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.jm, 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.

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

Document reviewed	
Title of the draft being reviewed:	**Draft Guidelines for the establishment of baseline environmental data**
Contact information	
Surname:	Charlet
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General Comments
GSR thanks the International Seabed Authority for the opportunity to comment and appreciates the work of the Legal and Technical Commission in preparing these Guidelines.
Robust baseline data is important for EIAs, EISs, EMMPs, REMPs and, ultimately, informed decision-making. It is imperative that baseline data is collected in a comparable and standardized way. The current form of this guideline offers differing levels of detail for different parameters to be measured. This leads to uncertainty and potentially non-standardized sampling and processing and incomparable data – which risks making environmental management on a regional scale (REMP-scale) very difficult.
A number of contractors (GSR included) have developed plans and have been conducting baseline studies following previously published ISA recommendations on baseline studies – i.e. ISBA/19/LTC/8 of 2013, which was later replaced by ISBA/25/LTC/6 in 2019, and then updated to ISBA/25/LTC/6/Rev.1 and /Corr.1 in 2020. These recommendations have been developed over many years and with a great deal of stakeholder input. In some cases, the current draft guidelines appear to be a step backwards from the already existing recommendations on baseline studies. GSR's preference would be to see <u>one set</u> of guidelines for baseline studies, that is much more aligned with ISBA/25/LTC/6/Rev.1 and /Corr.1 than this current draft guideline is.
If there are to be two guidance documents related to baseline studies, this document needs be much better aligned with ISBA/25/LTC/6/Rev.1 and .Corr.1 to minimize confusion and to ensure comparable data sets.
As an aside: should this guideline be part of the Exploration Regulations rather than Exploitation Regulations (noting that baseline studies are for the most part conducted under the exploration contract)?
It is important to recognise that the list of studies required is an enormous amount of work, and could be nearly impossible (if not impossible) to operationalize, if attempts were made to complete all studies exactly as outlined. There is no mention of the importance of parameters that should be documented or rationale for why they are important. It would be difficult for a contractor to design a sampling scheme to captures all these measurements that is efficient and effective. Ship time is limited and some prioritizing and/or decisions for efficiency purposes will need to be made - e.g. a water sampling carousel with a CTD, etc, might end up affixed to the wire of a box corer or multiple-corer to make the most out of each "cast" and ensure each hour offshore is used as efficiently as possible. The guidelines need to allow for some ingenuity and flexibility. It also is important that the guidelines are not so prescriptive that they stifle innovation or opportunistic data collection that can provide valuable results.
For guidelines to be useful – they should mention what needs to be measured, not necessarily how.
Offshore campaigns can be performed at different times of the year to study temporal variability in the NE Pacific Ocean. However, some months of the year present risk for offshore operation (December, January and July, August during the hurricane period). In such cases, safety of offshore activities must always prevail.
In the Geological Section, the use of seismic devices may also be a very good way to better understand the relationship between sediment and presence of nodules and specific habitats. We strongly suggest including this geophysical technique in this section.

The feedback provided here is not exhaustive and we hope there will be other opportunities to engage on the topic of baseline study guidelines.		
Specific Comments		
Page	**Line**	**Comment**
4	71	GSR notes these guidelines are meant to build on the recommendations (ISBA/25/LTC/6/Rev.1 and /Corr.1) however in many cases the detail and 'requirements' do not align. If there are to be two documents related to baseline study guidance/guidelines, there needs to be complete alignment for the parts that overlap.
4	82-86	The statement "The primary goal of the acquisition of baseline data is to enable an assessment of the possible impacts of exploration and exploitation activities on the marine environment prior to those activities taking place." may need some expansion. As a suggestion: **The primary goal of baseline data acquisition is to characterise the existing environment, prior to an impact occurring,** so that an assessment of the possible impacts and effects of exploration and exploitation activities on the marine environment can be made prior to those activities taking place.
5	124	Should "statistic" be "statistical"?
6	Figure 1	Is box coring a seamount realistic? If a specific aim is to avoid impacts and effects to seamounts presumably this kind of sampling would not necessarily be needed?
6	Figure 1	Should examples of "Biogeochemical entities" and "physiographic zones" be provided and/or should there be further definitions of what these terms mean?
6	Figure 1	Similarly, explaining nuances between "zones" & "units might further help. An estimate of the minimum surface these zones / units should cover to be relevant would be an appropriate addition. As an example, if seamounts cover 0.1 % of the contract area, is it relevant to sample it/them as strongly as another habitat type covering 99.9 % of the contract area?
6	157	AUV imagery survey in some specific and contrasted topographical environments (slopes, seamounts) may be impossible to perform because of technical/equipment safety limitations. It may be necessary to mention these limitations. In this specific case, the use of a ROV may be preferable. It may be sufficient to say "seafloor acoustic and optical imagery" is needed and leave it to the contractor to determine how best to acquire this data.
7	159	As it is known that the only food supply is coming from the surface, could observations be reduced if it is proven after extensive desk study (e.g.

