

**TEMPLATE FOR SUBMISSION OF TEXTUAL PROPOSALS DURING THE 29TH SESSION:
COUNCIL - PART II**

Please fill out one form for each textual proposal which your delegation(s) wish(es) to amend, add or delete and send to council@isa.org.jm.

1. Name(s) of Delegation(s) making the proposal:

Japan

2. Please indicate the relevant provision to which the textual proposal refers.

Annex X bis

3. Kindly provide the proposed amendments to the regulation or standard or guideline in the text box below, using the “track changes” function in Microsoft Word. Please only reproduce the parts of the text that are being amended or deleted.

Design Criteria for Impact Reference Zones (IRZs) and Preservation Reference Zones (PRZs)

Applicants must establish suitable and effective Impact Reference Zones (IRZs) and Preservation Reference Zones (PRZs) in order to monitor the Environmental Impacts of their activities. The following parameters shall apply in the designation of IRZs and PRZs.

1. IRZs and PRZs must be situated within the Contract Area (and the Contract Area may need to be selected around the need for appropriate IRZ/PRZs, especially where multiple or large reference zones are required)
2. The applicant needs to demonstrate that the IRZ/PRZs are [environmentally]similar before the commencement of mining. [Additional PRZs and IRZs have to be introduced subsequently, once areas ecologically dissimilar from the primary PRZ are impacted, to warrant future comparability.]
- ~~3. To designate representative IRZs/PRZs requires characterisation of the pelagic and benthic environment including all sub-habitats that may be impacted by Exploitation activities mining operations, and determination of regional distributions and patterns of connectivity of communities. Temporal variation must also be evaluated over multiple years.~~
4. IRZs must be zones where direct impacts from mining are predicted to occur once mining commences.
- ~~5. All types of impact [from mining related activities in any Contract Area identified in the Environmental Impact Statement], must correspond with [at least 1] IRZ[/IRZs] which will enable the Contractor to monitor these impacts. Designation of multiple IRZs [(or a very large IRZ) may be necessary is possible] for this purpose.~~
6. The area(s) of the IRZ(s) needs to be sufficiently large and representative to allow adequate assessment of recovery of populations and environmental conditions after the Exploitation activities, in accordance with the applicable relevant Standards, and taking into consideration account relevant Guidelines.

7. PRZs will be important in identifying natural variations in environmental conditions against which impacts shall be assessed and must be comparable to that of the impacted areas, in accordance with the applicable relevant Standards and, taking into consideration account the relevant Guidelines. ~~[The abiotic and biotic baseline data include but are not limited to the quantity and quality of mineral resources, species composition and habitat types.]~~
8. PRZs must be areas that will not be impacted by Exploitation activities from any Contractor, including impacts from operational and discharge plumes and including during the post-closure period. PRZs ~~should~~**must** also be free from impacts of other industrial activities. PRZs ~~should~~**must** remain unimpacted throughout the post-mining monitoring period.
9. Where a Contract Area consists of several disjunct sub-areas that are isolated from each other, then each of those areas would require a corresponding PRZ and IRZ.
10. Use of multiple PRZs and IRZs should be considered for increase in statistical rigour, and chance of detecting effects and adding redundancy in case of unexpected variation/plan changes.
11. The area of the PRZ needs to be sufficiently large to contain sufficiently large populations to guarantee long-term survival. The PRZ will also require a buffer zone around it to protect the populations and ensure maintenance of natural environmental conditions in the PRZ.
- ~~12. Abiotic and biotic parameters, within the IRZ and PRZ will need to be monitored to quantify impacts. This includes but is not limited to monitoring species diversity and function. To establish an adequate baseline and to find suitable indicator species (e.g., the sensitive species that will suffer most from an impact, key stone species that are crucial for ecosystem processes, or species which abundance indicates a disrupted ecosystem functioning), it will be necessary to catalogue most species in the IRZ and PRZ in question and unravel their functions. This will require sufficient sampling effort to collect sample sizes that allow for a meaningful comparison (i.e., with high statistical power).~~
- ~~13. The longevity of PRZs and duration of post-mining are important. The duration of post-mining monitoring should last until [monitoring results show a trajectory towards recovery. Post-mining monitoring should be described in the final EMMP and/or Closure Plan] no measurable difference between IRZ and PRZ can be detected anymore. [13 Alt. Post mining monitoring shall continue until [monitoring show a trajectory towards recovery of] ecosystem function [returns to the level of the pre-mining condition] agreed within the EMMP/Closure Plan and taking into account the time taken to reach a new equilibrium state.]~~
14. Isolation of PRZs is important. Any PRZ will by definition have to remain unimpacted throughout the post-mining monitoring period.
- ~~15. To designate representative IRZs/PRZs requires characterisation of the pelagic and benthic environment including all sub-habitats that may be impacted by Exploitation activities mining operations, and determination of regional distributions and patterns of connectivity of communities. Temporal variation must also be evaluated over multiple years.~~
- ~~16. An applicant will need to be able to demonstrate knowledge of species' ecological requirements (e.g. for successful reproduction); an average population density alone will not suffice.~~

