



**Template for the review of the draft standards and guidelines  
associated with the draft regulations on exploitation of mineral resources in the Area**

**I. Background**

1. The draft regulations on exploitation of mineral resources in the Area ([ISBA/25/C/WP.1](#)) require that certain issues are addressed in accordance with, or taking into account, standards and guidelines to be developed by the organs of the Authority. The standards will be adopted by the Council and will be legally binding on Contractors and the Authority, whereas the guidelines will be issued by the Legal and Technical Commission or the Secretary-General and will be recommendatory in nature.
2. Stakeholder consultation is an integral part of the process decided upon by the Commission for the development of the standards and guidelines ([ISBA/25/C/19/Add.1](#)).
3. The Legal and Technical Commission will consider the comments received through stakeholder consultation during its current session.
4. The drafts include a cover page containing background and contextual information on the approach taken by the Legal and Technical Commission in developing each standard and guidelines. Please note that stakeholder comments are not sought on this cover note.
5. Issues of format and consistency across the standards and guidelines will be reviewed by the secretariat and the Legal and Technical Commission once the content of the various standards and guidelines is finalized following stakeholder consultation.

**II. Submitting Comments**

6. To ensure that your comments are given due consideration, please send them by e-mail to [ola@isa.org.im](mailto:ola@isa.org.im), at your earliest convenience but **no later than the date announced on the ISA website for the relevant draft standards and guidelines**.
7. When submitting comments, please adhere to the following guidance as much as possible:
  - a. Please provide all comments in writing and in an MS Word .doc or .docx format using the table provided below.
  - b. The table format allows for an unlimited number of comments to be added. To add more comments, you may add more rows.

- c. Please provide full contact information for the individual/Government/organization submitting the comments.
  - d. Please avoid commenting on issues related to format, grammar, spelling or punctuation, unless it affects the overall meaning of the text, as the document will be formatted and edited when the final draft is prepared by the Legal and Technical Commission.
  - e. To facilitate the revision process please be as specific as possible in your comments. In areas where you feel additional or alternative text or information is required, please suggest what this text may look like or what information should be included.
  - f. Text may be copied from the draft into the table if stakeholders wish to use "track changes" in editing text (this is encouraged to ensure accuracy and avoid numbering errors).
  - g. If you refer to additional sources of information, please include these with your comments when possible or provide a complete reference or hyperlink.
  - h. All review comments will be posted on the ISA website, unless otherwise requested by the submitting entity.
8. Should you have any questions regarding the review process, please contact [ola@isa.org.jm](mailto:ola@isa.org.jm).

**III. Template for Comments**

- 9. Please use the review template below when providing comments.
- 10. Line and page numbers have been provided in the drafts. Please use these as a reference as illustrated in the table below.

**TEMPLATE FOR COMMENTS**

<i><b>Document reviewed</b></i>	
<b>Title of the draft being reviewed:</b>	Draft Guidelines for the establishment of baseline environmental data Developed by the Legal and Technical Commission
<i><b>Contact information</b></i>	
<b>Surname:</b>	Williams
<b>Given Name:</b>	Christopher
<b>Government (if applicable):</b>	
<b>Organization (if applicable):</b>	UK Seabed Resources
<b>Country:</b>	United Kingdom

<b>E-mail:</b>	Christopher.j2.williams@lmco.com
<b>General Comments</b>	
<p>UK Seabed Resources is grateful for the opportunity to comment on this draft set of guidelines and appreciates the considerable efforts and expertise that have gone into its production. UKSR has incorporated expert 3rd-party input from MarineSpace in producing this stakeholder response.</p>	
<p>UKSR notes that its existing exploration programme, as provided for under exploration contracts for UK1 and UK2, has been designed and executed around the data requirements set out in existing guidance, and that these draft Guidelines introduce significant additional requirements as well as inconsistencies in completing environmental baseline studies.</p> <p>UKSR acknowledges that evolving scientific knowledge of the Area will drive demand for new datasets, and that the need for data consistency between contract areas to enable regional-level environmental management will drive specific requirements into those datasets. However, UKSR requests that the Authority seek, to the greatest extent possible, to ensure consistency across guidelines and to avoid invalidating work already undertaken in good faith by contractors.</p>	
<p>Furthermore, UKSR notes that new data requirements impose additional cost on contractor resources which are likely to remain constrained, particularly at exploration stage. Where the Authority's data requirements cannot be rationalised or prioritised, contractors must therefore apply their own judgement in prioritising data collection in their baseline survey design, for example by the relevance to the particular contract area or resource type, or applicability of environmental baseline data to anticipated impacts of the particular project. One approach to this would be through a scoping report. UKSR suggests that a scoping report-led approach, developed in consultation with the LTC, could be a good basis for operationalising the guidelines on a contract-by-contract basis.</p>	
<p>We suggest that socioeconomic environment should be considered within the baseline for informing the EIA. No guidelines for its inclusion are provided in the current Draft Guidelines.</p>	
<p>In situ sediment characteristics are not mentioned in the Draft Guidelines, but may have an effect on the nature and extent of plumes generated. It is suggested that details regarding the assessment of potential plumes be included in the Draft Guidelines, and thus the nature of the sediment and its tendency to form extensive plumes can be detailed within the baseline that will inform the EIA.</p>	
<p>The requirement for a seasonal data series over a period of 3 years is one example of a data requirement which could be rationalised in the context of a specific exploration contract and plan of work. While it may be practical to collect seasonal data from long-term fixed moorings, for example, it will not necessarily be practical or proportionate to take regular ship-based observations or equipment deployments 12 times in a 3 year period (for example infauna sampling, seabird or marine mammal observations).</p>	
<p>A list of abbreviations/glossary would be helpful at the start of the Draft Guidelines as, in some instances, a term or abbreviation is not explained on its first introduction, or is described later on in the document (e.g. ACDP, CTD and UAV).</p>	
<p>Clearer signposting is needed in the document to both best practices and guidelines, and</p>	

