



UNIVERSITY OF
PLYMOUTH

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

3 July 2021

RE: Stakeholder Consultation - Draft Standard and Guidelines for Environmental Impact Assessment Process

Dear Sir/Madam,

Please find below our Commentary on the Draft Standard and Guidelines for Environmental Impact Assessment Process, as issued in May 2021.

As Group Lead, I submit on behalf of the Marine Conservation Research Group, of the University of Plymouth. The list of contributors is presented at the beginning of the document. Express Consent for sharing is granted.

Sincerely,

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TEMPLATE FOR COMMENTS

<i>Document reviewed</i>	
Title of the draft being reviewed:	Draft Standard and Guidelines for environmental impact assessment process
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<i>General Comments</i>	
<p>The following experts from the University of Plymouth’s Marine Conservation Research Group contributed to this response:</p> <p>Prof. Kerry Howell Dr. Sian Rees Dr. Holly Niner Dr. Kirsty McQuaid</p> <p>Below we outline general concerns that apply across the document, followed by a list of specific comments.</p>	
<p><i>Coherence and complementarity across all Standards and Guidelines</i></p> <p>Many of the comments we provide herein likely have bearing on the detail in the other documents under consultation. We advise that these comments are considered across the full portfolio of Standards and Guidelines to ensure cohesion, complementarity and future ease of application.</p>	
<p><i>Definition of terms</i></p> <p>Throughout the text, there are multiple references to “<i>Best available techniques</i>” and “<i>Good Industrial Practice</i>”, with no clarity on where information on these should be sought or what this refers to. While there are lessons to be learned from existing practices, including other deep-sea or offshore industries. However, a new industry such as DSM should be seeking to build and expand on this experience with a view to halting trends of environmental degradation that continue to occur under current practices.</p>	
<p><i>Expert judgement</i></p> <p>There is provision to rely quite heavily on expert judgement given anticipated high degrees of uncertainty in assessment. Best practice guidance should be provided on how to undertake this, specifically how to select suitably qualified experts and how to appropriately process the information obtain through such exercises.</p>	
<p><i>Mitigation hierarchy</i></p>	

The guideline suggests both restoration and biodiversity offsets as relevant to the seabed mining context. Current scientific literature suggests that post-mining restoration in deep-sea environments may be impossible, hence offsets are inappropriate and would lead to a net loss of biodiversity (e.g., Niner et al., 2018). While the Guideline may include the full mitigation hierarchy in line with standard environmental management practice, it is important that focus be placed on the first two steps of the mitigation hierarchy: avoid and minimize. We also note the definition of offsets and the offsetting process used is incorrect. Notably, there is no definition of what the aim of offsetting is (e.g., net benefit or no net loss), which specific elements of biodiversity are being measured, and how each scenario is being established. Further, the criteria of additionality/equivalence are missing. See details in the table below.

Restoration and remediation

To manage the unavoidable impacts of deep seabed mining in accordance with demands to protect effectively the marine environment, and given the infeasibility of offsetting (and no net loss or net gain targets), the ISA will be required to define how they intend to operationalize this aim. For example, whilst we welcome the integration of the mitigation hierarchy into project design and regulation, reference to the steps beyond those of avoidance and minimization should be removed.

Restoration and measurement of efforts to restore is particularly problematic for deep-sea environments. Knowledge is outstanding such that they are considered unlikely to be successful “on timescales relevant to management and possibly for many human generations” (See Niner et al., 2018). Accordingly, in line with the precautionary principle and the mitigation hierarchy, if requirements for restoration or remediation are identified then this should promote further exploration of avoidance and minimisation measures.

Stakeholder consultation

Guidance or best practice as to how stakeholder identification can ensure that it is appropriate and comprehensive is missing here. How can those that have been historically missed or marginalized from consultation be included or notified of opportunities for consultation? We suggest consultation is required and advertised appropriately (with appropriate timescales) in all adjacent states or states through which some link is established to the proposed project. We also highlight the importance of considering whether capacity building efforts are necessary to support participation in consultation exercises.

