arising with respect to the environmental aspects of the activities in the Area;
e. consultation of stakeholders;
f. environmental aspects of marine scientific research; and
g. such environmental and scientific issues as are requested by Council.

In addition, the Environment Committee could advise LTC on matters upon its request.

The Environment Committee should be mandated to ensure that the broadest and best independent scientific advice from within the international scientific community with expertise in relevant matters be sought and used by the ISA (such as from academic institutions; expert scientists from the global network of deep-sea scientists INDEEP with whom the ISA has collaborated in the past, and the Deep Ocean Stewardship Initiative). The Environment Committee could make use of telecommunication, video conference

and related facilities in its meetings and consultations in order to facilitate the cost-effective performance of its functions and to enable it to communicate and collaborate with scientists and other stakeholders around the world.

Need for Public Debate about Seabed Mining

During the presentation by MIT at the Special Session by Council in March 2018, the DSCC asked if MIT had taken into account environmental costs such as harm to ecosystem services. Professor Roth answered 'no', and said that he believed that exercise should be done by the ISA. A number of academic papers have discussed the impossibility of seabed mining with no net loss to biodiversity, such as Niner et al (2018)[9] and Van Dover et al (2017)[10]. Some, such as Boetius & Haeckel (2018)[11], call for integrated scientific studies of global metal resources, the fluxes and fates of metal uses, and the ecological footprints of mining on land and in the sea, to critically assess the risks of deep-sea mining and the chances for alternative technologies.

The joint submission to the ISA Strategic Plan signed by 45 NGOs noted that the SDGs - and in particular SDG 12 "Ensure sustainable consumption and production patterns", and SDG 14 "Conserve and sustainably use the oceans, seas and marine resources" - set the global frame for rethinking our economy and natural resource use. We risk squandering one of our most precious ecosystems, which has a vital role to play in the health of our planet, for an obsolete dream of boundless growth.

Rak Kim noted last year[12] that the ISA is not mandated to simply promote deep seabed mining, but more broadly to organize and control activities in the Area on behalf of mankind as a whole (Article 153 UNCLOS), and that economic analyses should include the direct and indirect values of natural resources as used by others or for their intrinsic and ecosystem services values. A broader discussion of metal use and reuse, the circular economy, recycling, unsustainable patterns of consumption and production, and the conservation and sustainable use of geologically scarce mineral resources for the long-term future, including with other international agencies, needs to occur.

The ISA should actively facilitate a discussion about whether seabed mining should proceed, the implications of seabed mining for biodiversity, whether potential adverse effects on the environment of deep seabed mining are likely to outweigh any potential benefit from increased metal supply, and how to ensure effective protection of the Area as the common heritage of mankind.

Liability

Liability is an area which is ripe for discussion and development. A briefing on liability was attached to the DSCC's 2017 briefing. We observe in our comments on the draft

[9] Niner, H.J., Ardron, J.A., Escobar, E.G., Gianni, M., Jaeckel, A., Jones, D.O.B., et al. (2018). Deep-sea mining with no net loss of biodiversity – An impossible aim. Front. Mar. Sci. 5, 53. doi: 10.3389/fmars.2018.00053. At https://www.frontiersin.org/articles/10.3389/fmars.2018.00053/full.
[10] Van Dover, C.L., Ardron, J.A., Escobar, E., Gianni, M., Gjerde, K.M., Jaeckel, A., et al. (2017). Biodiversity loss from deep-sea mining. *Nat. Geosci.* 10, 464–465. doi: 10.1038/ngeo2983. At https://www.researchgate.net/publication/318093120_Biodiversity_loss_from_deep-sea_mining.
[11] Boetius, A., and Haeckel, L. (2018) Mind the seafloor. Science 359, 34–36 . doi: 10.1126/science.aap7301. At http://science.sciencemag.org/content/359/6371/34/tab-e-letters.
[12] Rak Kim, Should deep seabed mining be allowed? Marine Policy. 2017, 134-137.

regulations that we welcome the introduction of the Liability Fund, but suggest that its combination with what has until now been known as the Sustainability Fund may be problematic.

