

## **OceanCare Input to the “Draft Standards and Guidelines”**

Wädenswil/Switzerland, June 23, 2021, submitted to:

International Seabed Authority ([ola@isa.org.jm](mailto:ola@isa.org.jm))

Dear Sir/Madam,

OceanCare would like to thank the Secretariat of the International Seabed Authority (ISA) for the opportunity to provide input to the “Draft Standards and Guidelines associated with the draft regulations on exploitation of mineral resources in the Area” in the course of the public consultation process. Please find our review regarding the following Draft Standards and Guidelines in the enclosed template format as provided by ISA:

- Draft Guidelines for the establishment of baseline environmental data
- Draft Standard and Guidelines for environmental impact assessment process
- Draft Guidelines for the preparation of an environmental impact statement
- Draft Guidelines for the preparation of environmental management and monitoring plans
- Draft Guidelines on tools and techniques for hazard identification and risk assessments

Sincerely yours,

A handwritten signature in black ink that reads "Sigrid Lüber".

Sigrid Lüber, President and Founder, [slueber@oceancare.org](mailto:slueber@oceancare.org).

Our contact person for the Deep Sea Mining programme is Mr. Cyrill Martin, Ocean Policy Expert, [cmartin@oceancare.org](mailto:cmartin@oceancare.org).

### TEMPLATE FOR COMMENTS

Document reviewed	
<b>Title of the draft being reviewed:</b>	Draft Guidelines for the establishment of baseline environmental data
Contact information	
<b>Surname:</b>	Martin
<b>Given Name:</b>	Cyrill
<b>Government</b> (if applicable):	
<b>Organization</b> (if applicable):	OceanCare
<b>Country:</b>	Switzerland
<b>E-mail:</b>	cmartin@oceancare.org
General Comments	
<p>1. Pending the consideration of relevant stakeholder comments on the Draft Exploitation Regulations, their according amendment and formal adoption, the development and finalizing of standards and guidelines is premature. While it is helpful to have insight into the ideas of the LTC for future standards and regulations in order to see the whole picture, the formal process for developing and finalizing this lower level 'legislation' needs to be done only after formal adoption of the Draft Exploitation Regulations. The current process is legally doubtful, at best.</p>	
<p>2. The aforementioned is particularly problematic in the case when constraints on the draft standards and guidelines are based on the unfinalized and unadopted Draft Exploitation Regulations e.g. when used to justify very limited public consultation in the EIA process.</p>	
<p>3. As a general comment we want to express our great concern that the draft standards and guidelines presented are not meeting the necessary criteria to effectively protect the marine environment from harmful effects which may arise from activities in the Area. They also do not guarantee the necessary transparency and stakeholder involvement.</p>	
<p>4. We urge the International Seabed Authority (ISA) to use only the most effective and stringent international or national regulations on protection of the environment as a basis for regulating the Area. Where such is lacking, the most qualified scientific and policy experts shall be involved to draft regulations strictly based on the precautionary principle.</p>	
<p>5. Furthermore, this drafting shall be conducted in a fully transparent manner. This includes disclosure of contributors to the Draft Standards and Guidelines and their affiliation. Following the precautionary principle we ask the ISA to abstain from allowing any activities in the Area where there is uncertainty if the activity could cause significant harm to the marine environment.</p>	
<p>6. OceanCare is focusing on noise emissions from Deep Sea Mining (DSM) activities and we therefore will focus our specific comments primarily on that subject. This should not be interpreted as prejudice, endorsement or legitimization of the other parts of the draft standards and guidelines.</p>	
<p>7. It is important to note that exploration activities and baseline data collection cause noise emissions with potential significant impacts on marine species (e.g. shipping propulsion and cavitation, dynamic</p>	

positioning, acoustic exploration measures such as echosounders and seismic methods, extraction activities for sampling). These should be accounted for already at the exploration and baseline environmental data collection stage, be subject to, where necessary, potential avoidance and exclusion provisions and as a general principle the least harmful method should always be prescribed. In that respect incentive models should be promoted that only the least noise-generating technology is applied and best environmental practices are followed which shall be subject to frequent and continued updating.

