

International Seabed Authority
14-20 Port Royal Street
Kingston
Jamaica

Potsdam, 24 June 2021

To: ola@isa.org.jm

IASS Comments on the Draft Standard and Guidelines for environmental impact assessment process

Dear Madam/Sir,

The Institute for Advanced Sustainability Studies (IASS), which has had observer status at the Authority since 2017, is pleased to provide comments, as annexed to this cover letter, on the *Draft Standard and Guidelines for environmental impact assessment process*, open for public consultation until 3 July 2021 (<https://isa.org.jm/mining-code/standards-and-guidelines>).

We provide express consent for this document to be uploaded to the Authority's website and for wider dissemination. The following persons have contributed to this document: Dr Sabine Christiansen, Pradeep Singh, Dr Aline Jaeckel, and Sebastian Unger.

If you have any questions, kindly contact us at Sebastian.Unger@iass-potsdam.de. We thank you for your kind attention.

Yours sincerely,

Sebastian Unger

Lead, Ocean Governance Research Group

Institute for Advanced Sustainability Studies e.V. (IASS)

TEMPLATE FOR COMMENTS

<i>Document reviewed</i>	
Title of the draft being reviewed:	Draft Standard and Guidelines for environmental impact assessment process
<i>Contact information</i>	
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<i>General Comments</i>	
<p>Transparency & process of developing the draft standards and guidelines: Drafting the standards and guidelines while the Exploitation Regulations are not yet agreed upon is problematic. Some of the draft standards and guidelines appear to have taken a clear stance on certain provisions, which are still being debated at the ISA Council. For example, the standards and guidelines for EIAs notes that stakeholder consultation is not required by the current draft regulations. Therefore the Commission left out stakeholder consultation from the draft EIA Standard (page 1, para 3).</p> <p>Given the importance of the standards and guidelines, their development should be fully transparent. It appears that the draft standards and guidelines were developed by working groups of LTC members, independent experts, consultants, and contractor representatives.</p> <ol style="list-style-type: none"> 1. All contributors (formal and informal) and their affiliations should be named and an explanation provided as to how any conflict of interests were managed. 2. It is inappropriate for contractors to contribute to drafting legal documents that seek to regulate their very activities. In contrast, member states of the ISA have not been involved in the drafting of these key documents, even though states are the ones holding decision-making power. This undermines the procedural integrity of the ISA's draft standards and guidelines. 3. Given the private interests represented within the drafting group, it would be appropriate to include information on the key differences of opinion on provisions of the draft, to enable the Council to make an informed decision. 	
<p>Scoping: The section about the Scoping report should be restructured to expressly require an applicant or Contractor to produce a Scoping Report and then set out what that Report must entail. The Standards should clearly state that it is compulsory for a Scoping Report to be subject to public comments (as indicated in the EIA Guidelines). The Standards should clearly set out the process for reviewing the Scoping Report – see suggestions in table below (page 3 in EIA Standard).</p>	
<p>Review & decision-making: The standard and guidelines, similar to the draft exploitation regulations, fail to set out adequate review and decision-making processes for the Scoping Report, EIS, and EMMP. Clear procedures and responsibilities are fundamental to ensuring effective protection of the marine environment. See suggested changes in table below (page 5 in EIA Standard).</p>	

Environmental risk assessment: The environmental risk assessment as outlined on pp. 11-18 relies on a risk matrix (severity vs probability of impact) that is inappropriate for deep ocean activities because current scientific knowledge simply makes it impossible to quantify the severity and probability of mining impacts.

These approaches are more suitable for offshore oil and gas industries that benefit from established baseline information as well as experience of the frequency of accidents. For seabed mining, the knowledge base is very small and the main risks are not accidents but stem from the removal of minerals as such. Thus, a more qualitative approach to risk assessment should be used, such as set out in A MacDiarmid et al. (2012) *Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf*. NIWA Client report, WLG2011-39, <https://environment.govt.nz/assets/Publications/Files/niwa-risk-assessment.pdf> .