A liability regime needs to be established. Article 304 of UNCLOS refers to the development of further rules and opens the liability regime for deep seabed mining to new developments in international law.[9] Development of rules on responsibility and liability need to be established. These include:

- rules around responsibility and liability for the Authority, sponsoring States and contractors;
- the standard of care for the Authority, for Sponsoring States and for Contractors – absolute liability, strict liability, of fault based and the standard of liability for breach by sponsoring States of direct obligations;
- the meaning of 'wrongful' acts by contractors: whether that term encompasses breaches of regulations, breach of contract, negligence, or liability for all damage, whether caused by negligence or however caused;
- the form reparation may take: restitution, compensation, satisfaction or a combination of the three; and
- the role, form and substance of bonds and insurance.

Closely linked to this is the issue of effective control, which the DSCC addresses in its comments on the draft regulations in Annex A. The DSCC looks forward to engaging in these discussions. No exploitation should be considered until these issues are addressed.

Standards and Guidelines

The DSCC looks forward to the proposed terms of reference from the LTC on the proposed workshop or workshops on standards and guidelines. There are important issues including:

- a list of standards and guidelines that will be developed;
- how a decision will be made on which items will be standards and which will be guidelines, and on what basis;
- confirmation of the binding nature of the standards and guidelines, and consequent compliance and enforcement issues;
- who will be involved in developing, reviewing, and approving the standards and guidelines and what will the process be for reviewing and updating the standards and guidelines;
- confirmation that no exploitation can start unless and until necessary standards and guidelines are in place.

Exploitation Regulations

The regulations and their framework must be robust and include:

- clear conservation and management objectives;
- transparent and enforceable procedures including access to information, public participation, and review procedures;
- requirements based on the precautionary and ecosystem approaches and the polluter pays principle;

- publicly available, comprehensive, prior EIAs, based on extensive, high quality environmental baseline information, public and independently scientifically verified environmental management and monitoring programs and independent, effective and accessible review procedures;
- the requirement that protected areas must be established to achieve objectives established for the areas;
- the requirement that the development and adoption of any deep-sea mining exploration and exploitation regulations must be transparent and participatory;
- the requirement that any mining activities permitted must respect the common heritage of humankind.

They should ensure that significant adverse impacts on vulnerable marine ecosystems (VMEs) are prevented, that appropriate management steps are taken to protect ecologically or biologically significant areas (EBSAs) and that other serious harm to the marine environment does not occur.

Cumulative impacts from mining and other activities and sectors must be considered.

Marine protected areas protect ecological functioning, such as providing resilience and preserving connectivity, so protected features - such as habitats, species, hydrogeographic features (including benthic and pelagic and subdivisions therein) - must in turn help to ensure ecosystem integrity and resilience.

Procedures to intervene to prevent serious harm, such as emergency stop work orders, need to be in place, together with liability regimes to address consequences of serious harm. Activities that are likely to cause serious harm should not be permitted: stop orders should be reserved in cases such as accidents and emergencies.

They must ensure real benefits to society as a whole, must be fit for purpose and must be equitable. Mechanisms for liability and redress must be established, and research and other initiatives to promote conservation and sustainable management must be implemented. Management must be effective, accountable, and transparent with ongoing monitoring, compliance, enforcement and transparent review procedures. All this is in view of the Area and its resources being the common heritage of humankind.[10]

May 29 Draft Exploitation Regulations

The DSCC makes the following observations on the May 2018 Draft Regulations in ISBA/24/LTC/WP.1[13] The regulations, while improved from the previous draft, are at a very early stage and a great deal more work needs be done. In addition, the regulations will be reviewed and possibly amended by the LTC.

The briefing Note from H.E. Olav Myklebust, Council President, proposes both an *ad-hoc* open-ended working group and the need for intersessional meetings. In light of the many issues that need to be resolved, the DSCC considers that these are helpful suggestions, and also underline the need for an Environment Committee.