		using satellite data) that the spatial & temporal variability within the contract area is limited?
7	173	Account for climate change for sampling when the ecosystem functions are not yet defined per se for nodule fields might be challenging.
7	179-184	If a midwater impact is expected, then water column sampling at and around the appropriate depth(s) should be conducted.
7	185-194	Does this align with the recommendations provided in ISBA/25/LTC/6/Rev.1? Note slicing at 0.5 cm intervals is challenging for boxcorer samples, for example.
7	179-194	This part of the document appears to be overly prescriptive. GSR recommends that this text be removed. The sampling details are provided in subsequent sections of the guidelines.
8	204-207	Can different cores of a multiple corer never be considered replicates?
8b	208-210	What happens if ISBA/25/LTC/6/Rev.1 and Corr.1 and the guidelines contradict one another? GSR again recommends that these guidelines align with ISBA/25/LTC/6/Rev.1 and /Corr.1 to avoid confusion and to avoid potential gaps.
9	253-262	Agree GOOS EOVs are a good starting point
11	335	There is inconsistency and some duplication between Physical Oceanography section (from line 335) and the Chemical Oceanography and Biogeochemistry section (from line 671). E.g., see mentions of CTD and ADCPs and parameters to be measured. GSR recommends using the wording from ISBA/25/LTC/6/Rev.1.
12	370-375	Is there or should there be a glossary of terms and/or acronyms table? (CTD, LADCP, AUVs, etc).
12	384-388	Are the depths listed for physical parameters only? Does it pertain to water sampling? If so, does it apply to chemical properties in the water column as well? Depths should be chosen that are appropriate to the expected locations of environmental impacts and effects. While providing the expected sampling resolution is useful, such a prescriptive list could risk missing important depths that samples should be obtained from. .e.g if dewatering plant (return water) discharge is planned for 3000 m water depth, this guideline would have "okayed" sampling at 2000, 2500, 3000, 3500 m water depth, which does not seem appropriate/adequate for this particular scenario. Sampling depths should be chosen to a) characterize the existing environment and b) reflect locations where impacts/effects are expected to occur. An additional point: The currently suggested water depths would represent 2 or 3 deployments of typical scientific rosettes per station, and incredible filtering periods, representing important ship time to characterize an almost continuous water column. This level of detail may not be entirely needed, and it may not be the best use of ship time or resources.

