



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

June 11, 2021

**RE: Stakeholder Consultation - Draft Guidelines for the Preparation of an Environmental Impact Statement**

Sir/Madam,

Below, please find below our Commentary on the Draft Guidelines for the Preparation of an Environmental Impact Statement as issued in May 2020.

As Group Leads, we submit on behalf of the **Deep-Sea Minerals Working Group of DOSI, the Deep-Ocean Stewardship Initiative**. 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>	
<b>Title of the draft being reviewed:</b>	Draft Guidelines for the Preparation of an Environmental Impact Statement
<i>Contact information</i>	
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<i>General Comments</i>	
<p>The following DOSI experts commented on this document:</p> <p>Dr. Diva Amon, SpeSeas, Trinidad and Tobago; Natural History Museum, London, UK</p> <p>Dr. Patricia Esquete Garotte, University of Aveiro, Portugal</p> <p>Dr. Sabine Gollner, Royal NIOZ, The Netherlands</p> <p>Dr. Jesse van der Grient, University of Hawai’i, USA</p>	

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Dr. Aline Jaeckel, University of New South Wales, Australia

Dr. Daniel Jones, National Oceanography Centre, UK

Dr. Samantha Smith, Blueglobe Solutions, Canada

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We acknowledge the effort of the LTC and consultants to draft an initial version of these guidelines for the preparation of an Environmental Impact Statement. Drafting such a document for the remote and comparably poorly-known deep-sea ecosystems and a nascent industry is a very difficult task, but will be critical for conservation and sustainable management of the ocean.

Please find below our general concerns as well as a list of specific comments. We also include suggestions for improving the document, as well as supporting references.

**EIS and Marine Protected Areas, VMEs, EBSAs, PSSAs**

The EIS should have a dedicated section that clearly outlines whether the proposed mineral exploitation could affect marine protected areas or special conservation areas designated by any competent organization including, for example, VMEs (Vulnerable Marine Ecosystems), EBSAs (Ecologically or Biologically Significant Areas), and PSSAs (Particularly Sensitive Sea Areas).

**Iterative Process of EIS and EMMP**

The Guideline should specifically state that the production of the EIS and EMMP follow an iterative process. As the latest CODE Project report states: “The publication of the submitted EIS and EMMP together does not appear to allow for an iterative process more typical of environmental assessments in extractive industries, in which the EIS evolves through consultations and produces an EMMP that is reflective of stakeholder input.” See Pew Charitable Trusts (2020).

**Alternative Project Plans**

The EIS typically includes a presentation of reasonable alternatives to the project plan, evaluation of their relative merits, mitigation options and a decision on which is the optimal solution. An example is Annex IV of Environmental Impact Assessment (EIA) Directive (2014/52/EU): “A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects”.

Consideration of a range of options and their impacts encourages a more active approach to project planning. There is no provision for this in the current guidelines.

### **EIS and Mitigation**

The main aim of the EIS, as given on Pg.2 lines 79-83, is to document the EIS process, describing (1) predicted effects and (2) measures of mitigation. There are no guidelines or standards on how mitigation should be addressed by the contractor and how these should be documented. The current EMMP gives only very few recommendations also. The analyses of alternative project plans (as outlined above) is of high importance as it could have positive or negative consequences with regard to environmental impacts.

A greater emphasis on the mitigation hierarchy (avoidance, minimize, rehabilitate/restore, off-set) is needed. Mitigation actions, to name a few practical examples, may include careful selection of the to be mined area (e.g., based on seabed-topography, currents, which influencing plume spreading, and biogeography of important species); design of mining vehicle to minimize impact (e.g. low sediment depth affected by mining, reduction of plume created by mining vehicle, reduction/avoidance of return water plume including metal-enrichment); rehabilitation and restoration of degraded areas (e.g. devoid of nodules) and analyses of costs and benefits; off-set. The document should also emphasise that the mitigation hierarchy should be applied sequentially (i.e., options to avoid/prevent should be considered and exhausted before looking to minimize risks; options to minimize should be exhausted before considering rehabilitation or restoration measures, and restoration options should be exhausted before considering offsets) and due to current questions/limitations regarding restoration and offsets, contractors should pay particular attention to the first two stages of the hierarchy in order to mitigate risks.

### **Uncertainty**

There is very little consideration of uncertainty in the current guidelines. We suggest that there should be a section that outlines the sources of uncertainty, their magnitude and the effects on decision making. In addition, uncertainty should be expressed explicitly in the presentation of conclusions.