Some pressing issues are:

[13] ISBA/24/LTC/WP.1. Draft Regulations on Exploitation of Mineral Resources in the Area (Advance Unedited Text. 29 May 2018. https://www.isa.org.jm/sites/default/files/files/documents/isba24-ltcwp1-adv.pdf.

- REMPs need to be incorporated in the regulations.
- EIAs need to be defined, scoped, subject to public comment, assessed and revised, and integrated with the environmental impact statement.
- Effective control needs to be carefully defined.
- The institutional framework needs to evolve, as is provided in the 1994 Agreement, and should include an environmental committee.
- A public process for formulation of Standards and Recommendations needs to be established, and standards should be binding.
- Accessible, and as necessary non-binding but effective compliance and dispute resolution mechanisms should be implemented.
- Plans of work should be flexible, capable of modification and not of excessive duration.
- All documents comprising the Plan of Work should be subject to public comments, which are taken into account.
- The Fundamental Principles need to be carefully defined and mainstreamed into the regulations, so that applications and renewals are measured against them.
- Protected areas, not limited to areas of particular environmental interest (APEIs), protection reference zones (PRZs) and impact reference zones (IRZs), need be defined and mainstreamed into the REMPs, EIAs and EMMPs.
- EMMPs should be revised by the Authority, rather than the contractor.
- The regulations need to make clear the procedure whereby the LTC considers and responds to public comments on the Plan of Work, including the environmental plans.
- The common heritage of mankind needs to be operationalized in the regulations. For instance, the LTC should be required to consider whether the Plan of Work benefits mankind as a whole, by measuring the application against the Fundamental Principles in DR 2, where the common heritage of mankind should be properly expressed, consistent with Article 150(j), to read “maintenance of the principle of the common heritage of mankind”
- Any renewal applications must take into account all the Fundamental Principles, including environmental considerations, should be public and subject to public review, and should take into account any new information or circumstance.
- The review should be carried out by independent assessments, with public comment.

Full comments are included in Annex A.

Annex A: Analysis of Exploitation Regulations draft of 29 May 2018

Draft Regulation	***Issue***	***Recommendation***
Scoping	Scoping	While the LTC has recommended that scoping be moved to exploration regulations, scoping is a crucial aspect of an EIA and should not be separated from it.
2.5, Annex 4(d), Annex 7(1)(c), Annex 8(4), 13	REMPs	The DRs do not specifically foresee the adoption of REMPs, let alone making them compulsory or a prerequisite for granting mining rights. REMPs should be a prerequisite for approving Plans of Work.
EIA	EIA	The term 'environmental impact assessment' is not defined. There are no substantive provisions on an EIA in the regulations. The EIS must be based on an EIA (see Annex VII, para 1(b)) but other than that there is no detail as to what the EIA entails and what procedure it must follow. The EIA must be integrated with the environmental impact assessment EIS, follow a Scoping Report (which is missing) and be subject to criteria, and a public comment period.
3, 6, 14, 25, 40, 42	Effective control	Effective control arises in the Convention. Annex III Article 4(3) as well as Article 9(4) with respect to reserved areas, and Article 139 with respect to compliance and liability, and Article 153(2)(b) with respect to the Enterprise. It is therefore important that the Exploitation Regulations ensure that the criteria and procedures for implementation of the sponsorship requirements are be set forth in the rules, regulations and procedures of the Authority (Annex III Article 4(3).) There is still no discretion about effective control, which term is undefined. The new provisions in Schedule I section 11 have dropped the substantive requirements in DR14 and left no discretion in the Authority in case of a change in sponsoring state. A contractor could obtain a new sponsoring State without giving reasons. While under DR 6, where an applicant has the nationality of one State but is effectively controlled by another State or its nationals, each State shall issue a certificate of sponsorship. There is no such requirement now where the applicant change sponsoring State: thus potentially avoiding this control.