8. Baseline data are the basis of an EIA and therefore fundamental. Regulating the establishment of baseline environmental data should be done in a binding standard rather than in a guideline. Insufficient knowledge on baseline data should trigger a clause stating that additional research is needed before any exploitation activity will be allowed and the request should be resubmitted to the LTC including the gathered additional data for reevaluation.

9. It is crucial that ISA provides stakeholders with available information on all data relevant for environmental impacts. Those have to be publicly and easily available. Failing to do so undermines the efforts for effective environmental protection.

#### ***Specific Comments***

<b>Page</b>	<b>Line</b>	<b>Comment</b>
11	362-364	<p><i>Noise - Noise is created by numerous sources located both inside the ocean and on its surface and can affect communication in marine mammals and other marine organisms</i></p> <p>Comment: This reference to the potential impacts by noise is outdated and does not reflect the understanding on the wide-ranging impacts caused by noise-generating activities, neither per taxa nor per potential impact. Species impacted by noise include invertebrates, fish and marine mammals; Impacts on marine species range from those involving development, anatomy, physiology, behavior, ecosystem services, mortality rates, as well as causing socio-economic impacts on fisheries. Furthermore, noise-generating activities can affect the population health and welfare of marine species and ecosystem dynamics.</p>
17	577-593	<p>Sound propagation is a highly complex issue, as well as the potential impacts on the diverse range of species. Therefore, independent, scientific modelling of sound propagation from noise generating activities should be a necessity.</p> <ul style="list-style-type: none"> <li>• Spectral levels of natural ambient noise should be measured, along with levels at higher frequency resolution (TOB, etc.).</li> <li>• Generally, the term “sound speed profile” is used, not sound velocity.</li> <li>• Sound propagation is a highly complex issue, as well as the potential impacts on a diverse range of species. Therefore, independent, scientific modelling and validation by measurement of sound propagation from noise generating activities should be a necessity.</li> </ul>
35	1373-1376	Multibeam echosounders, side scan sonars, etc. should use frequencies over 50 kHz and preferably 100 kHz so as not to be potentially harmful and disturbing to marine mammals.
36	1398-1400	Multibeam echosounders, side scan sonars, etc. should use frequencies over 50 kHz and preferably 100 kHz so as not to be potentially harmful and disturbing to marine mammals.

40-41	1580-1595	<p>Sound propagation is a highly complex issue, as well as the potential impacts on the diverse range of species. Therefore, independent, scientific modelling of sound propagation from noise generating activities should be a necessity.</p> <p>Echosounders should not be using frequencies as low as 18 and 38 kHz which will be audible and likely disturbing to marine mammals. Even echosounders using 50 kHz may be audible, so those over 100 kHz would be safer to use.</p> <p>Marine mammals have to be addressed here, too.</p>
55	2203-2215	<p>The reference to “whales” shall certainly be replaced by using the term “marine mammals”. As already noted, we strongly recommend referring to the most recent and most sophisticated guidelines undertaking EIAs prior to noise-generating activities which have been endorsed by more than 100 Member States of the Convention on Migratory Species, which include a Technical Support document addressing species-specific requirements, as well as providing guidance on modelling, monitoring, observation programmes etc. Passive Acoustic Monitoring must be undertaken and analyzed by highly trained individuals in this technique. Visual surveys should be conducted only in Beaufort wind speeds of less than Force 3.</p>
Additional rows can be added to this table by selecting “Table” followed by “insert” and “rows below”		

Comments should be sent by e-mail to [ola@isa.org.jm](mailto:ola@isa.org.jm)