### **Consistency with other ISA Documents**

In the EIS it is proposed to e.g. provide a list of species according to the different depths. However, these depths differ to what is proposed in the guidance for environmental baseline data. The documents should be coherent (the EIS taking up guidance/standards given in the env. Baseline data document).

### **Access to Data/Documents to Review and Evaluate the EIS**

The current document means that the EIS will repeatedly refer to documents that are confidential, such as the Plan of Work. As such, it will be impossible for stakeholders to review the information in its entirety. Some other documentation, for example, unpublished baseline reports, may also contain

vital information for assessment yet be unavailable for stakeholder review. We recommend that all necessary information required for review is published with the EIS (potentially as annexes).

**Climate Change**

Climate change and its cumulative effects should be considered, potentially as a source of uncertainty. While there are several mentions of climate change, the potential for it changing the environment during the course of the project is very high so this should be captured in the EIS. Note, this is increasingly common in other EIA legislation e.g., EU Environmental Impact Assessment (EIA) Directive (2014/52/EU).

**Process of Developing the Standards and Guidelines**

DOSI would like to see more transparency around the process for drafting the standards and guidelines. For example, a list of contributors and affiliations (both formal members of the technical working group, and formal and informal consultants) should be included. There is no information in the public domain about how contributors were selected, whether objective criteria were applied, and whether conflict of interests were declared and/or managed.

***Specific Comments***

<b>Page</b>	<b>Line</b>	<b>Comment</b>
1	57	“Expected scope and Standard of Baseline Data Collection”. It is unclear what is meant by “Standard”. Please provide a definition of “Standard” and how this is/can be linked to the ISA document on guidelines on environmental baseline data collection.
2	67-70	Suggest adding at the end of para 6 “EIA review or audit steps could be undertaken when there is a substantive adjustment to the relevant REMP and may correspond with a review or audit of the EIS and EMMP”. This reflects the text within para 65 of the ‘Draft Guidelines on tools and techniques for hazard identification and risk assessments’, making clear that changes to the REMP need to be considered.
2	67	Given that the development of REMPs is an ongoing process (and also noting that they will be updated with new and best available information) detail on how applicants or contractors should apply draft REMPs or additional best available information yet to be incorporated should be provided here.

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2	83	“off-set”, the fourth component of mitigation hierarchy should be added (1.Avoidance, 2. Minimize, 3. Rehabilitate/Restore, 4. Off-set).
2	103	Suggest deleting the following: The EIS template .... “recognizes that details of methodology or thresholds are likely to be resource- and project-specific”. This sentence presupposes the outcomes of ongoing discussions around who should set environmental thresholds and when. There is a strong argument to be made for thresholds to be region- and resource-specific but not project-specific. In any event, the Guidelines should not pre-empt these discussions.
3	107	The numbers given in the guideline are dissimilar from numbers given in the EIS section. At the moment, this is confusing. Please amend.
3	116	In addition to the economic, financial and other benefits, any negative aspects of the project should be given (e.g., loss of ecosystem services).
3	117-118	<p>The executive summary should clearly state which anticipated impacts are considered to be of no significance and where that conclusion is explained within the EIS. This will be a key piece of information for stakeholders reviewing the EIS.</p> <p>As recommended in para 73 of the ‘Draft Guidelines on tools and techniques for hazard identification and risk assessments’, a tabulation of the risk events considered, including those excluded and the reasons for excluding them, would be helpful. This could be provided as an annex to the EIS and referenced in the executive summary.</p> <p>If the EIS is to form a ‘stand-alone document’ it must provide a summary of the anticipated impacts and recommended mitigation measures, as well as the impacts considered to not be significant.</p>
3	119	“Off-set” should be included as well.
4	141-152	The introduction should also briefly cover what other deep-seabed mining activities are planned/occurring in the region so that discussions of cumulative impacts are put into context.

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4	166	Project viability – This section should also reflect on the societal need for the project given the unavoidable impact and risk from deep-seabed mining. This analysis should reflect on higher level societal goals such as the SDGs, CBD and Paris Agreement and how this project contributes or detracts from these targets, as well as how the project fits with demands to manage resources of the deep seabed for the Common Heritage of Mankind. In addition, the negative aspects of the projects should be clearly given (e.g., loss of ecosystem services). This section should present and discuss details around the economic context of the project, provide justifications for project execution, and descriptions of benefits and negative aspects, and proposals for benefit sharing.
5	185-188	An overview of the data collected as part of exploration work would also be valuable. This could be presented as a table, with an indication of what has/has not been made available through the ISA’s DeepData. For data not included in the repository, justification should be given regarding its commercial sensitivity, or an alternative method for accessing the data made clear.
5	224	Guidance on how to report “EIS of a larger project containing several Mining Areas within the Contract Area” or “EIS that contain multiple volumes of information” should be clearly given.
6	244	Suggest adding the following international agreements:  -1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter  - Convention on Biological Diversity (CBD and EBSAs)  -FAO (and VMEs)  -IMO (and PSSAa)
6	262	A definition of what is “relevant” should be added.
6	269	Showing a detailed bathymetric map should be a requirement.
7	291	Benefit-sharing should be added: “Commitments made by the Contractor for capacity building and benefit sharing.”