		Likewise, the applicant by changing the sponsor would avoid the requirement for a declaration that the sponsoring State assumes responsibility in accordance with Articles 139 and 153 (4) of the Convention and Annex III, Article 4(4), of the Convention. (DR 3(3)) Also, by putting the change of sponsor requirements in the contract, they are no longer part of the approval or review process. The current effective control requirement in DR 25 defines change in control of being a change in 50% or more of the ownership. That is excessive, or poorly worded: a change from e.g. 49% to 51% would change effective control, but that is only a 2% change. Control could be defined in terms of shareholding, voting rights or directorships. One common criterion is that effective control was about whether an entity or a person has the power to effect or make changes in a company, such as the power to appoint and remove directors. Effective control and change of control would also be relevant to the issue of monopolization. For example, one definition for DR 25(3) could be: “"Effective control" shall mean the exclusive right to appoint the majority of the directors or to determine the outcome of decisions relating to the financial, management or policy decisions exercisable by a person or persons acting individually or in concert, directly or indirectly, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements or in any other manner. A State exercises effective control over a Contractor if the beneficial shareholders exercising effective control have the nationality of that State.” (Effective control could also be defined in terms of beneficial ownership.) "National" (currently undefined) could be defined as: “National” means a natural person who has the nationality of a Sponsoring State or a juridical person who is under the effective control of a Sponsoring State. Regulation 5 (1) (b) should then read: States parties, State enterprises, Nationals, when sponsored by such States, or any group of the foregoing which meets the requirements of these Regulations. DR 6(1) could read: 1. If more than one State has effective control, as in the case of a partnership or consortium of entities which are

		effectively controlled by more than one State, each State involved shall issue a certificate of sponsorship. Regulation 6(3) could then read: (c) A statement that the applicant is: (i) A National of the sponsoring State; And in the Contract, Section 11 could read: 11.1 If the nationality or effective control of the Contractor changes or the Contractor's sponsoring State or States, as defined in the Regulations, terminates its sponsorship, the Contractor shall promptly notify the Authority. DR 42(2) needs to be amended as well. In addition, the annual report in DR 40 should include a statement disclosing whether effective control has changed.
	Protected Areas	It is important that environmental management plans can incorporate protected areas within claims, in addition to PRZs and IRZs. Definitions of IRZs should ensure all impacts are included, as recommended by scientists at the International Seabed Authority Workshop on the Design of Impact Reference Zones and Preservation Reference Zones, in Berlin, 27-29 September 2017. Depending on scientific recommendations and information and advice received during the EIA process, it may be necessary to ensure that certain areas, such as particularly vulnerable, endemic or rare species or ecosystems, are not subject to either mining or effects from mining at any time, and are monitored to ensure their continued protection, and where necessary follow-up action where monitoring shows unacceptable impacts in or beyond mined areas all need to be comprehensively addressed.
Institutional Framework		The institutional mechanism of the ISA will need considerable evolution, which is provided for in the 1994 Agreement. Australia has suggested a scientific or environmental committee. This will be indispensable for implementation of the exploitation regulations. Likewise, transparency requires that the LTC holds its sessions in public, closing sessions only when matters of commercial confidence are under discussion.
DR 1(5), 92, Schedule 1.	Standards	The Draft does make it clear that standards are binding. It should.
2	Fundamental Principles	The Fundamental Principles are somewhat stranded; they are not implemented. They should be mainstreamed into the Regulations. For instance, DR 12 (general review) and DR 14 (environmental review) and DR 16 (Commission recommendation) should require that the