MacDiarmid et al. introduce confidence to address uncertainty which affects the risk rating. For seabed mining (section 4.6), the report lists particular activities that pose “extreme”, “high”, “moderate”, and “low” environmental risks.

Activities with extreme environmental risk “should be prohibited, if no way can be found to avoid, mitigate or remedy their impact”. These activities include:

- Sea floor cutting/fragmentation/extraction
- Extraction plume
- Deposition of tailings in stock piles or pits
- Deposition plume” (p. 69)

The draft guidelines cite the MacDiarmid report. However, table 1(c) on pp. 14-15 of the draft guidelines contains only four environmental categories, because the fifth (called “Recovery Period” in the MacDiarmid report) has been omitted. We suggest adding this fifth category to the guidelines. Furthermore, some of the wording in table 1(c) was altered without any indication that MacDiarmid’s table was adapted. Suggest using the original wording of the table (as in MacDiarmid et al. 2012) for the draft guideline.

Mitigation hierarchy: The Guideline suggests both restoration and biodiversity offsets as relevant to the seabed mining context, despite scientific literature having demonstrated that restoration is currently impossible and offsets are inappropriate and would lead to a net loss of biodiversity. Focus must instead be on the first two steps of the mitigation hierarchy: avoid and minimise. See details in the table below.

BACI-design: So far, the EIA draft standard and guidelines do not prepare for the well-established BACI-design which measures impacts **before and after** an activity and reflects best practice.

Instead, the draft guidelines focus primarily on the risk assessment **before** the mining and thus do not allow for the quantification of actual impacts. As such it would be of little help in addressing accidental, cumulative or unforeseen impacts.

Ideally, these draft guidelines should prepare for an independent impact review at specific intervals during mining using verifiable monitoring data from the IRZ and PRZ and compare them to each other and to the baseline information. The outcome of this comparison allows for the quantification of mining impacts on the environment and possibly for the immediate issue of obligations to mitigate certain damages or to avoid them altogether.

Specific Comments		
Page	Line	Comment
1	40-49	<p>An additional aim of the Standard for EIAs should be to meet the ISA’s strategic environmental goals and objectives which need to be incorporated in the draft regulations and broken down into measurable goals, objectives, targets, thresholds, indicators.</p> <p>This will be necessary to define ‘serious harm’ and to provide clarity to applicants, the LTC, and states as to how environmental protection is to be balanced with mining operations.</p> <p>See e.g. V Tunnicliffe et al, ‘Strategic Environmental Goals and Objectives: Setting the Basis for Environmental Regulation of Deep Seabed Mining’ (2020) 114 <i>Marine Policy</i> 103347 https://linkinghub.elsevier.com/retrieve/pii/S0308597X1830321X</p>
3	87-94	<p>Screening: An EIA should also be expressly required when any Material Change to a Plan of Works is proposed.</p>
3	101-125	<p>The section about the scoping report should be restructured to expressly require an applicant or Contractor to produce a Scoping Report and then set out what that Report must entail.</p> <p>The Standard should clearly state that it is compulsory for a Scoping Report to be subject to public comments (as indicated in the EIA guidelines).</p> <p>The Standard should clearly set out the process for reviewing the Scoping Report.</p> <ol style="list-style-type: none"> 1. Scoping Report open for public review 2. Scoping Report and all comments to be submitted to the applicant/Contractor who may add responses. 3. Scoping Report, all comments and responses to be submitted to the Commission. 4. The Commission should then review the Scoping Report together with all comments and potential responses from the applicant/Contractor. 5. The Commission should make recommendations to the applicant/Contractor to: <ol style="list-style-type: none"> a. revise any aspect of the Scoping Report or the underlying ERA; b. amend the proposed terms of reference for the EIA; and/or c. re-submit a revised Scoping Report for stakeholder review and consideration by the Commission <p>Point 5 is a crucial procedural safeguard and must not be left out. If the regulator only receives a Scoping Report but cannot require the applicant/contractor to revise or re-submit, an EIA risks becoming a mere box-ticking exercise.</p>