sources (e.g., in para. 117).		
A summary table of variables; sampling technique(s); indicative replication; indicative temporal/spatial variation would be useful.		
General Note Under 'C. Sampling Resolution – 1. Pelagic sampling' (para 223 -224), no indication of replicates provided or temporal resolution.		
General Note - Under 'I. Measured Variable – Whales, sharks, turtles and surface nekton' (Para 324-325) does this need expanding on? The section is very light compared to the others but is likely to be a focus for many consultees.		
General Note - Under 'J. Measured variable - seabirds' (Para 326-331) does this need expanding as again it is likely to be a focus for some consultees?		
<b>Specific Comments</b>		
<b>Page</b>	<b>Line</b>	<b>Comment</b>
7	164-166	<i>For variables that are not expected to show significant seasonal variability (e.g., sediment infauna... We disagree that it can be assumed that there will not be seasonal variability for benthic infauna (e.g., during periods of recruitment) and so agree it would be important to validate this.</i>
7	167-173	This paragraph reads that collection of baseline data should cover, as a minimum, a 3 year period. This is an important guideline so should this be stated higher in up section? Same comment as for Paragraph no. 57 where 3 years is mentioned but in Paragraph no. 57 it talks about “every season for at least 3 years”. Paragraph 57 therefore implies a constant collection of baseline data over 3 years, rather than just collecting data for a 3 year period.
7	174-176	If repeat sampling over X years, then statement to add that sampling should ensure that any results are not an artifact of sampling itself. E.g., as sampling of the seabed causes disturbance, so if sampling the next season/year be aware that any changes are not indicative of sampling effects by of any natural temporal changes.
7	179-184	Clarification required. This paragraph states that 3-4 <u>replicate</u> samples are to be taken within the surface to 200 m depth - is that 3-4 samples to be taken between the surface and 200 m, or 3-4 at each of the sub-layers within that sampling zone?
8	230-232	<i>...the sampling programme <b>should be adjusted if required to ensure the baseline data is focused on areas where mining is expected to take place and any impacts are likely to be seen.</b></i> If a sampling programme is adjusted to focus on where areas of mining are expected to take place, does this extend the duration of the sampling programme itself e.g. re-starts the clock to get adequate baseline data to cover temporal variation?
9	266	It would be useful to understand the types of “state-of-the-art models” discussed here, either as examples or specific guidance. The models are