		Authority measures the application against the Fundamental Principles, as should the EMMP in Annex VII. DR 2(5)(d) could be split into two paragraphs: one for data and one for public participation. DR 2(7) currently reads "to ensure the effective management and regulation of the Area and its Resources in a way that promotes the long term development of the common heritage of mankind." This is not consistent with UNCLOS. DR 2(7) should read: "the development of the common heritage for the benefit of mankind as a whole." This is the wording of Article 150(j).
4	Compliance notice/Coastal States	The threshold for a compliance notice in DR 4 should not be that Serious Harm is 'likely' but that that 'substantial evidence indicates' the risk of serious harm to the marine environment (UNCLOS Art 162(2)(l).)
DR 7(3)(a), 19(7),40(2)(k), Annex II	Data	Data from EIAs conducted during exploration (e.g. equipment testing) should also be included in an application.
11	Environmental Plans	The Authority should revise environmental plans in DR 11.1 (c), rather than the Applicant.
12	Participation	The review in DR 12(5), like DR 14, should take into account public comments.
13, 14, 11	Assessment, Environmental Review	DR 13(4)(a) requires the LTC to determine whether a Plan of Work is technically achievable and economically viable, but not environmentally sustainable. DR 14 requires the LTC to determine whether the environmental plans (a term only defined in DR 11(1) - it should be in the Definition section) provide for the effective protection of the Marine Environment in accordance with article 145 of the Convention. But other than the lack of clarity from the undefined terms, DR 14 provides for a limited review, restricted to Article 145. Article 145 is important, but it is not exhaustive of either Convention requirements with respect to the environment (art 194(5) is one example). The review should extend past Article 145 and the precautionary approach and include the fundamental principles, particularly DR 2.5, which includes accordance with relevant REMPs. Instead, the Draft Regulations should require compliance with the fundamental principles (in DR 2), which should be enlarged to include, but not be limited to, REMPs, Article 145 in all its facets, Article 192, Article 194(5), the ecosystem approach as well as the precautionary approach, and the LTC and Council should measure

		proposed Plans of Work in their entirety against the fundamental principles.
13, 20	Flexibility	The ability to change the EMMP and other necessary parts of the Plan of Work, particularly in light of new information, new developments and new science is crucial to flexibility and adaptability. DR 21 provides for a maximum term of 30 years. The ISA needs to be able to set a shorter period, not just agree a shorter period, and the discretion needs to be broadened beyond the question of expected economic life to include environmental matters. A shorter contract period would be much easier to review. 30 years is a very long time given the current lack of knowledge of the deep-sea environment. The DR 13 review needs to take account of any new information or circumstance arising during the term of the previous contract, including environmental information. Any further 10 year period should be able to be modified in the same way as the initial term. The review should not be automatic (may not shall): a discretion should be able to be retained. Public comment needs to be included in the review.
13, 19, 33	Impact Area	The Draft omits the concept of an Impact Area. Impacts of mining may go beyond the mined area, or even a contract area. The term Project Area (Annex VII paras 2, 30) should be defined and
16	Approval of Plan of Work	The Recommendation in DR 16 should take into account compliance with the Fundamental Principles in DR 12 and the LTC should retain a general discretion to approve or deny a Plan of Work. If reasonable and practical mitigation measures are insufficient to achieve the fundamental principles (including the effective protection of the marine environment and protection and preservation of rare and fragile ecosystems and the habitat of depleted, threatened or endangered species), then the Plan of Work should not be approved. Likewise, if the baseline is inadequate, the Plan of Work should not be approved. If a Plan of Work is approved, and after work commences, it is shown that assumptions with respect to harm to the marine environment were wrong, then there must be mechanisms to amend and when necessary suspend or cease operations to protect the marine environment.

16	Reserved areas	While reserved areas are excluded from applications, nowhere is provision made for application for reserved areas.
17; Section 3, 3.3 of contract, 34	'Reasonably practicable'	DR 17 requires measures to be taken as far as reasonably practicable, whereas the Convention standard is the best practicable means (Article 194); compliance with standards is only as far a is reasonably practicable in Section 3, 3.3 of the contract.; and in DR 34, a Contractor shall reduce the risk of Incidents as low as reasonably practicable to the point where the cost of further risk reduction would be grossly disproportionate to the benefits of such reduction. This does not include a factor weighing the environmental factors: the cost may be grossly disproportionate, but the environmental consequences may also be enormous. This should be a factor.
21	Contract term, renewal	Factors to determine the term should not be limited to the economic life of the activities and there should be a residual discretion over the term. The 1994 Agreement provides for a term of exploration contracts of 15 years (Annex, Section 1, Paragraph 9). This may be a guide for the default term. Any renewal application should take account of any new information or circumstance arising during the term of the previous contract, should be subject to a full public review and should be measured against the Fundamental Principles.
23	Use of contract as security; transfer	The Authority should retain the discretion to refuse a transfer. While sponsoring is a sovereign right, approving an applicant is a right of the ISA. So it is a non sequitur to suggest that since sponsoring is a sovereign right the applicant can transfer the contract to a new entity without any discretion by the Authority. The identity of both the sponsoring State and of the contractor are very important and the Authority must retain control.
28	Insurance	DR 28 provides for insurance, but lacks a review of insurance policies and quantum.
40	Report	Annual reports should be made public and there should be a review process.
50	Performance Assessment	The ISA should carry out the compliance assessment, not the contractor. Currently the only requirement is that the report is to be made public. It should also require public comment.