In addition, stakeholder consultation is only mentioned in the Guidelines (Appendix II). This is a critical component of EIA and ensuring quality control, and should be included in the Standard. Where it is included in the Guidelines, it is seen as optional in the Scoping phase. Stakeholder consultation will be critical in ensuring that the EIA process is developed incorporating all important view points and knowledge. The wording should be stronger (e.g. in Scoping consultation guidelines, pg 19).

Cumulative impacts

Scoping should define how cumulative impacts are going to be assessed, what is considered the best practice method for this to define what is included or excluded, and rationale for this.

Guidance from the ISA on how to assess this (e.g. what projects/activities should be included and how to approach assessing those that are planned or foreseeable) would be helpful.

Impact assessment

Impacts should be assessed at all relevant scales and against relevant legal principles. Including abilities to meet the Common Heritage of Mankind and international human rights legislation. This is particularly relevant when considering the potential disruption to ecosystem services that may in turn restrict abilities for nations and communities to meet aims of no hunger (SDG 2) and health and wellbeing (SDG 3) (see Chin and Hari 2020).

Socio-economic baselines

The EIA is expected to build on environmental (including social and economic) data collected by the application or Contractor, for example in the Impact Identification stage of Environmental Risk Assessment. However, to our knowledge, there are no Standards or Guidelines on the collection of socio-economic data, and these are missing from the draft guidelines for the establishment of baseline environmental data.

Thresholds

We are concerned that Contractors and applicants are encouraged to develop their own thresholds until such time as the ISA has developed these (see pg 29 – Environmental Performance). While this is a pragmatic way forward to avoid consenting bottlenecks for Contractors, a lack of data to develop thresholds for the Area is clearly stated as a reason for the ISA not developing them. This could present a worrying conflict of interest. Development of common thresholds would hold all Contractors/applicants account to the same level, and would facilitate enforcement. It would be extremely difficult to review, monitor and enforce different thresholds developed across different Contractor/applicant EMMPs.

Further detail on the compliance process relating to situations where thresholds are exceeded should be provided.

Specific Comments

Page	Line	Comment
1	52	To our knowledge there is no guidance for the collection, storage and sharing of baseline social and economic data, including ecosystem services. This needs to be rectified otherwise social and economic data cannot be compared or scaled making impact difficult if not impossible to determine.
2	60-61	This should also include a process to identify, analyse and evaluate the nature and extent of activities and risk to ecosystem services. Risk Assessments have been applied to ecosystem services.
2	Flow chart	The steps of mitigation, reporting, review, decision-making and monitoring do not allow for measures of success of mitigation measures. Monitoring and reporting of mitigation measures are required to ensure that impacts are accounted for. There does not seem to be any avenue for the use of or