### TEMPLATE FOR COMMENTS

<i>Document reviewed</i>	
<b>Title of the draft being reviewed:</b>	Draft Standard and Guidelines for environmental impact assessment process
<i>Contact information</i>	
<b>Surname:</b>	Martin
<b>Given Name:</b>	Cyrill
<b>Government (if applicable):</b>	
<b>Organization (if applicable):</b>	OceanCare
<b>Country:</b>	Switzerland
<b>E-mail:</b>	cmartin@oceancare.org
<i>General Comments</i>	
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8. The EIA process should not be split in different documents with duplications as well as inconsistencies. We rather recommend to integrate EIA, EIS and EMMP into one process and provide a standard on the whole process. The fundamental requirement for EIA, EIS and EMMP should be binding. Non-binding recommendations that leave the concrete steps at the discretion of the contractor are not sufficient to effectively protect the marine environment from harmful effects which may arise from activities in the Area and do not reflect the obligation of ISA to manage the Area as a common heritage of mankind. More technical details should be developed as supportive guidance to the EIA process in the form of guidelines. To illustrate this with an example on underwater noise, we kindly invite you to have a look at the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Family Guidelines on Environmental Impact Assessments for Marine Noise-generating Activities (as inspiration for a standard) and their technical support information (as model for a guideline)

CMS Family Guidelines: [https://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.12.14\\_marine-noise\\_e.pdf](https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf)

Technical Support information: [https://www.cms.int/sites/default/files/basic\\_page\\_documents/CMS-Guidelines-EIA-Marine-Noise\\_TechnicalSupportInformation\\_FINAL20170918.pdf](https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf)

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#### Specific Comments

Page	Line	Comment
Back-ground	No. 3	Public stakeholder consultation is necessary to allow for transparency and the inclusion of relevant stakeholder feedback into the EIA process. It is therefore not acceptable to have stakeholder consultation only as a recommendation. Moreover, there have to be binding provisions stating that the stakeholder submissions have to be considered. Stakeholder consultation in the EIA process have to be a binding requirement and therefore should be included in the standard. Justification of a non-binding recommendation with the Draft Exploitation Regulations is obsolete as these are still at a drafting stage and should be amended themselves with a binding requirement on stakeholder consultation in the EIA process.  We strongly suggest that ISA consults the <i>UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention)</i> as a state of the art agreement on stakeholder involvement and public participation <a href="https://unece.org/environment-policy/public-participation/aarhus-convention/introduction">https://unece.org/environment-policy/public-participation/aarhus-convention/introduction</a> .
3	108	A no action alternative should be included.
7	262 et sqq.	Contractors should make use of specific species, threats or pressure related EIA guidelines endorsed or adopted by other multilateral agreements (e.g. <i>Convention on the Conservation of Migratory Species of Wild Animals (CMS) Family Guidelines on</i>

		<i>Environmental Impact Assessments for Marine Noise-generating Activities, EU Marine Strategy Framework Directive)</i>
8	299	Also applies to other parts of the document: A binding standard for significant adverse effects has to be defined.
14	505, 506	While under 505 the term “stocks” is used, under 506 “population” is used. We ask ISA to give a clarification on use of terminology, particularly regarding the categorization of consequences.
29	980-995	Lacking knowledge for defining thresholds indicates that allowing for exploitation activities is premature and such knowledge has to be built up first (precautionary principle). It is not acceptable that definition and application of the thresholds is left to the applicant or Contractor. ISA would neglect its obligation as regulator for activities in the Area (this, unfortunately, appears to be the case repeatedly in the draft standards and guidelines).
22	721-731	Insert an example on underwater noise: New No. 3. <u>What sources of underwater noise will be present? What is their Sound Pressure Level, Sound Exposure Level, and particle motion (through water and substrate)? What is the estimated range of impact of the noise sources? What is the expected duration of noise-generating activities?</u>
22	740-751	Insert an example for underwater noise measurement: <ul style="list-style-type: none"> <li><u>Noise and vibration propagation modelling and verification in the field</u></li> </ul>
22	752-752	Add this bullet: <ul style="list-style-type: none"> <li><u>Noise and vibration propagation modelling</u></li> </ul>
23	791	Please note that noise may cease after the mining operation (or during a break) but its impacts on marine life may persist (e.g. there is documented proof of long-term effects on reflex responses, mortality rates, immunosuppression, and nutritional condition months or even a year after the noise had ceased).
23-24	782-825	Some noise emissions from DSM will reach beyond the mined areas and will likely have negative impacts on marine life beyond those regions. Some DSM noise sources are estimated to reach at least a distance of 500 km at levels 10 times over background natural ambient levels. These could affect whale species in addition to fish and invertebrates such as squid or others. Furthermore, there will be potential cumulative effects from other noise sources as well as non-noise stressors that need to be accounted for. It is particularly important to assess the impacts of noise from mining activities (including involved vessel-based noise) on APEIs. The proposed questions shall be adjusted accordingly to similar processes and amended by e.g. amending para. 802 Legal issues with the following question: <ul style="list-style-type: none"> <li>Are the areas and/or species affected by transboundary energy emission subject to national, regional or international protection status?</li> </ul>
25	851 and	Add after “assessed directly against numerical criteria and standards where these exist”:

	853-854	<u>However, such standards may only address one type of impact (e.g. on hearing thresholds), whereas many more population and community-level impacts may exist for which there are no numerical criteria, yet these impacts are at least as important. The same goes for impacts on behaviour, physiology (stress), anatomy, and development, as well as masking.</u>
28	945-967	<i>E. Uncertainty:</i> There should be binding provisions stating that, in case of uncertainty about the effects of an activity on the environment, an independent and qualified scientific body has to be consulted and a public stakeholder consultation has to be conducted in order to carefully assess the potential harmful effects on the environment.
29	967	Add: <u>4. Do not proceed with the activity until enough data is available for allowing an independent and qualified scientific body to assess, in a scientifically sound manner, that the activity will have no significant harmful effects on the environment.</u>
31	1045 et sqq.	This Mitigation hierarchy is only in parts suitable for DSM. To our best knowledge, post-mining restoration in deep-sea environments is likely to be impossible, what makes offsets inappropriate and leading to a net loss of biodiversity. Avoidance/prevention as well as minimizing harmful impacts on the environment are applicable steps and should be focused on. Best Available Technology and Best Environmental Practice should be applied in order to reduce harmful impacts, especially as DSM is a new activity with lots of uncertainties.
31	1049-1061	“...redesigning methods, adaption of technology, scaling down operations...” are minimizing measures and should hence be moved to 3. <i>Minimise</i> (instead of 2. <i>Avoid/prevent</i> ).
39	1344 - 1353	<i>Appendix 1:</i>  There are multiple noise sources from DSM activities in different water depths. These should be described more comprehensively and with more detail within ISA’s regulations. The following sources should be included:  <ul style="list-style-type: none"> <li>Noise emissions originating from the surface include acoustic exploration methods (sonar, seismic methods), vessel/platform propulsion and dynamic positioning (DP), noise from machinery and processing of ore (including pumps), offtake vessels, supply vessels, monitoring vessels and research vessels.</li> <li>Riser systems, as well as motors of AUVs and ROVs, will likely be the major mid-water noise sources.</li> <li>Seabed or near-seafloor noise and vibration sources include acoustic exploration close to the seabed, noise emissions from extraction (drilling, dredging, cutting, scraping) and machinery (e.g. subsea lift pump, collector and cutting machines) as well as ROVs and AUVs.</li> </ul>