12	391-394	What is meant by "every season"? Should "every season" be "seasonally" or "winter and summer seasons"? It would seem this may be more appropriate. It may be more appropriate (better) to focus efforts on studying diurnal variability.
12-13	395-428	Advice on ADCP data seems too prescriptive. Guidelines should indicate what needs to be measured, not necessarily how. ADCPs, LADCPs, ship-mounted, floats and drifters, moorings, etc - the guidelines currently state all should be done, but perhaps these are examples of how the required data could be collected. To require all these methodologies would likely be cost prohibitive. It could be re-worded to state "Floats and drifters may also be deployed…" It is noted too that there have been varying degrees of success with L-ADCP deployments – they are not easy to set up properly and data interpretation is not straightforward. GSR strongly recommends that the guidelines focus on what is required to be measured rather than be so prescriptive about how to measure it.
13	430	This is too prescriptive. CTD profiling can be done on a wire, an ROV, AUV or glider are not necessarily needed. Guideline needs to say CTD profiling is needed. How it is done should be left up to the contractor (and/or their scientific advisors).
13	439-441	This text is too prescriptive and misses out standard wire deployments. Also, CTDs or appropriate sensors can be deployed on other sampling devices, e.g. box corer, multiple corer wires.
14	449	Buoys/moorings can also be used. Again, by being so prescriptive, the guidelines risk missing out other valid instrumentation and methodologies, including new/innovative ones.
14	464	Are surface drifters very useful to measure currents? Most effort needs to be applied where most impact and effects are anticipated, and should focus on understanding the extent and duration of sediment plumes. This part of the text again seems too prescriptive and possibly out of sync with priorities.
17	577-587	It is important to note that noise measurements can be used to measure background noise levels (to capture ship traffic as well as cetacean activity, for example) and also to measure noise created by the activity.
20	709-713	GSR's understanding is that the carbonate system does not constrain primary production or organic carbon remineralization (although we recommend confirming with the relevant scientific experts on this point).
32	1241-1246 (and other)	GSR notes that with the exception of 210Pb, new studies have been introduced here that are not included in the previous recommendations on baseline studies (i.e. ISBA/25/LTC/6/Rev.1). What information would these new analyses provide that is not already captured by other studies?

		As a general point, where additional studies have been added, it would be useful to understand the rationale and ensure it is applicable to / needed for baseline studies/EIA work.
35	1363	RE: “deformation and changes of seafloor sediment physical properties”: if this is about the geotechnical shear strength, it should be clearly mentioned.
35	1365	Resources are indeed confidential information. However, if the target result is to map the different habitats, it should maybe be preferable to give the required parameters.
35	1371	MBES using ROV device is not supported by GSR. It is also important to mention that the ship-based or the deepsea robotics come with totally different data resolution. Both are necessary, and not one or the other.
35	1382	Please explain why deep core (gravity/piston..) should be collected and studied for the purpose of baseline study.
36	1410	If sediment lithology is the reason of performing deep-core, please describe the application or information that will be used for exploitation
40	1576-1579	Does this align with Figure 1 ?
44	1755	This part states for macrofaunal analysis, the sediment should be divided into 0-3 cm, 3-5 cm, and 5-10 cm depths. However, in ISBA/25/LTC/6/Rev.1, the following depth slices are recommended for macrofauna: 0-1 cm, 1-5 cm, 5-10 cm. GSR is concerned that the inconsistency will cause confusion and result in data sets that are not comparable. As mentioned previously, GSR strongly recommends ensuring consistency between these guidelines on baseline studies and the existing recommendations on baseline studies – or developing one set of guidelines (or set of recommendations) for baseline studies (based on ISBA/25/LTC/6/Rev.1) which would avoid cross-document consistency issues altogether.
55	2204-2212	Given the fairly few observations to date of whales, sharks, turtles and surface nekton during offshore campaigns to the CCZ, it may not be overly useful (or the best use of ship time) to conduct the specific surveys as outlined here. It may be more efficient/useful to ensure a Marine Mammal Observer is on board to help record sightings and for the surveys to be done only when a risk assessment warrants it, with any data obtained supplemented by passive acoustic monitoring.
55	2216-2343	Similar comment to the row above – it may be worthwhile having a dedicated observer to log seabird sightings on offshore campaigns, but dedicated surveys might only get done if a risk assessment warrants it. Again, ship time will need to be prioritized and seabird surveys to the detail described in these guidelines this far offshore (CCZ) may not be practical or warrant prioritization over other studies. We would be happy to engage on this or any other point further.

59	2372	The Bibliography appears to be incomplete. There are some references provided in the text of the guidelines that don't appear here.
Additional rows can be added to this table by selecting "Table" followed by "insert" and "rows below"		

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