		<p>response to monitoring data.</p> <p>The flow chart should be amended to reflect the iterative nature of the processes, as later described in the Guidelines (Appendix II, pg 10) (e.g. using circular arrows from Impact Assessment to Review and back).</p>
3	93	Who is responsible for the “ <i>screening process</i> ” to determine if a project must be subject to an EIS or EIA?
3	95-100	Scoping should also define how cumulative impacts are going to be assessed, what method will be used to define what is included or excluded and rationale for this. Guidance from the ISA on how to assess this (e.g. what projects/activities should be included and how to approach assessing those that are planned or foreseeable) would be helpful.
3	102	How will “ <i>appropriate time and resources</i> ” be defined?
3	104	More detail on how the ISA foresees operationalizing “ <i>reasonable</i> ” would be helpful. Presumably, the precautionary principle (as outlined at 120) should inform how this is applied?
3	108 onwards	The use of the mitigation hierarchy should be referenced here. Following this specific reference to the need for avoidance measures to be explored here, outlining the options for the project. Following this, minimisation measures should be outlined. How does the precautionary principle relate to these assessments?
3	128	This baseline data should also take into account any potential for a shifted baseline. For example, if an area has previously been trawled or dredged by fishing gear.
4	133	We suggest rephrasing “ <i>development of mitigation</i> ” to “ <i>avoidance and minimisation measures to limit unavoidable impacts</i> ” as this recognises the incompatibility of offsets with deep-sea environments and the potential impacts of mining in such locations, and clearly sets the first two stages of the mitigation hierarchy (avoidance and minimisation) as the necessary focus for impact management. This section should also reference the precautionary principle and how this has been applied in assessment of avoidance and minimisation.
4	144	Is the Contractor only obliged to focus on “high risk” impacts identified during scoping?
4	150-153	Impacts should be assessed at all relevant scales and against relevant legal principles, including abilities to meet the Common Heritage of Mankind and international human rights legislation. This is particularly relevant when considering the potential disruption to ecosystem services that may in turn restrict abilities for nations and communities to meet aims of

		no hunger (SDG 2) and health and wellbeing (SDG 3) (see Chin and Hari 2020).
4	158-163	<p>Please supply a figure of the mitigation hierarchy, or describe it here. Offsetting is unlikely to be a viable option for DSM (Van Dover et al., 2017; Niner et al., 2018) and as such, it would be worth considering how the ISA will determine acceptable impact or loss of biodiversity. Following this, the issue of compensation for unavoidable and accepted impacts should be considered with respect to the demands of the mining code, UNCLOS and other relevant legislation.</p> <p>Furthermore, the precautionary principle will need to be incorporated into such assessments. Detail on how the ISA will weigh impact against feasibility (technical and economic) would assist transparency.</p>
4	165	As with the other sections, this should start with a requirement. E.g. <i>“The Contractor or applicant shall compile an EIS...”</i>
4	168	Although stakeholder consultation is discussed in further detail in the Guidelines, this is the first mention of consultation in the Standard. Please make it clearer where this fits into the process.
5	177-180	This should be rephrased as the other sections. E.g. <i>“The Contractor or applicant shall establish follow-up processes to monitor the project and ensure conditions of the contract are met...”</i>
6	224-226	And presumably in the Standard (Appendix I)?
6	243	What and who defines <i>“acceptable levels”</i> ? See overarching comment on Thresholds.
7	Flow chart	Stakeholders must also be involved in/have access to outcomes of decision-making, monitoring and audits.
7	281 onwards	How should stakeholder identification ensure that it is appropriate and comprehensive? How can those that have been historically missed or marginalized from consultation be included or notified of opportunities for consultation? We suggest consultation is required and advertised appropriately (with appropriate timescales) in all adjacent states or states through which some link is established to the proposed project. We also highlight the importance of capacity building efforts to support participation in consultation exercises.
8	291	It seems that the scope of the baseline data collection is determined at the impact assessment stage based on the <i>most important environmental characteristics</i> highlighted during the scoping phase. What is the cut off point for the ‘most important’. This could lead to a situation where N flux