		Also the 2 year frequency should be revised to at least allow for yearly reviews: not subject to contractor agreement.
52	Environmental Liability Trust Fund	This fund is welcome. However, the Fund combines two funds discussed to date: the Environmental Liability Trust Fund and the Sustainability Fund. The DSCC sees difficulties in combining the funds, as they address different issues. The former addresses the 'gap' where funds cannot be recovered from a Contractor (52(a) – a contingent fund which needs to be funded to be able to be called upon – whereas the latter addresses ongoing needs (52(b)-(e). This would mean constantly drawing down on the Liability fund. It would not be appropriate to combine the two very different funds.
56	Review	The review in DR 56 should include independent reviews, as were provided for in the earlier draft, including independent scientific assessment. The review should provide for publication of the review and comments from stakeholders: making public the results of the review does not suffice. The list of triggers in DR 56(1) should also include new information relevant to the marine environment. The review should be able to result in changes being made: in the current draft, under DR 56(3), the only result is "Where as a result of a review the Contractor wishes to make any changes to a Plan of Work." This is grossly inadequate. The result needs to result in the Secretary-General recommending changes to the Plan of Work to the LTC and Council.
87	Confidential Information	The process in DR 87.4 should allow objection by the Secretary-General at any time. 30 days may be far too short: an issue may arise weeks or months later. Moreover, there should be a procedure for stakeholders to object to the designation of information as confidential. The academic exemption in DR 87.2(k) should be deleted: environmental information should not be withheld from the public or stakeholders for academic reasons. There should be an accessible and simplified dispute procedure; not recourse to courts and ITLOS which is inappropriate to determine individual matters relating to confidential information: an administrative procedure is necessary.
93	Guidelines	There must be an approval process for Guidelines, including by Council.
104	Dispute Settlement	Part XII and DR 104 on dispute settlement are inadequate. There should be accessible, cost effective access to dispute settlement procedures.

		An accessible and cost-effective administrative review mechanism (as discussed in the previous Draft Regulations) should be provided for. A process accessible to stakeholders and the Authority, as well as Contractors, to resolve disputes short of a formal dispute resolution mechanism, would be a useful mechanism to improve governance and compliance. Whether it is binding depends on the process and its application. From the point of view of efficiency, as a principle, decisions should be binding, and if necessary reviewable, at last resort, by the Seabed Disputes Chamber. But there may be also be scope for Aarhus or Espoo-type non-binding compliance mechanisms, whereby disputes and compliance matters can be resolve by a compliance committee in a non-binding way designed to enhance compliance. There is also scope for expert panels to determine factual issues. All dispute resolution mechanisms must be transparent. Arbitration is commonly closed and confidential, and this would be entirely inappropriate in the area which is the common heritage of mankind. While this is provided for in Article 187, it is now clear that disputes over the interpretation of a contract are a matter of public interest, and that transparency requires that they be determined in public, with access by stakeholders, none of which is available with commercial arbitrations, which are typically closed. Section V dispute resolution should be used only as a last resort.
105	Reg Review	It must be clear that amendments to regulations apply to existing contracts
Schedule 1 Definitions	Environmental Effect	The definition of "Environmental Effect" includes an inappropriate restriction on cumulative impacts to "cumulative effect arising over time or in combination with other mining impacts." Cumulative impacts must include impacts from other anthropogenic activities as well as effects such as ocean acidification. "Mining" should be deleted. So it should read: "Environmental Effect" means any consequence in the Marine Environment arising from the conduct of Exploitation activities, being positive, negative, direct, indirect, temporary or permanent, or cumulative effect arising over time or in combination with other effects or impacts. (DEJC)
	Exploitation	The definition of "exploit" and "exploitation" is too broad and encompasses activities past the Area, which is outside the scope of Article 134(2). It includes processing, without restriction, so could include offshore