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7	294	Mitigation should not be limited to restoration, but should include details of the full mitigation hierarchy including details on avoidance, minimization, rehabilitation, restoration, and off-set.
7	303-305	Details should be given regarding the anticipated composition of processing water and any other by-products listed.
7	316	The description of the timetable should include reasoning for the suggested timing, including that the contractor accounted for e.g., breeding seasons of fauna, migration of fauna, or current-change according to season (if applicable).
8	346-348	How the Contract Area compared to the surrounding region should be discussed. Suggested wording “...the EIS will need to provide a detailed account of the Contractor’s knowledge of the baseline conditions in the proposed Contract Area and how the proposed Contract Area compares/relates to the surrounding region”.
8	361-363	The level of detail in each section should be commensurate with the scale and intensity of the potential impact, not the proposed activity.
9	370-372	Data collected but not contained in the DeepData repository should also be made clear. Suggest rewording “Studies completed (including environmental reference baseline data collected in accordance with the exploration contract, with details as to where such data has been made publically available).”
9	396	This list should include next to natural hazards: “anthropogenic hazards (e.g., dump sites)”.
9	410-412	Discussion should include a comparison of the biological components to the surrounding region. Suggested rewording “... and include a discussion of the various biological components and communities that are present or utilize the area in and around the proposed Contract Area, and how these biological components compare to the regional-scale biology.”
10	422	The contractor should provide information on species in and around the proposed Contract Area. In order to be able to do this, there should be such a topic addressed on how and who performed such analyses in the Area (including in e.g., APEI and areas in the regions that are not dedicated contract areas).



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10	426	<p>Depths differ to what is suggested in the guidance on environmental baseline data (e.g.,</p> <p>Pg. 7, line 179: surface 200 m and bottom 500 m as general guidance;</p> <p>Pg.12, line 387 0, 25, 30, 50, 75, 100, 125, 150, 200, 250, 300, then every 100 down to 1600, 1750, 2000, then every 500 to 200m above seabed for physical oceanography;</p> <p>Pg. 22, line 802: according to productivity etc. for chemical oceanography;</p> <p>Pg. 39 line 1545: 50, 50-100, 100-200, 200-500, 500-1000, and 1000 to 10m above the seafloor for biological communities).</p> <p>Clear and coherent guidance should be given in the EIS and baseline environmental data.</p>
10	444	<p>Life-history stages are not addressed in much detail in the baseline environmental data. More guidelines or standards should be given on life-traits in the baseline environmental data document.</p>
10	448	<p>Endemism of species, as given in this document, is very important but is not addressed in much detail in the baseline environmental data. More guidelines or standards should be given on endemism in the baseline environmental data document. For example, requirements that habitat (e.g., soft or hard substrate) is given for sampled specimens.</p>
11	478	<p>A detailed reference to these “available resources” should be given.</p>
11	474	<p>We agree that modelling will become more common, but stress that for modelling, robust baseline data are needed and that models need verification. A need for the verification for models should be added.</p>
11	488-490	<p>Strongly suggest that the sentence “Because the proposed projects will take place in the Area, direct socioeconomic impacts to specific communities are not expected” is deleted. Such an assumption disregards many Indigenous Peoples and Local Communities that have a deep connection to the ocean. Instead, an explanation of the term ‘ecosystem services’ should be given to encourage consideration of all viewpoints, including cultural ecosystem services. Suggested text: “Ecosystem services are the multitude of benefits provided by ecosystems to humans, they can be separated into three general categories: provisioning services (i.e., the outputs and products generated by an ecosystem, such as fish, minerals</p>

