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Draft regulations on exploitation of mineral resources in the Area

The Facilitator's fourth revised draft text on Parts IV and VI and related Annexes

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Explanatory note

1. I have prepared this fourth revised text ("the Facilitator's fourth revised text") in the enclosure to assist discussions in the Informal Working Group on the Protection and Preservation of the Marine Environment, with a view to advancing the work on Parts IV and VI and related Annexes of the Draft Regulations.

2. I have adopted a similar approach to the revisions as with the previous versions of the text, and I refer to the Facilitator's further revised text in respect of working modalities (ISBA/28/C/IWG/ENV/CRP.1). The views expressed and the textual proposals made during and after the meeting in July 2023, either by individual participants or the result of group discussions, were considered in the preparation of this fourth revised text.

3. As participants will recall from the meeting in July 2023, we managed to conduct a reading of draft regulations 44 to 48. I have thus made a full revision of draft regulations 44 to 48 based on that and furthermore updated draft regulation 49 and onwards with the additional incoming proposals since the meeting. I suggest to resumed the reading from draft regulation 49.

4. The content of this text is without prejudice to the position of any participants on any of the matters referred to therein and does not preclude the consideration of matters not included in the document.

Enclosure

Further revisions to the relevant parts and Annexes of the Draft Regulations

Part IV
Protection and preservation of the Marine Environment

Section 1
Obligations relating to the Marine Environment

Regulation 44
General obligations

1. The Authority, Sponsoring States, the Enterprise, Contractors and flag States [and States competent for vessels, installations, structures and other devices flying their flag or of their registry or operating under their authority] shall each within their plan, adopt, implement and update all measures necessary for ensuring effective protection of the Marine Environment, including but not limited to rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species from harmful effects directly or indirectly resulting from Exploitation in the Area. in accordance with the Convention, the Agreement, the Rules of the Authority, Standards and taking into account Guidelines including those referred to in Regulation 45, international law and the applicable Regional Environmental Management Plan. To this end:

(a) In adopting and keeping under periodic review rules, regulations and procedures, as well as the Standards and Guidelines in accordance with the Convention and the Agreement, the Authority shall:

(i) Apply the precautionary approach and [~~the~~] [an] ecosystem-based approach to the assessment, ~~–~~management and prevention of risk of harm to the Marine Environment from Exploitation in the Area,

(ii) Apply the Best Available Techniques and Best Environmental Practices taking into account the applicable guideline,

(iii) [Ensure] ~~Integrate~~ Best Available Scientific information, traditional and indigenous knowledge in decision-making, including all risk assessments and management undertaken in connection with environmental assessments, acknowledging knowledge gaps, and uncertainties and the management and response measures taken under or in accordance with Best Environmental Practices; and

(iv) Ensure accountability and transparency in the assessment, evaluation and management of Environmental Effects and risks from Exploitation in the Area including through Stakeholder participation in accordance with the relevant Standard and the prompt public release of environmental data and information, ~~including~~ [as well as] sampling methodologies and associated metadata, at regular intervals and in an accessible format through the Authority's website, including in accordance with Regulations 92 and 92bis.

(iv)bis Take into account the approach that the polluter should bear the cost of pollution, endeavour to promote practices whereby those engaged in exploitation activities bear the cost of meeting the pollution prevention and control requirements for the authorized activities, having due regard to the public interest.

~~(iv.ter) Ensure accountability and transparency in the assessment, evaluation and management of Environmental Effects and risks from Exploitation, including through the participation and consultation of Potentially Most Affected Coastal States and other Stakeholders, as well as the prompt public release of environmental data and information at regular intervals and in an accessible format through the Authority's website.~~

[(v) omitted]

~~(vi) Ensure to minimize the direct or indirect damage or the likelihood of damage from one part of the environment to another or transform one type of pollution into another as stated in article 195 of the Convention. This is especially related to avoiding persistent and bio accumulative toxic, persistent and bio accumulative substances effects.~~

~~(vi Alt.) In implementing the regulations, the Contractor shall not transfer, directly or indirectly, damage or hazards, or the likelihood of damage or hazards, from one part of the environment to another, or transform one type of pollution into another, as stated in article 195 of the Convention, and shall not use toxic, persistent and bio accumulative substances.~~

(b) In taking all necessary measures to ensure that the Contractor carries out Exploitation in the Area in conformity with the terms of its contract and its obligations under the Rules of the Authority related to the effective protection for the Marine Environment from harmful effects, the Sponsoring State shall, assist the Authority to implement, the measures set out under paragraph (a)(i) to (vi) above.