	<p>Limited and incomplete reference to peer industry regulations, academia and one single DSM project, as done in this table, are not sufficient. Moreover, the indicated references supporting assessment of impacts need to be reviewed as some of the referenced documents do not include any information on noise (see comment below).</p> <p>The table in Appendix 1 claims there are thresholds from the oil and gas industry and academia related to noise and impact assessment. Firstly, these thresholds only refer to TTS (temporary threshold shift) and PTS (permanent threshold shift), i.e. hearing impairment. Secondly, they are controversial and usually based on limited experiments on a few individuals of a few species of captive animals. Thirdly, hearing impairment thresholds will not address population and community-level impacts from noise for which there are no numerical criteria, yet these impacts are at least as important. The same goes for impacts on behaviour, physiology (stress), anatomy, and development, as well as masking. There are also no thresholds for cumulative sources of noise, nor cumulative and synergistic impacts from several stressors at once, which will be the case for DSM (plumes, toxins, noise, etc.).</p> <p>We do not see invertebrates represented under “ecosystems” anywhere except on the seafloor, yet many invertebrates (squid, jellyfish, larval forms, etc.) live in the water column.</p> <p>Under “Impact”, we are not sure whether multibeam sonar systems, side scanning sonars, etc., and other technologies to image the seafloor are included. These are not incidental or accidental to operations, but are purposeful additions of sound. Please specify.</p> <p>In order to properly address noise as a major pollutant from DSM activities, ISA, together with the most qualified marine biologists, acoustic experts and engineering experts as well as other competent regulative bodies and with transparency towards all stakeholders, needs to set up its own, stringent and holistic regulations, standards and guidelines on EIA for noise emissions from DSM activities.</p> <p>We kindly invite you to have a look at the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Family Guidelines on Environmental Impact Assessments for Marine Noise-generating Activities (as inspiration for a standard) and their technical support information (as model for a guideline)  CMS Family Guidelines: <a href="https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf">https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf</a>  Technical Support information: <a href="https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf">https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf</a></p> <p>Other inspiration can be drawn from the Guidelines to Address the Impact of Anthropogenic Noise on Cetaceans in the ACCOBAMS Area in Annex 2 of Resolution 7.13 (ACCOBAMS-MOP7/2019/Doc38/Annex15/Res. 7.13 <a href="https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf">https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf</a>).</p> <p>Regarding the development of underwater noise EIA regulations for DSM activities we strongly recommend you to consult with the competent bodies of international agreements and organizations. We recommend a collaboration with the <i>Joint</i></p>
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		<p><i>CMS/ASCOBANS/ACCOBAMS Noise Working Group (Joint NWG)</i> that has been established with members and observers of the scientific and advisory bodies of the Convention on Migratory Species (CMS), the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) and Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS): <a href="https://accobams.org/wp-content/uploads/2019/12/WG_Noise.pdf">https://accobams.org/wp-content/uploads/2019/12/WG_Noise.pdf</a>. External experts can be invited to participate in the Joint NWG in order to ensure the best possible advice can be generated and expertise extended to all relevant fields regarding the noise and noise impact assessment from DSM activities.</p> <p>We also recommend a collaboration with the Scientific Committee of the International Whaling Commission <a href="https://iwc.int/scientific-committee">https://iwc.int/scientific-committee</a>.</p>
41	1357-1358	Reference No. 2: The Canada-Newfoundland and Labrador Offshore Petroleum Board Offshore Waste Treatment Guidelines do not include provisions on noise.
41	1384-1387	<p>Reference No. 10: We strongly advice to include the CMS Family Guidelines here: <a href="https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf">https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf</a></p> <p>Technical Support information: <a href="https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf">https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf</a></p> <p>Other inspiration can be drawn from the Guidelines to Address the Impact of Anthropogenic Noise on Cetaceans in the ACCOBAMS Area in Annex 2 of Resolution 7.13 (ACCOBAMS-MOP7/2019/Doc38/Annex15/Res. 7.13 <a href="https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf">https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf</a>).</p> <p>The <i>Marine Strategy Framework Directive Good Environmental Status</i>, particularly <i>Descriptor 11 Introduction of energy (including underwater noise) does not adversely affect the ecosystem</i> has to be considered when developing the noise regulations of ISA for DSM activities.</p> <p><a href="https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-11/index_en.htm">https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-11/index_en.htm</a></p>
42	1395-1399	Reference No. 13: This publication includes no data on sound emissions from DSM activities. It only draws (very limited) conclusions from noise measurements in related industries (mainly dredging). It clearly shows that data for proper EIA on noise emissions from DSM activities is not available at this stage.
Additional rows can be added to this table by selecting "Table" followed by "insert" and "rows below"		

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<b>Title of the draft being reviewed:</b>	Draft Guidelines for the preparation of an environmental impact statement
<i>Contact information</i>	
<b>Surname:</b>	Martin
<b>Given Name:</b>	Cyrill
<b>Government</b> (if applicable):	
<b>Organization</b> (if applicable):	OceanCare
<b>Country:</b>	Switzerland
<b>E-mail:</b>	cmartin@oceancare.org
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Technical Support information: [https://www.cms.int/sites/default/files/basic\\_page\\_documents/CMS-Guidelines-EIA-Marine-Noise\\_TechnicalSupportInformation\\_FINAL20170918.pdf](https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf)