3	108	<p>Scoping: Considering alternatives is key during EIAs to enable the ISA to determine the least harmful option. Alternatives should include a “no action” option.</p>
3	119	<p>Scoping: Identifying uncertainties is key during an EIA. The Standard should require a Scoping report identifying uncertainties and proposals for how to respond to them.</p>
4	133	<p>Mitigation: Suggest rephrasing ‘<i>development of mitigation</i>’ to ‘<i>inform avoidance and minimisation measures to limit unavoidable impacts</i>’.</p> <p>This recognises the incompatibility of offsets with deep-sea environments and the potential impacts of mining in such location and clearly sets the first two stages of the mitigation hierarchy (avoidance and minimisation) as the necessary focus for impact management (see further comments below on the mitigation hierarchy).</p> <p>This section should also reference the precautionary principle and how this has been applied in assessment of avoidance and minimisation.</p>
5	171-175	<p>Review and decision-making: The standard and guidelines for EIA should clearly set out the competencies of the Commission and the Council to review the Scoping Report, EIS, and EMMP and guide the applicant/contractor during the EIA process, and ultimately approve/reject the EIS. Clear procedures and responsibilities are fundamental to ensuring effective protection of the marine environment.</p> <p>The current provisions regarding review and decision-making, simply cross-referencing the draft exploitation regulations, are inadequate.</p> <p>The standard and guidelines should specifically require the Commission to determine:</p> <ol style="list-style-type: none"> 1. whether an EIS was prepared in accordance with regulation 47 and the relevant standard and guidelines, including being based on sufficient environmental baseline data in accordance with the minimum requirements that should be set out in the guidelines for the establishment of baseline environmental data and information; the data should be “sufficient to allow prior assessment of, and informed judgments about”, the possible environmental effects of the planned activities (wording copied from Art 3(2)(c) of the 1991 Protocol on Environmental Protection to the Antarctic Treaty, https://www.ats.aq/e/protocol.html); 2. whether the predicted environmental impacts are acceptable and lower than the thresholds set in the relevant REMP [and standard on environmental objectives?] and can meet the relevant environmental goals and objectives; 3. whether the proposed work would cause “any effect ... which represents: ... loss of scientific or economic values which is unreasonable in relation to the benefit derived from the activity in question” as was suggested by the ISA Preparatory Commission

		<p>(LOS/PCN/SCN.3/WP.6/Add.5 (8 February 1990), article 2(2)); and</p> <p>4. whether the applicant has demonstrated the required monitoring capabilities, including “the capacity to monitor key environmental parameters and ecosystem components”, to determine the actual environmental effects during activities in the Area, in line with the Regional Monitoring Plan that should be developed and the Guidelines for EMMP (see Art 3(2)(c)(v) of the 1991 Protocol on Environmental Protection to the Antarctic Treaty, https://www.ats.aq/e/protocol.html)</p> <p>The standard and guidelines should state that where the Commission determines that any of the above criteria are not satisfied, it must require further work from the applicant/Contractor or recommend disapproval of the application/Material Change.</p> <p>The regulations and standards should provide for the Commission to seek independent scientific advice when reviewing EIA documents and the EIS/EMMP (e.g. on aspects not covered by the scientific disciplines represented in the Commission).</p> <p>The regulations and Standard should require the Commission to give detailed reasons for recommending approval/rejection of an EIA/EIS and EMMP. This should include a summary of any uncertainties associated with the EIS. This supports both transparency and assists the Council in its decision-making.</p>
5	176	<p>Monitoring of impacts is crucial and should not be left solely to the contractor. An independent monitoring programme is needed, e.g. funded by contractors collectively and organised by the ISA using its powers under UNCLOS, art 165(2)(h).</p> <p>Engagement with sponsoring states is possible here. See UNCLOS, article 204, requiring state to “<i>keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.</i>”</p>
8	307	<p>Strongly agree that “[e]ffective and comprehensive stakeholder engagement is needed from the scoping stage throughout the entire EIA process.’ We strongly suggest this should also be reflected in the draft Exploitation Regulations and the EIA draft Standard.</p>
10	398	<p>“<i>The ERA process should involve suitably qualified experts across the range of topics that it addresses.</i>”</p> <p>The Standard (not the Guideline) should require the contractor/applicant to assemble a team for the EIA consisting of internationally recognised EIA practitioners and scientists with relevant disciplinary background (deep ocean ecology etc).</p>