		and Cetaceans are considered the most important at one site and biological characteristics and heavy metals at another site. Leading to no scalable data beyond the impact area.
8	299	Where are the “ <i>clear and transparent assessment criteria</i> ”?
8	310 onwards	Requirements, processes and standards for data sharing should be included at this point.
8	315	Given the extractive nature of DSM we suggest changing the wording to “ <i>Screens out options with highest environmental impacts...</i> ”,
8	316	Please insert “ <i>human rights</i> ” after “ <i>social issues</i> ” as this should be included in the list of concerns.
8	327	This is very vague language. We would like to see transparency in decision-making on what may or may not trigger the need for an EIA and/or amendment to the EIS.
10	388	This point should be amended to include “ <i>and effects on ecosystem services</i> ”.
10	400-404	An additional view of “ <i>Risk</i> ” is the risk to ecosystem services and benefit flows resulting from a change in the status (extent, condition, connectedness) of the natural capital asset. (e.g. Mace et al., 2015)
10	405-408	Text should also be inserted here that a rationale/justification for the selection of experts and the methods through which “ <i>expert judgement</i> ” is elicited should be clearly outlined.
10	409	We would also like to see “ <i>and chronic/acute impacts resulting from pressures</i> ” added here.
11	427	This line again directs an applicant to only consider data baselines and EIA on the main activities and impacts and “ <i>not spend undue time on elements of little risk</i> ”. Consideration needs to be given here to how EIA baselines can contribute to understanding ecosystem effects at scale, if there is no commonality in broader-scale, question-driven research.
11	450	Where are potential land-based or remote impacts assessed?
12-17	476 onwards	Detail is required on how these approaches can be applied to social ecological goals such as the SDGs and those set out in human rights legislation. This is particularly pertinent given the unavoidable catastrophic categorisation of some of the impacts arising from mining projects (See Van Dover et al. 2017; Niner et al. 2018).
18	572	This point should include “ <i>and ecosystem services</i> ”
18	583	We welcome the acknowledgement that areas of uncertainty require greater attention and consideration in decision-making. This supports the precautionary principle and is particularly relevant given the unavoidable biodiversity losses arising from seabed mining projects.
19	603	We welcome requirements for early liaison with stakeholders

		<p>but sufficient time for effective and equal participation of any stakeholder including those not identified by the Contractor is necessary.</p> <p>Definition of “<i>sufficient time</i>” should be provided.</p>
19	608	How will it be ensured that views expressed are taken into account and be seen to be taken into account?
19	613	Requirements to outline how key stakeholders have been identified (as stated in pg 20 line 648), and the process for engagement of those missed by this Contractor-led process should also be included.
19	627	Presentation of feasible and discounted alternatives should also demonstrate how impacts have been avoided or reduced to demonstrate how the mitigation hierarchy has been applied.
21	695	Baseline data needs to be collected in a structured way that enables a robust assessment against an impacted state, and can be integrated into common and scaled assessments.
22	740	Prediction approaches also include multi-criteria analysis, scenario modelling, risk registers, and sustainability appraisal.
22	760	This list should include “ <i>Model validation (where possible)</i> ” and “ <i>Model evaluation</i> ”.
23	787 onwards	We suggest that the different scales at which significance should be assessed at are included. Again, this should include relevant societal goals such as the CBD, SDGs, human rights law etc.
23	789	Table 3 – We suggest removing “ <i>positive or negative?</i> ” It would be more appropriate to frame this point of assessment in the context of change – some changes might be viewed as positive, when this is not necessarily the case. For example, recolonization by certain species after disturbance may be viewed as positive, but on closer inspection recolonisation might be by different species than recorded in pre-disturbance conditions and which may have supported important ecosystem services.
25	855	In some cases, thresholds may be defined in policy. In others, they may need to be defined based on expert opinion or societal thresholds. How to do this needs to be determined. The only one mentioned is in line 1001-Peer Industry Thresholds, consolidation of this evidence is important.
29	986	We are concerned that Contractors and applicants are encouraged to develop their own thresholds until such time as the ISA has developed these. It would be extremely difficult to review, monitor and enforce different thresholds developed across different Contractor/applicant EMMPs.