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#### ***Specific Comments***

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6	240	Add here: <u>Fisheries regulations, animal and species conservation regulations, ocean conservation regulations</u>
6	244	We suggest adding the following text: <u>Fisheries agreements, animal and species conservation agreements (e.g. Convention on the Conservation of Migratory Species of Wild Animals (CMS), Convention on Biological Diversity (CBD), ocean conservation agreements and future agreements relevant for the proposed activities (e.g. the 'International legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ)')</u>
7	278	Please amend with the underlined text: "The likely extent of any secondary impacts such as sediment plumes <u>and underwater noise</u> "
7	298	General remark on new and untested mining methodologies (this comment applies also to other sections of the EIS Guidelines): Detailed description on new, untested or only little tested techniques, technologies and equipment shall be submitted for review by an independent expert body

		which includes scientific experts on marine biology, engineering, acoustics and from other relevant fields. Their review should include assessment of the impacts of the techniques, technologies and equipment on the environment and provide binding recommendations on whether or not the technique, technology or equipment should be used and on how environmental impacts should be mitigated.
7	318 et sqq.	Provisions for alternatives should be stronger, e.g. “Alternative screening criteria <u>must typically</u> include the following: Environmental impacts”
8	346	Where there are not sufficient data available from the review of existing literature and scientific studies, the primary data shall be submitted for review by an independent expert body which includes scientific experts on marine biology, engineering, acoustics and from other relevant fields.
9	398	<p>Please amend with the underlined text:  “Noise and light (ambient levels <u>(including noise from shipping)</u>, and influence of existing maritime, exploration, and exploitation activity in and around the proposed Contract Area)”</p> <p>There needs to be a request to submit specific information such as dB, Hz etc and binding provisions on how to measure these data.</p> <p>All existing, past or proposed anthropogenic noise sources should be detailed by sound pressure levels (SPLs), sound exposure levels (SELs), particle motion, frequency spectrum, duration, duty cycle, etc., so that a clear understanding of how the natural soundscape has been altered in the past, and how it will be altered in the present and future is gained.</p>
13	588	<p>Please amend with the underlined text:  “...Sources of potential impacts may include (but are not limited to) physical disturbance of the seabed during mining activities, sediment plume(s) <u>and noise</u> that could disperse beyond the footprint of the Contract Area...”</p>
14	612	“noise affecting the food chain and availability of prey” Noise can cause a broader range of detrimental impacts than those listed. Please extend listing accordingly, e.g. impacts on community interactions, population health and welfare, ecosystem services, etc.
14	622 et sqq.	<p>Please amend with the underlined texts:</p> <ul style="list-style-type: none"> <li>“increased vessel activities and potential pollution (from vessel discharge and wastes <u>as well as noise emission from production vessels, offtake, monitoring and other vessels</u>) of the surrounding area” (noise is, according to Art. 1, para. 1 No. 1 UNCLOS, a kind of pollution (“introduction by man... of energy into the marine environment...”))</li> <li>Add the underlined text below para. 622/623: Noise is briefly addressed in para. 631. However, we believe that noise as a potential surface impact with strong effects on marine life should be included more prominently here. We</li> </ul>

		therefore suggest to include the following bullet below para. 623: <u>“Noise pollution from production vessels (e.g. dynamic positioning, machinery and processing of minerals, pumps), offtake, monitoring and other vessels as well as riser and discharge systems and any acoustic exploration method used before or during exploitation”</u>
14	633 et sqq.	The following bullet should be added to “Potential water column impacts (200-50m above seafloor)”: <ul style="list-style-type: none"> <li>• <u>noise pollution from riser and discharge systems and AUVs/ROVs operating in mid-water and any acoustic exploration method used before or during exploitation</u></li> </ul>
14	643	Add “etc.” to “potential noise effects (direct avoidance, masking faunal communication, feeding disruption, <u>etc.</u> )” as this is not an exhaustive list of noise effects.
14	644 et sqq.	The following bullets should be added to “Potential benthic impacts (seafloor to 50 m above)”: <ul style="list-style-type: none"> <li>• <u>Noise pollution from production tools and machinery (e.g. from dredging, grinding, drilling as well as machine noise) and any acoustic exploration method used before or during exploitation</u></li> </ul> <p>We also strongly advice to add a bullet for potential noise effects:</p> <ul style="list-style-type: none"> <li>• <u>Impacts from noise and particle motion through the water and substrate, as well as vibration through the substrate</u></li> </ul>
Additional rows can be added to this table by selecting “Table” followed by “insert” and “rows below”		