4. Please indicate the rationale for the proposal.

【General comment】

- Since the Annex specifies the design criteria for Impact Reference Zones (IRZs) and Preservation Reference Zones (PRZs), the main text should include provisions regarding their installation.
- Paragraphs 3 and 15 are duplicated, so the latter should be deleted.

【Specific comments】

Paragraph 3: (As for all sub-habitat) Requiring for characterization of all sub-habitats in the absence of established methods or rules for extracting impacts may lead to ineffective results. Therefore, the minimum requirement should be provided for in Guidelines. Alternatively, it would be acceptable to delete this paragraph from Annex X bis and move to Guidelines.

Paragraph 3; (As for patterns of connectivity) If the determination of patterns of connectivity is required without the establishment of rules and methods for selecting target species (or communities), it could be ineffective. Therefore, this paragraph should be deleted from Annex X bis and be moved to Guidelines, which should provide criteria for selecting target species and methods for understanding patterns of connectivity.

Paragraph 5: We believe that the scope of types of impact dealt with in this paragraph should be made clear. Whereas in the previous text the scope was all types of "impact identified in the Environmental Impact Statement," in the current text it has been changed to all types of impact "from mining-related activities in any Contract Area", which is a more abstract expression. In order to standardize the efforts of contractors and the accuracy of their respective survey results, the target impact should be clarified in Guidelines. If it is not clarified in Guidelines, it should be reverted the expression "impact identified in the Environmental Impact Statement".

Paragraph 8: In practice, it is difficult to ensure PRZs without any impacts of other industrial activities, though it is desirable goal. Therefore, we propose to use "should" instead of "must" in the second sentence.

Paragraph 12: Annex X bis should indicate the design criteria for IRZ and PRZ, but here paragraph 12 describes the survey and analysis methods. Therefore, this paragraph should be deleted from the Annex and be moved to Guidelines.

Paragraph 13: It is unclear what parameters are being targeted in the condition that no measurable difference between IRZ and PRZ can be detected anymore. If the parameter refers to the biological community, it is never assumed in ecology that such difference will disappear. For example, if manganese nodules are recovered, the community composition, dominant species, and species diversity will all change and stabilize in a different state from the original. Even if the parameters refer to physicochemical ones, even the smallest of differences can be detected as the accuracy of measuring

instruments improves. In any case, the requirement in this paragraph cannot be achieved. Furthermore, as we pointed out in paragraph 12 Annex X bis should show the design criteria for IRZ and PRZ, but paragraph 13 explains the monitoring period. Therefore, the contents of this paragraph should be deleted from the exploitation regulation and be indicated in Guidelines. However, even if they are included in Guidelines, for the reason stated above, the current text is not acceptable.

Paragraph 16: Paragraph 16 is not enough to share understanding among stakeholders regarding species' ecological requirements, including successful reproduction. It should be more appropriate to provide detailed information in Guidelines after consultation with experts in deep-sea ecology and biology rather than to refer to incomplete information in short sentences in the Annex. As mentioned in other paragraphs, Annex X bis should specify the design criteria for IRZs and PRZs, but demonstrating knowledge of species' ecological requirements (e.g., for successful reproduction) is not a criterion, and therefore, this paragraph should be deleted from the Annex and be moved to Guidelines.