12-17		<p>Risk assessment with the use of matrices that have been developed for terrestrial, freshwater or coastal ecosystems is a rather futile approach, because the complete lack of knowledge about individual species' ecology prevents the proper assignment of risk to any mining activity at this time. These matrices would only provide some feeling of pseudo-security.</p> <p>Therefore, MacDiarmid and colleagues (2012) recommended to the New Zealand government that seafloor extraction, extraction plumes, deposition of tailings, and deposition plumes <i>“should be prohibited, if no way can be found to avoid, mitigate or remedy their impact”</i>.</p> <p>See A MacDiarmid et al. (2012) <i>Expert Risk Assessment of Activities in the New Zealand Exclusive Economic Zone and Extended Continental Shelf</i>. NIWA Client report, WLG2011-39, https://environment.govt.nz/assets/Publications/Files/niwa-risk-assessment.pdf.</p>
13-15	Table 1	<p>As Table 1 (pp. 13-15) demonstrates, an EIA requires judgment calls (here called „consequence levels“) that have not been set yet. Given that these include not only scientific considerations but value-judgments and political decisions about how much harm to the common heritage is deemed “acceptable”, the LTC or the Secretariat will not be the appropriate organs to make these decisions. Instead, these decisions must be discussed and taken by the ISA Assembly or Council.</p>
19	594	<p><i>‘Scoping may [must] include a stakeholder identification exercise which provides the applicant or Contractor with a preliminary stakeholder list in relation to the project. Consultation with these identified stakeholders during the scoping phase may [must] then be carried out to inform development of the Scoping Report.’</i></p>
28	946	<p>Paragraph 75 on uncertainties is essential and important to maintain in future revisions of the EIA Guideline.</p>
31	1058	<p>Mitigation hierarchy - minimising impact: Suggest adding that minimisation is generally achieved through technical measures or design (e.g. nature-based solutions) that reduce the magnitude or significance of an identified impact.</p>
31	1066	<p>Mitigation hierarchy – restore: Restoration techniques for the deep seabed are not yet available and are unlikely to be possible or achievable <i>“on timescales relevant to management and possibly for many human generations.”</i> Accordingly, this should promote further exploration of the first two steps of the mitigation hierarchy: avoidance and minimisation.</p> <p>(See Niner et al, ‘Deep-Sea Mining With No Net Loss of Biodiversity—An Impossible Aim’ (2018) 5 <i>Frontiers in Marine Science</i> 53 http://journal.frontiersin.org/article/10.3389/fmars.2018.00053/full .</p>