(c) In taking all necessary measures to prevent, reduce and control pollution and other hazards to the Marine Environment and its ecosystem structure, function and resilience, including the adjacent coastlines, and of interference with the ecological balance of the Marine Environment which includes ecosystem integrity arising from its Exploitation in the Area, the Enterprise and Contractors shall [implement, mutatis mutandis, the measures set out under paragraph (a)(i) to (iii) above and] demonstrate accountability and transparency in the assessment, evaluation and management of Environmental Effects and risks from Exploitation , including through Stakeholder participation and the prompt public release of environmental data and information on their respective activities at regular intervals and in an accessible format [consistent with best scientific practices]. In so doing, the Enterprise and Contractors –shall apply a priority order to avoid, minimize, Mitigate, [and if feasible] remediate, and restore harm to the Marine environment and adapt the necessary measures according to [~~newly~~] obtained information and data.

2. In adopting laws and regulations, in accordance with the Convention, to prevent, reduce and control pollution of the Marine environment from Exploitation undertaken by vessels, installations, structures, [robots] and other devices flying their flag or of their registry or operating under their authority, as the case may be, States shall implement, *mutatis mutandis*, the measures set out under paragraph 1(a)(i) to (vi) above.

The parties shall:

(a) Apply the precautionary approach, and [~~the~~] [an] ecosystem-based [~~management~~] approach to the assessment and management of risk of harm to the Marine Environment from Exploitation in the Area;

(b) Apply the Best Available Techniques and Best Environmental Practices;

(c) Integrate Best Available Scientific information in decision making, including all risk assessments and management undertaken in connection with environmental assessments, acknowledging knowledge gaps and uncertainties and the management and response measures taken under or in accordance with Best Environmental Practices; and

(d) Ensure accountability and transparency in the assessment, evaluation and management of Environmental Effects and risks from Exploitation in the Area, including through Stakeholder participation and the timely public release of relevant environmental data and information at regular intervals and in an accessible format through the Authority's website.

(e) Take into account the [approach] [principle] that the polluter should, [~~in principle~~], bear the cost of pollution, endeavour to promote practices whereby those engaged in exploitation activities bear the cost of meeting the pollution prevention and control requirements for the authorized activities, having due regard to the public interest.

(f) In implementing the regulations, act so as not to transfer, directly or indirectly, damage or likelihood of damage from one part of the environment to another or transform one type of pollution into another as stated in article 195 of the Convention. This especially related to the previous reference to avoiding toxic, persistent and bio accumulative substances.

(g) Ensure that Exploitation under an exploitation contract is carried out with reasonable regard for climate mitigation and ecosystems in the area, such as carbon burial and sequestration and nutrients recycling.

3. The Legal and Technical Commission shall make recommendations on the implementation of paragraphs 1 and 2 above.

4. No regulation in this Part shall be interpreted as preventing Sponsoring States, the Enterprise and Contractors from taking, individually or jointly, more stringent measures in accordance with codified and customary based international law with respect to the prevention, reduction and where practicable elimination of detrimental effects on the marine environment.

[Regulation 44 Alt

General Obligations

1. The Authority, sponsoring States, the Enterprise, Contractors, flag States and the States of registry of or having authority over installations, structures and other devices shall take necessary measures to ensure effective protection of the Marine Environment from harmful effects which may arise directly or indirectly from Exploitation in the Area, in accordance with Regulations and Standards and taking into account Guidelines referred to in regulation 45 and the relevant Regional Environmental Management

Plan and to this end shall, as applicable in their respective areas of competence:

(a) Apply the precautionary approach and the ecosystem-based management approach to the assessment management and prevention of risk of harm to the Marine Environment from Exploitation in the Area;

(b) Apply the Best Available Techniques and Best Environmental Practices;

(c) Integrate Best Available Scientific Evidence in decision-making;

(d) Ensure accountability and transparency in the assessment, evaluation and management of Environmental Effects and risks from Exploitation in the Area

(e) Apply the polluter pays principle having due regard to the public interest; and

(f) Ensure that damage or hazards are not transferred to the marine environment and that one type of pollution is not transformed into another one. This is especially related to avoiding toxic, persistent and bio accumulative substances.