		<p>Development of common thresholds would hold all Contractors/applicants account to the same level, and would facilitate enforcement.</p> <p>Refer to overarching comment on Thresholds for further detail.</p>
29	1001	<p>It is important to note the shortcomings of the EIA process for other established industries (e.g. <i>“a significant number of ESS falling short of satisfactory quality and a tendency for the process to be driven by compliance rather than best practice”</i> (see Barker & Jones 2013).</p> <p>There is a lot to be learnt from previous practice. However, a new industry such as DSM should be seeking to build and expand on this experience with a view to halting trends of environmental degradation that continue to occur under current practices.</p>
29	1019-1020	<p>This is the first and most important step of the mitigation hierarchy. For clarity, we recommend that this is moved under the section outlining <i>“The Mitigation Hierarchy”</i>.</p>
30	1038-1044	<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. 2017).</p> <p>The CBD has published (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 (para 21). This document clearly states: <i>“...safeguards would be needed to, among other things, ensure that any loss is replaced by the same or similar</i></p>

		<p><i>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 some ecosystems <i>“currently impossible to restore, such as some marine ecosystems.”</i> as outlined in (Niner et al., 2018).</p> <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 new and additional benefits and “measurable and commensurate gains”. See (Bull et al., 2016).</p> <p>The sentence “In terrestrial and some coastal jurisdictions, offset measures can include situations where the offset area is unlike the impacted area” may be 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 para 96 is not complete and should include that of demonstrable equivalence and additionality) for offsetting success is necessary. See (Niner et al., 2017a, 2017b).</p>
31	1057-1061	<p>Reference to <i>“engineering designs”</i> is misleading here. Generally, minimisation is achieved through technical measures or design that reduces the magnitude or significance of an identified impact. We suggest rephrasing this to describe minimisation measures as those that – <i>“require ongoing action to eliminate corresponding impacts (e.g. carrying out extraction activities during certain times of year so as to avoid the nesting season of a bird species)”</i> (See Bull et al. 2016).</p>
31-32	1063-1075	<p>It is important for the ISA to outline clearly the aim for this stage of the mitigation hierarchy.</p> <p>What is meant by <i>“Restoration to return an area to the original ecosystem”</i> or <i>“basic ecological functions and/or ecosystem services”</i>? Can we measure this? Further restoration techniques for the deep seabed remain outstanding and are unlikely possible to achieve <i>“on timescales relevant to management and possibly for many human generations”</i> (see Niner et al. 2018). Accordingly, this should promote further exploration of avoidance and minimisation measures.</p>

		While increasing the knowledge base for rehabilitation options will potentially manage the impacts of future deep-sea mining projects (although the timescales required to appropriately assess this are likely to be prohibitive to its utility), this should not be considered as an appropriate trade for impact.
32	1076 onwards	Please refer to comments relating to lines 1038-1044.
32	1084-1088	<p>APEIs cannot serve as offsets as these are not under threat and will likely not be equivalent in size and environmental characteristics to the areas impacted by mining (see McQuaid et al. 2020). 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>' (See Niner et al. 2018). An example for an averted loss offset would be the removal of bottom trawling pressures to offset mining impacts on seamounts.</p> <p>In addition, PRZs are not under threat and IRZs are areas that will be mined and monitored to support impact monitoring (ISA, 2018) and are therefore unsuitable as options for offsetting.</p>
32	1090-1098	These are the criteria used to select APEIs, which, as discussed, are not an appropriate form of offsetting. The environmental criteria listed for offset sites also fail to list equivalence and additionality as a key criterion. 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.
33	1151	We strongly object to the use of the term " <i>sustainable</i> " in the context of deep-sea mining. Deep-sea mining is not a sustainable practice. It may support sustainability in other sectors (e.g. renewable energy, electric vehicles etc), but in itself it is not sustainable as the resources are not renewable.
34	1179	We would like to note here that the LTC, which will be reviewing the EIS, currently consists of only 2 environmental experts. This is woefully insufficient.
35	1199 onwards	Clear reference for the onus for effective and equitable stakeholder consultation is on the Contractor/applicant. This may mean that capacity building efforts are required to ensure all relevant stakeholders are included.
<p>References</p> <p>Barker & Jones. 2013. 'A critique of the performance of EIA within the offshore oil and gas sector'. Environmental Impact Assessment Review. doi: 10.1016/j.eiar.2013.05.001.</p>		

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