30-32	1042-1044	<p>Mitigation hierarchy - offset: Strongly suggest deleting any reference to offsets, as these are inappropriate in the seabed mining context and inconsistent with the draft exploitation regulations.</p> <p>As demonstrated in the literature: <i>‘The last resort in the mitigation hierarchy is in-kind or like-for-like offsets within a biogeographical region. When offsets cannot be located where the affected biodiversity is found, and where the affected biodiversity is important for geographically restricted functions such as connectivity (as is the case for the deep sea), in-kind offsets are not an appropriate mitigation strategy. ... The four-tier mitigation hierarchy used so often to minimize biodiversity loss in terrestrial mining and offshore oil and gas operations thus fails when applied to the deep ocean. Residual biodiversity loss cannot be mitigated through remediation or offsets and the goal of no net loss of biodiversity is not achievable for deep-seabed mining. Focus therefore must be on avoiding and minimizing harm.’</i> (See Van Dover et al, ‘Biodiversity Loss from Deep-Sea Mining’ (2017) 10(7) <i>Nature Geoscience</i> 464 http://www.nature.com/doi/10.1038/ngeo2983)</p>
		<p>The CBD has published (on 23rd April 2021) an updated document on the scientific and technical information to support the review of the proposed goals and targets in the updated zero draft of the post-2020 global biodiversity framework (CBD/SBSTTA/24/3/ADD2/REV1). It refers extensively to ‘no net loss’ and ‘net gain’ concepts and highlights the risks of using those concepts without setting measurable biodiversity targets and applying adequate safeguards (paragraph 21).</p> <p>This document clearly states: <i>“safeguards would be needed to, among other things, ensure that any loss is replaced by the same or similar ecosystems and that critical ecosystems and functions are not lost.”</i> It also is explicit in its recognition of the need for special consideration for ecosystems <i>“currently impossible to restore, such as some marine ecosystems.”</i></p>
	1080-1083	<p>The definition of offset in para 94 does not reflect scientific consensus. The term “biodiversity offset” is frequently misapplied and misused. True offsets require <u>new</u> and <u>additional benefits</u> and <i>“measurable and commensurate gains.”</i> (See Bull et al (2016). Seeking convergence on key concepts in no net loss policy. <i>J. Appl. Ecol.</i> 53, 1686–1693. doi: 10.1111/1365-2664.12726)</p>
	1082	<p>The sentence <i>“[i]n terrestrial and some coastal jurisdictions, offset measures can include situations where the offset area is unlike the impacted area”</i> maybe true, but these programmes are not meeting their stated aims and have been heavily criticised for an inability to meet the criteria such as demonstrating equivalence of offsets. Where ‘out of kind’ offsets are supported, clear accounting is necessary to demonstrate that the criteria (note the criteria outlined at paragraph 96 is not complete and should include that of demonstrable equivalence and additionality) for offsetting success is necessary. (See H Niner et al, ‘Realising a vision of no net loss through marine biodiversity offsetting in Australia’ (2017) 148 <i>Ocean & Coastal Management</i> 22-30, https://doi.org/10.1016/j.ocecoaman.2017.07.006)</p>

	1084-1088	<p>PRZs or APEIs cannot serve as offsets as these are not under threat and will likely not be equivalent in size and ecology to the areas impacted by mining. As Niner et al conclude: <i>'Notably, [APEIs] do not provide new and additional biodiversity benefits and thus do not actually offset residual losses of biodiversity that might be incurred by a mining project.'</i> An example for an averted loss offset would be the removal of bottom trawling pressures to offset mining impacts on seamounts.</p> <p>(See Niner et al, 'Deep-Sea Mining With No Net Loss of Biodiversity—An Impossible Aim' (2018) 5 <i>Frontiers in Marine Science</i> 53 http://journal.frontiersin.org/article/10.3389/fmars.2018.00053/full)</p>
	1090-1098	<p>The environmental criteria for offset sites fail to list equivalence and additionality as key criteria. In any event, the list should be deleted and replaced with a statement saying that offsets are inappropriate given current knowledge of the deep ocean. This may change in the future.</p>
35	1200	<p>Stakeholder engagement: Suggest highlighting that meaningful stakeholder engagement is both best practice and particularly important in the context of engaging with the common heritage of humankind.</p>
	1209-1212	<p>Para 112: Suggest adding that stakeholder consultation also means providing feedback about the extent to which stakeholder comments were implemented and reasons for accepting/rejecting them. This will enable the Commission and Council to make an informed decision about an EIA. We cannot expect Council members to read all stakeholder comments and check whether they have been adopted.</p>
36	1233	<p><i>'Environmental Effects are any consequences in the Marine Environment arising from the conduct of Exploitation activities, whether positive, negative, direct, indirect, temporary or permanent, or cumulative effect arising over time or in combination with other mining impacts or in combination with other marine activities and processes.'</i></p> <p>Suggest adding the red text to ensure cumulative impacts is not limited to several mine sites but includes other industries and processes, such as climate change. This is in line with paragraph 40(b) of the Environmental Management Plan for the Clarion-Clipperton Zone (ISBA/17/LTC/7), which requires consideration of "cumulative impacts of mining and other human activities".</p>

Comments should be sent by e-mail to ola@isa.org.jm