2. The Legal and Technical Commission shall make recommendations on the implementation of paragraphs 1 above as required.

3. No regulation in this Part shall be interpreted as preventing sponsoring States, the Enterprise and Contractors from taking, individually or jointly, more stringent measures in accordance with international law with respect to the prevention, reduction and where practicable elimination of detrimental effects on the marine environment.]

Explanation / comment

- After our last meeting, several alternative suggestions have been put forward in respect of draft regulation 44, including suggestions from the Intersessional Working Group on Regulation 44. After going through the different proposals, I suggest continuing the negotiations based on the proposal by the Intersessional Working Group on Regulation 44 (called "option 2" by the intersessional working group), as I believe it represents many of the points and considerations raised by participants during our previous meetings.
- I have retained the original draft regulation 44 and have updated it according to proposals received during the July meeting and incoming proposals. During our last meeting, I noted that there were no clear views on whether point "*vi*" or "*vi alt*" in paragraph 1, litra a should be used. I propose deleting both versions of point "vi" as I believe "litra g" in paragraph 1, to a large extent, covers the same.

Regulation 44bis
Regional Environmental Management Plans

1. The Commission shall consider an application for a Plan of Work [~~if a~~] [based on the adopted] Regional Environmental Management Plan [~~has been adopted~~] by the Council for the particular area and type of resource concerned.

2. [In the event that an application for a Plan of Work is submitted for an area where no such Regional Environmental Management Plan exists, the drafting of a Regional Environmental Management Plan applicable to the area in concern shall be prioritised and adopted without any undue delay, taking into account Section 2, Article 15 b/c of the 1994 Agreement.]

Regulation 45
Development of environmental Standards and Guidelines

1. Environmental Standards and Guidelines developed under this regulation shall have the [~~aim to ensure~~] [purpose of ensuring] the effective protection of the Marine Environment from harmful effects, in accordance with Article 145 of the Convention.

2. The Council shall, based on the recommendations of the Commission, adopt Environmental Standards in accordance with regulation[s] 94 [and 95], inter alia on the following subject matters:

(a) Baseline investigations;

(b) Environmental quality objectives;

(c) Indicators and quantitative environmental thresholds, including but not limited to:

(i) biodiversity status and ecosystem structures, functions and services;

(ii) sediment plume properties such as [turbidity, depositional footprint and chemical composition], dispersion and dilution, resettlement, temperature [and,] toxicity. [~~and chemical composition~~]

(iii) Physico-chemical Characteristics of seawater and sediment, [including]water chemistry and temperature

(iv) light emissions;

(v) noise and vibrations emissions and

(vi) habitat[disturbance] [~~removal~~].

(d) Monitoring procedures

(e) Mitigation measures [, including restoration measures]

(f) [Minimum] [t]echnical [and operational] requirements for environment protection with regard to [all] the equipment used for the Exploitation activities

(g) Assessment of accidental events and natural hazards leading to environmental emergencies as well as environmentally hazardous discharges and residual effects of such emergencies, including preparation and implementation of emergency response and contingency plans.

(h) Procedural and substantive requirements relating to submissions or reports required by these regulations, including but not limited to: Plans of Work, Environmental Management Systems, Environmental Impact

Assessments, [~~Environmental Risk Assessments~~,] Environmental Impact Statements, Environmental Management and Monitoring Plans and Closure Plans.

3. The Authority shall not approve any Exploitation [~~activities~~] ~~-~~unless the environmental Standards [and Guidelines] have been adopted.

4. In addition to the environmental Standards, Guidelines on environmental matters may be developed, in accordance with regulation 95.