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		<p>and pharmaceuticals), regulating services (i.e., benefits from the regulation of environmental processes, such as carbon sequestration) and cultural services (i.e., non-material benefits such as educational opportunities, natural and cultural heritage, existence value). These ecosystem services are supported by different ecological functions (e.g., primary and secondary productivity, nutrient and element cycling, breeding grounds and nursery habitat), which are in turn supported by the physical, chemical and biological properties of a system (i.e., ecosystem structures).”</p> <p>The potential impacts of deep-seabed mining remain largely unknown and untested. Furthermore, evidence and understanding of the ecosystem services afforded to society by the deep sea is not unknown. We recommend that assessment should robustly consider the potential for impacts to ecosystem services. These ecosystem services could affect coastal communities or other sectors dependent on marine resources, such as through damaging effects to the lifecycle of culturally and/or nutritionally important fish stocks, or through reducing the deep sea capacity to store carbon, particularly when considered cumulatively. The inclusion of this sentence undermines the need for any robust consideration of these legitimate concerns. See: DOSI Policy Brief “The Necessity of Traditional Knowledge for Management of Deep-Seabed Mining” and Le et al., 2017.</p>
11	493-509	Strongly suggest adding “Uses of the ocean by traditional owners and indigenous communities, as well as the cultural significance of ocean spaces by local and indigenous communities” as a bullet point within para 49 so that these perspectives are not lost from the EIS.
12	517-516	There is very little guidance on mitigation. Please see general comments above. It is important to consider the full mitigation hierarchy, including avoidance, minimization, rehabilitation/restoration and off-set and priorities of mitigation actions. Also, timescales and uncertainty should be clearly addressed. The document should also emphasise that the mitigation hierarchy should be applied sequentially and due to current questions/limitations regarding restoration and offsets, contractors should prioritise the first two stages of the hierarchy in order to mitigate risks.

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13	586	Whilst we recognize that this list of potential impacts is not intended to be complete, we suggest adding a major impact of active and inactive sulfide mining: “change in hydrothermal fluids”.
13	613-614	Whilst we recognise that this list of potential impacts is not intended to be complete, we suggest adding: “habitat removal or destruction”.
14	621-652	<p>The midwater section is not addressed in the EIS on Pg. 14.</p> <p>Depths also differ to what is suggested in the Guidelines on environmental baseline data (e.g.,</p> <p>Pg. 7, line 179: surface 200 m and bottom 500 m as general guidance;</p> <p>Pg.12, line 387: 0, 25, 30, 50, 75, 100, 125, 150, 200, 250, 300, then every 100 down to 1600, 1750, 2000, then every 500 to 200m above seabed for physical oceanography;</p> <p>Pg. 22, line 802: according to productivity etc. for chemical oceanography;</p> <p>Pg. 39 line 1545: 50, 50-100, 100-200, 200-500, 500-1000, and 1000 to 10m above the seafloor for biological communities).</p> <p>Clear and coherent guidance should be given in the EIS and baseline environmental data.</p>
14	651	Modification of benthic habitat should be added to the list.
15	659-668	It is clear that this list of socio-economic considerations is not meant to be exhaustive but strongly recommend that the list includes “tangible and intangible cultural heritage”. This reflects the need to consider sites of archaeological and historical significance as well as the ocean uses and beliefs of local and indigenous communities.
16	708	Mitigation should stand alone, especially as this is one of the main objectives of this document.
16	736	This list should also include “loss of ecosystem services associated with mining”.

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16	740	<p>....”this entails that the proposed project does not lead to environmental degradation”....</p> <p>We note that removal of nodules degrades the environment/mined area from a “nodule area” to a “no nodule area”. Please consider amending.</p>
16	743	<p>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.</p>
16	750-753	<p>This section of the EIS should provide an anticipated timeline for the expected consultations and details on how the consultation will be announced/shared with stakeholders.</p>
17	754-757	<p>The EIS should provide links to where comments and responses are held.</p>
16	759	<p>The EIS template could include a description of any EIA process performed under the laws of the sponsoring state.</p>
22		<p>In addition to the review form, a template for the EIS may be provided for the contractor. Such a template would be beneficial for the contractor and the reviewer.</p>
<p><b>References</b></p> <p>DOSI Policy Brief “The Necessity of Traditional Knowledge for Management of Deep-Seabed Mining”.</p> <p>Le, J.T., Levin, L.A. and Carson, R.T., 2017. Incorporating ecosystem services into environmental management of deep-seabed mining. Deep Sea Research Part II: Topical Studies in Oceanography, 137, pp.486-503.</p>		

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Pew Charitable Trusts, Feb 2020. EIA Procedure in ISA Draft Exploitation Regulations - Sixth Report of the CODE Project. [https://www.pewtrusts.org/-/media/assets/2020/03/sixth\\_report\\_of\\_the\\_code\\_project\\_v2.pdf](https://www.pewtrusts.org/-/media/assets/2020/03/sixth_report_of_the_code_project_v2.pdf)

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