Comments should be sent by e-mail to [ola@isa.org.jm](mailto:ola@isa.org.jm)

### TEMPLATE FOR COMMENTS

<i><b>Document reviewed</b></i>	
<b>Title of the draft being reviewed:</b>	Draft Guidelines for the preparation of environmental management and monitoring plans
<i><b>Contact information</b></i>	
<b>Surname:</b>	Martin
<b>Given Name:</b>	Cyrill
<b>Government (if applicable):</b>	
<b>Organization (if applicable):</b>	OceanCare
<b>Country:</b>	Switzerland
<b>E-mail:</b>	cmartin@oceancare.org
<i><b>General Comments</b></i>	
<p>1. Pending the consideration of relevant stakeholder comments on the Draft Exploitation Regulations, their according amendment and formal adoption, the development and finalizing of standards and guidelines is premature. While it is helpful to have insight into the ideas of the LTC for future standards and regulations in order to see the whole picture, the formal process for developing and finalizing this lower level 'legislation' needs to be done only after formal adoption of the Draft Exploitation Regulations. The current process is legally doubtful, at best.</p>	
<p>2. The aforementioned is particularly problematic in the case when constraints on the draft standards and guidelines are based on the unfinalized and unadopted Draft Exploitation Regulations e.g. when used to justify very limited public consultation in the EIA process.</p>	
<p>3. As a general comment we want to express our great concern that the draft standards and guidelines presented are not meeting the necessary criteria to effectively protect the marine environment from harmful effects which may arise from activities in the Area. They also do not guarantee the necessary transparency and stakeholder involvement.</p>	
<p>4. We urge the International Seabed Authority (ISA) to use only the most effective and stringent international or national regulations on protection of the environment as a basis for regulating the Area. Where such is lacking, the most qualified scientist and policy experts shall be involved to draft regulations strictly based on the precautionary principle.</p>	
<p>5. Furthermore, this drafting shall be conducted in a fully transparent manner. This includes disclosure of all contributors to the Draft Standards and Guidelines and their affiliation. Following the precautionary principle we ask the ISA to abstain from allowing any activities in the Area where there is uncertainty if the activity could cause significant harm to the marine environment.</p>	
<p>6. OceanCare is focusing on noise emissions from Deep Sea Mining (DSM) activities and we therefore will focus our specific comments primarily on that subject. This should not be interpreted as prejudice, endorsement or legitimization of the other parts of the draft standards and guidelines.</p>	
<p>7. It is important to note that exploration activities and baseline data collection cause noise emissions with potential significant impacts on marine species (e.g. shipping propulsion and cavitation, dynamic</p>	

positioning, acoustic exploration measures such as echosounders and seismic methods, extraction activities for sampling). These should be accounted for already at the exploration and baseline environmental data collection stage, be subject to, where necessary, potential avoidance and exclusion provisions and as a general principle the least harmful method should always be prescribed. In that respect incentive models should become stimulated that only the least noise-generating technology is applied and best environmental practices are followed which shall be subject to frequent and continued updating.