5. [The application of this Regulation shall be without prejudice to the function of the Council to develop other Standards and Guidelines on the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the Marine Environment, taking into account the development of the exploitation activities in the Area]. Environmental Standards and Guidelines shall be regularly reviewed and updated in response to advancements in scientific knowledge and experience [and new contributions from Indigenous Peoples and local communities.]

[Article 45 Alt omitted]

Explanation / comment

- During our last meeting we reviewed the draft from the intersessional working group on regulation 45. I proposed to use this work as basis going forward and noted consensus among participants during the meeting for this approach. Although I noted a few participants preferring the former provision (Regulation 45.Alt), I propose to delete Regulation 45.Alt going forward to focus on finalizing this regulation on the base of the outcome from the intersessional working group. This deletion has also been suggested in a submission by a participant, which I fully support. I invite for views on this. The following points therefore relate to incoming submissions pertaining to regulation 45 as proposed by the Intersessional Working Group.
- I have received a submission from a participant to insert new paragraph 3 which refers to the Regulation (45) being without prejudice to the function of the Council to develop other Standards and Guidelines. I believe that this proposal can be inserted (merged with) the existing paragraph 5 which I have attempted. I invite for a discussion on this.

Regulation 46
Environmental management system

1. A Contractor shall develop, implement and maintain an Environmental Management System, [with the purpose of preserving and protecting the Marine Environment from the impacts of the activities in the Area] in compliance with the [Convention, the Agreement, and the Rules of the Authority.] Standards and taking account of the ~~relevant~~ Guidelines and in accordance with [~~Best Available Science and Scientific Information~~] [Best Environmental Practices, and] Good Industry Practice and internationally recognized standards.

2. An Environmental Management System shall, inter alia:

(a) Deliver the Authority's environmental objectives in the Contract area including those reflected in the applicant's Environmental Management and Monitoring Plan, and ~~taking into~~ the applicable Regional Environmental Management Plan as well as any additional objectives as set by the Contractor or Sponsoring State.

(b) Be reviewed [to reflect the development of the Rules of the Authority] and undergo [periodical] [annual] audits by an independent recognized and accredited international or national organization, in accordance with applicable Standards and Guideline, the Convention, the Agreement, and other relevant international law; and

(c) Facilitate effective reporting to the Authority in connection with environmental performance, pursuant to Regulations 33, 34, 38, 39, and 52.

[(d) Include the results of the audit, and any in the Contractor's annual reports and the performance assessment of the Environmental Management and Monitoring Plan under Regulation 52.]

3. All changes made to a Contractor's Environmental Management System, for example resulting from reviews and audits, [or any development of the Rules of the Authority], shall be reflected in the Contractor's annual reports and in the performance assessment of the Environmental Management and Monitoring Plan under Regulation 52. A proposed material change to a Contractor's Environmental Management System shall be treated the same as a modification of a Plan of Work, pursuant to Regulation 57.

Explanation / comment

- Regulation 46 has been amended in accordance with the proposals received.
- In paragraph 2 b), one participant has suggested that the reference to the reoccurring review of the Environmental Management System should be "annual" instead of "periodical". I have placed both words in square brackets and invite for a discussion on this.
- One participant submitted a new paragraph 2 d) which I support and have inserted. I invite for views on this.

Regulation 46 bis
Environmental monitoring

1. A Contractor shall, pursuant to its Environmental Management and Monitoring Plan required under Regulation 48 and in accordance with the Standard on environmental monitoring programmes and other applicable Standards, and taking account of the ~~relevant~~ guidelines observe, ~~measure~~, evaluate and analyse, in accordance with Best Available Scientific information, Best Environmental Practices, and Best Available Techniques, the environmental thresholds contained in the Standards, and risks to Environmental Effects on the Marine Environment arising from Exploitation. Surveillance shall be conducted during all stages of the mining operation, to determine whether it is having or likely to have harmful effects on the Marine Environment until satisfactory completion of a Closure Plan.

2. The Contractor shall establish and implement an environmental management and monitoring programme in accordance with the approved [~~environmental monitoring plan~~ Environmental Management and Monitoring Plan] and in accordance with the Standard on Monitoring Programmes and cooperate with, the Authority and the Sponsoring State or States as well as share findings and results of such programmes with the Authority for [~~wider dissemination~~ public access].