		processing. It also includes marketing of minerals, which is outside the scope of UNCLOS and the regulations. "Transportation systems" also should be clarified to be restricted to the Area.
	'Good' industry practice	"Good industry practice" should be "Best Industry Practice". The criterion "degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected to be applied by a skilled and experienced person engaged in the marine mining industry" is too weak and would only catch the worst practice, and is inconsistent with 'Best Environmental Practice". Instead, the definition should require (adapting the OSPAR definition of Best Available Technique) the "employment of the latest widely accepted stage of development (state of the art) of processes, of facilities or of methods of operation, consistent with the Fundamental Principles, including using skill, diligence, prudence and foresight which is and would reasonably be expected to be applied by a skilled and experienced person engaged in the marine mining industry."
Appendix VII	EMMPs, EIAs and Standards	EMMPs should be prepared in accordance with the Guidelines, Good Industry Practice and Best Available Techniques; and Standards, and Environmental Impact Assessments, Statements and Closure Plans should be prepared in accordance with applicable Standards.

[1] UNCLOS article 145, 192, 194.5.
[2] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. Aarhus, Denmark, 25 June 1998. At https://www.unece.org/env/pp/treatytext.html.
[3] See Kravchenko, S (2007). "The Aarhus convention and innovations in compliance with multilateral environmental law and Policy". Colorado Journal of International Environmental Law and Policy. 18 (1): 1–50, and Dellinger, M (2011). "Ten Years of the Aarhus Convention: How Procedural Democracy Is Paving the Way for Substantive Change in National and International Environmental Law". Colorado Journal of International Environmental Law and Policy. 23(2) 309-366.
[4] "The Authority shall enable public participation in environmental decision-making procedures in accordance with the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998, and its own rules and procedures." Environmental Management Plan for the Clarion-Clipperton Zone. ISBA /17/LTC/7. C.13 (f). At https://www.isa.org.jm/environmental-management-plan-clarion-clipperton-zone.
[5] Access to information is provided for in articles 4, 5 of the Aarhus Convention; Public participation in articles 6,7,8 and access to justice in Aarhus Convention articles 9. See generally guidance provided in the Aarhus Convention Implementation Guide (2nd edition 2014) .E.13.II.E.3. At https://www.unece.org/env/pp/implementation_guide.html
[6] Almaty Guidelines para. 29. Participation in the meetings of international forums such as the Authority, including their subsidiary bodies, should be allowed at all relevant stages of the decision-making process,

unless there is a reasonable basis to exclude such participation according to transparent and clearly stated standards that are made available, if possible, in advance.

[7] A brief discussion of functions of the principal organs may assist delegates. The Assembly is the sole organ of the Authority consisting of all the members, and is the supreme organ of the Authority to which the other principal organs shall be accountable as specifically provided for in the Convention. The Assembly shall have the power to establish general policies in conformity with the relevant provisions of the Convention on any question or matter within the competence of the Authority. UNCLOS art. 160.1. It has the power to discuss any question or matter within the competence of the Authority and to decide as to which organ of the Authority shall deal with any such question or matter not specifically entrusted to a particular organ, consistent with the distribution of powers and functions among the organs of the Authority. UNCLOS art. 160.2(n).

The Council is the executive organ of the Authority. The Council shall have the power to establish the specific policies to be pursued by the Authority on any question or matter within the competence of the Authority: UNCLOS art. 162.1. Council has the power to supervise and co-ordinate the implementation of the provisions of Part XI on all questions and matters within the competence of the Authority and invite the attention of the Assembly to cases of non-compliance. UNCLOS art. 162.2(a)

[8] UNCLOS art. 165.2.(b)

[9] AO para. 211.

[10] UNCLOS article 136.