		likely to be developed and enhanced by the Applicant and/or external consultants and therefore some latitude in allowing these models to feed into updated EMMPs and subsequent EISs may be required.
12	376-377	<i>Oceanographic and hydrochemical measurements and sampling should be undertaken at the <b>same stations</b> where biological sampling is performed.</i> Further clarification is required as to how the “same station” is defined in this context for sampling of each parameter/variable– e.g. should this be a simultaneous physical sample, or a sample in the same location in water column (e.g., plankton sampling) or directly at sediment surface for benthic fauna? Or both?
12	391-394	<i>To study diurnal variability of the water column properties, a diurnal station should be established for each physiographic unit with samples taken from surface to the depth of 200 meters. As noted in section III.A, sampling should also be repeated every season for at least three years to determine annual and inter-annual variability.</i> As per comment on Paragraph no. 17, this is now every season for 3 years – need to define the season (which may require additional data collection) and also collect a significant level of data constantly for 3 years if the seasons are changing regularly.
20	733-735	<i>For most of the chemical and biogeochemical variables, community-wide accepted methods exist and these should be used to ensure high-quality accurate and precise data that are comparable across licence areas and contractors.</i> Can these accepted methods be listed in the document to prevent ambiguity? A list of methods and/or Standard Operating Procedures etc. would be useful to avoid inconsistency.
22	787-794	We feel this paragraph needs clearer signposting, where appropriate, for other paragraphs and sections of the document where ‘Best Practices’ are referred to and detailed.
22	802-806	<i>At least one CTD station and two sediment traps should be established in the water column above each impact reference zone (IRZ), preservation reference zone (PRZ), and intended mining area within the contract area. In addition, transects with regularly spaced CTD stations at distances of about 100 km should be conducted throughout the licence area.</i> To confirm – only a minimum of a single replicate in each of the 3 zones (IRZ; PRZ and mining area)? Presumably these stations should be the ones regularly monitored as part of the baseline program described in paragraph 57?
36	1410-1415	We suggest that the in-situ physical properties of the sediments are also collected and recorded. These data will be used to generate more relevant and specific modelling results for the EIS.
38	1468-1472	It would be useful to produce, or signpost to, a standardised terminology of abyssal undersea features to ensure consistency and that all consultees will understand the nature of the features described.
38	1498-1502	<i>...The water and the organisms within this vast volume move across potential mining site(s), so sampling should extend beyond the immediate</i>

		<p><i>zone of direct mining impact to include all the water and organisms entering, potentially interacting with, and exiting, the zone of mining impact.</i></p> <p>To what extent beyond the mining site(s); the extent could be determined from predictive modelling or a pre-determined buffer zone? If the modelling is to be required first, this may hold up the application development.</p>
39	1531-1532	<p><i>To document regional diversity and connectivity patterns, it is likely that comparisons with <b>distant sites</b> will be required. Such comparisons may require sampling of <b>distant sites</b> as part of the baseline or may rely on comparisons with third-party data sources.</i></p> <p>It would be useful to define 'distant' as a range, at least in Km's.</p>
42	1649-1650	<p><i>Benthic communities can be divided into a number of size-class and functional groups. Whilst sampling should be aligned wherever possible, each group is subject to different considerations.</i></p> <p>The groups are:...For Macrofauna it is standard to use 500 µm (e.g., animals usually retained on a mesh size of 500 µm). Please clearly state if the preferred standard for deep sea fauna is to use a finer mesh of 250-300. µm, as specified in the ISA Macrofauna workshop Output recommendations in ISA Technical Study No. 13: Deep Sea Macrofauna of the Clarion-Clipperton Zone.</p>
43	1701-1704	<p><i>Transect length should be determined using existing data for the region to ensure sufficient megafaunal organisms are encountered in each transect for effective and robust evaluation of the metrics of interest. For biodiversity assessment, transects should be designed with the aim of encountering &gt; 500 individual organisms in each transect.</i></p> <p>Can this easily be predicted (the length of a transect to encounter &gt;500 individuals)? How often should stills be taken along a transect, as in Paragraph 238 it is stated that along the transects, image assessment should use stills and not moving images from videos. Thus, it is important to understand the frequency of still images to be taken along a transect, as this may influence the number of individuals encountered.</p>
44	1754-1768	<p><i>For sediment fauna, all processing should be performed in a wet laboratory. The sediment should be divided into 0-3cm, 3-5cm and 5-10cm depths and each sieved with cold filtered seawater. ... Increasingly samples are needed for both morphological and molecular analyses and so the use of formaldehyde as a fixative should be carefully considered...</i></p> <p><i>Formaldehyde should not be used for fixing crustacean groups such as isopods; for such taxa preservation in 96% Ethanol is advised. Samples should be fixed in formaldehyde solution for at least 24 hours, then as soon as is practicable, all samples should be transferred from formaldehyde solutions into 70-80% EtOH solution.</i></p> <p>(1) Sieved over what size sieve(s) per depth fraction, also these will likely include 'megafauna' (&gt;0.1cm) (2) It cannot be avoided to fix crustaceans in formaldehyde solution if they are present in sediment fractions &gt;3cm, as the whole fraction will be fixed first in formalin, and then specimens extracted and put in ethanol.</p>

49	1959-1960	<p><i>A disadvantage of camera systems is that species are often difficult to discriminate in images but if utilised, a <b>minimum of ten replicate</b> baited camera drops should be used.</i></p> <p>Need to clarify that the 10 replicate baited camera drops are to be distributed spatially across the mining, PRZ and IRZ reference zones of interest.</p>
<p><i>Additional rows can be added to this table by selecting "Table" followed by "insert" and "rows below"</i></p>		

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