[2.Alt. omitted]

3. ~~In addition to the Monitoring conducted by the Contractor pursuant to Paragraph 2,~~The Environmental Management and Monitoring Plan shall ~~cover all stages of the mining life cycle, and on submission for approval~~ contain a monitoring programme for at least the first [five] [seven] years of [~~the mining project,~~ commercial production] to be conducted ~~by independent experts and~~ in compliance with the applicable Standards and taking account of the ~~relevant~~ guidelines.

[3 .Alt. omitted]

4. The Contractor shall report annually in writing, in accordance with these regulations, to the Secretary-General on the implementation and results of the Environmental Management and Monitoring Plan and the environmental monitoring programme referred to in paragraph 2, in accordance with Regulation 38, paragraph 2(g). The [~~Secretary-General~~ Contractor] shall [~~release publicly~~ submit to the Secretary General] [submit to the Secretary General] environmental data and information in the required standardized format, in real time or at [monthly intervals] [annually], [~~if possible~~] consistent with best scientific practices, [~~environmental data and information in the required standardized format~~], and in accordance with the applicable Standards, and taking into account the applicable Guidelines. The Secretary General shall release the environmental data and information publicly in accordance with regulation 92bis. The Secretary-General shall transmit annual reports to the Commission for its consideration pursuant to article 165 of the Convention and publish them pursuant to Regulation 38(3).

5. In implementing paragraph 1, the Sponsoring State and Contractor shall consult, with any adjacent coastal State [~~across whose limits of national jurisdiction lie~~] with a view to avoiding infringement of their rights and legitimate interests, in accordance with Regulation 4.

Explanation / comment

- I have received several proposals for amending regulation 46 bis which I have tried to incorporate these as appropriate. It should be noted that in paragraph 4 bis that the submission of environmental data and information should be “annually” instead of “monthly”. I have placed these words in square brackets and invite for a discussion on this.
- In general, recalling the fruitful discussion on this regulation during our last meeting, several participants pointed towards the need for streamlining this regulation, including merging some of the paragraphs. Some participants furthermore suggested to merge paragraphs from this regulation (46 bis) with paragraphs from the following regulation (46 ter) and perhaps even merging the two provisions entirely. However, we did not reach a clear consensus on this during the meeting, nor whether the different alternative

paragraph proposals ("paragraph 2alt" and "paragraph 3 alt") should be accepted or deleted as there where different views on this.

- I propose to keep paragraph 2 and 3 (and thus omit paragraphs 2 alt and 3 alt) going forward as they represent the rules which most participants have commented on and made suggestions to alter. I invite for a discussion on this.

Regulation 46 ter
Environmental Management and Monitoring Plan

1. Each applicant or Contractor for Exploitation shall prepare an Environmental Management and Monitoring Plan in accordance with this regulation and Annex VII.

2. The purpose of an Environmental Management and Monitoring Plan is to manage and confirm that observed Environmental Effects meet Standards on environmental quality objectives and environmental performance for the mining operation. The plan shall address any issues that arise from the Environmental Impact Statement and will set out commitments and procedures on how the Environmental Effects of the mining operation will be monitored and mitigated including on pollution control and Mining Discharge in Regulations 49 and 50.

[3. The Environmental Management and Monitoring Plan shall include all elements and matters prescribed by the Authority in Annex VII to these regulations and shall:

(a) Be based on the Environmental Impact Assessment and the Environmental Impact Statement;

(b) Be prepared in accordance and consistent with the applicable Regional Environmental Management Plan,

(c) Be prepared in accordance and consistent with the applicable Standards ~~developed in accordance with Regulations 45 and 94~~ and taking account of the applicable Guidelines, as well as Good Industry Practice, ~~Best Available Scientific information~~, Best Environmental Practices ~~and Best Available Techniques~~;

(d) Be prepared in accordance and consistent with other plans in these regulations, including the Closure Plan and the Emergency Response and Contingency Plan;

(e) Incorporate site-specific environmental objectives and environmental performance standards, which are compatible with and designed to achieve the environmental policy and objectives of the Authority and applicable Standards;