8. The EIA process should not be split in different documents with duplications as well as inconsistencies. We rather recommend to integrate EIA, EIS and EMMP into one process and provide a standard on the whole process. The fundamental requirement for EIA, EIS and EMMP should be binding. Non-binding recommendations that leave the concrete steps at the discretion of the contractor are not sufficient to effectively protect the marine environment from harmful effects which may arise from activities in the Area and do not reflect the obligation of ISA to manage the Area as a common heritage of mankind. More technical details should be developed as supportive guidance to the EIA process in the form of guidelines. To illustrate this with an example on underwater noise, we kindly invite you to have a look at the Convention on the Conservation of Migratory Species of Wild Animals (CMS) Family Guidelines on Environmental Impact Assessments for Marine Noise-generating Activities (as inspiration for a standard) and their technical support information (as model for a guideline)

CMS Family Guidelines: [https://www.cms.int/sites/default/files/document/cms\\_cop12\\_res.12.14\\_marine-noise\\_e.pdf](https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf)

Technical Support information: [https://www.cms.int/sites/default/files/basic\\_page\\_documents/CMS-Guidelines-EIA-Marine-Noise\\_TechnicalSupportInformation\\_FINAL20170918.pdf](https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf)

9. It is crucial that ISA provides stakeholders with available information on all data relevant for environmental impacts. Those have to be publicly and easily available. Failing to do so undermines the efforts of effective environmental protection.

10. EMMP need to include provisions to comprehensively address cumulative impacts. This is particularly relevant for fast travelling and far-reaching pollutants such as underwater noise, where other anthropogenic sources can add significantly to the overall noise present.

#### *Specific Comments*

Page	Line	Comment
3	166	We would like to point out that this area will likely to be very vast due to the fact that sound travels fast and far underwater.
20	793 et sqq.	<p>Please consider adding the following on noise management to the table:</p> <p><a href="https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf">https://www.cms.int/sites/default/files/document/cms_cop12_res.12.14_marine-noise_e.pdf</a></p> <p>Technical Support information: <a href="https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf">https://www.cms.int/sites/default/files/basic_page_documents/CMS-Guidelines-EIA-Marine-Noise_TechnicalSupportInformation_FINAL20170918.pdf</a></p> <p>Guidelines to Address the Impact of Anthropogenic Noise on Cetaceans in the ACCOBAMS Area in Annex 2 of Resolution 7.13 (ACCOBAMS-MOP7/2019/Doc38/Annex15/Res. 7.13 <a href="https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf">https://accobams.org/wp-content/uploads/2019/12/Res.7.13_Anthropogenic-Noise.pdf</a>).</p>

		<p>The Marine Strategy Framework Directive Good Environmental Status, particularly Descriptor 11 Introduction of energy (including underwater noise) does not adversely affect the ecosystem</p> <p><a href="https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-11/index_en.htm">https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-11/index_en.htm</a></p>
Additional rows can be added to this table by selecting "Table" followed by "insert" and "rows below"		

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### TEMPLATE FOR COMMENTS

Document reviewed		
<b>Title of the draft being reviewed:</b>	Draft Guidelines on tools and techniques for hazard identification and risk assessments	
Contact information		
<b>Surname:</b>	Martin	
<b>Given Name:</b>	Cyrill	
<b>Government</b> (if applicable):		
<b>Organization</b> (if applicable):	OceanCare	
<b>Country:</b>	Switzerland	
<b>E-mail:</b>	cmartin@oceancare.org	
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Specific Comments		
<b>Page</b>	<b>Line</b>	<b>Comment</b>

7	236	'ALARP principle' not enough and going against the precautionary principle. If risks are not understood properly then the activity potentially causing the hazard shall not be allowed until such risks are assessed by independent science.
7	254	The consequences listed here should be comprehensive and extend beyond "affecting the food chain and availability of prey".
14	493 – 496	Sufficient data on the Area to establish EIA thresholds and other standards should be the precondition for exploitation of the seabed in the area. Therefore, this data needs to be collected first and thresholds and other standards cannot be left to be decided by the contractors.
22-23	789-798	The notion "The precautionary approach does not necessarily mean proposed projects with unknown effects or impacts should not proceed" is an unacceptable distortion of Principle 15 of the Rio Declaration which states "...lack of full scientific certainty shall be not used as a reason for postponing cost-effective measures to prevent environmental degradation". Principle 15 states that measures to prevent environmental degradation should not be postponed, not activities that cause the environmental degradation. Therefore " <del>The precautionary approach does not necessarily mean proposed projects with unknown effects or impacts should not proceed</del> " should be deleted here.
<i>Additional rows can be added to this table by selecting "Table" followed by "insert" and "rows below"</i>		

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