(f) Incorporate measurement criteria, ~~thresholds of the Authority defined in the~~ in accordance with the applicable Standard and reflect its methodology to determine whether the environmental quality objectives are being met and that the operation is compliant with ~~applicable environmental Standards and other~~ Rules of the Authority,

(g) Incorporate any recommendations made by the Commission, and approved by the Council, in its consideration of the Environmental Impact Statement, including commitments and procedures on;

(i) how the ~~environmental impacts~~ Environmental Effects of Exploitation~~the mining operation~~ will be monitored ~~in accordance with Regulation 46bis,~~ the Environmental Management and Monitoring Plan ~~EMMP~~ Standard and the applicable Monitoring Standard,

(ii) how the Mitigation measures, including pollution control and Mining Discharge in regulations 49 and 50, will be implemented,

(iii) how the effectiveness of such measures will be monitored,

(iv) how Preservation Reference Zones and Impact Reference Zones, designated in accordance with Annex Xter, will be utilised and implemented,

(v) what the management actions and responses will be to the monitoring results and new knowledge

(vi) what management and reporting systems will be adopted and followed, and;

(vii) how continual improvement will be promoted, including by testing assumptions and predictions made in the Environmental Impact Statement, improving environmental knowledge, and reducing residual uncertainties remaining from the environmental impact assessment process.]

3bis ~~The Contractor shall conduct monitoring for the entire duration of exploitation~~. In addition to the ~~Monitoring required to be~~ environmental monitoring programme performed by the Contractor, the Environmental Management and Monitoring Plan shall contain a supplementary monitoring programme for at least the first seven years of commercial production mining operations, ~~to be conducted by competent~~ independent experts ~~and~~ in compliance with the applicable Standards. The Contractor shall conduct monitoring for the entire duration of the mining operation and comply with any post-closure monitoring requirement according to Regulations 59-61 and the applicable Standard.

4. The Contractor shall provide information on the implementation and compliance of the Environmental Management and Monitoring Plan pursuant to Regulations 51 and 52 in its annual report in accordance with regulations 38, paragraph 2(g), and 46bis, paragraph 4, for evaluation by the Legal and Technical Commission, as well as environmental data and information for publicly release, in an accessible format, consistent with Best Scientific Practices monitoring data and information at a regular basis and where practicable in real-time or on a monthly basis.

5. The Contractor shall allocate sufficient resources and assign roles and responsibilities to implementation of the Environmental Monitoring and Management Plan in relation to the relevant risks and impacts.

Explanation / comment

- I have received several proposals for amending regulation 46 ter which I have tried to incorporate these as appropriate.
- One participant has submitted an alternative to this regulation, however consensus of the process and the amount of support and proposed alterations for the current version of regulation 46ter, I have omitted this proposed alternative..

- As stated in my comments to previous regulation 46 bis, several participants also pointed towards the need for streamlining regulation 46 ter during our last meeting. This included general suggestions to merge paragraphs from this regulation (46 ter) with paragraphs from the previous regulation (46 bis) and perhaps even merging the two provisions entirely. However, we also did not reach a clear consensus on this during the meeting.
- I agree that this regulation (and the previous, regulation 46 bis) needs streamlining. After careful considerations I propose that the more detailed paragraphs 3 could perhaps better be placed in the *Draft guidelines for the preparation of Environmental Management and Monitoring Plans* which can be found at The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm). I have therefore suggested this re-location in the accompanying Matrix which I introduced in my opening statement. I refer to the Matrix for the details on this proposed move and have for now placed paragraph 3 in a square bracket.
- Furthermore, I must stress that this proposal from my side is without any attempt to pre-empt or prejudge the discussions amongst participants on how best to address this. It is merely in my capacity as facilitator of these proceedings that I seek to envision how to resolve the challenge of streamlining regulation 46 ter (and regulation 46 bis). I invite for a discussion on this.

Section 2
The Environmental Impact Assessment Process

Regulation 47

Environmental Impact Assessment Process

1. An applicant or Contractor shall carry out an Environmental Impact Assessment Process on ~~shall be organized~~ the potential effects on the Marine Environment of the proposed operations and activities.

2. The Environmental Impact Assessment ~~Process~~ shall:

(a) Be based on relevant baseline data that captures temporal, (seasonal and interannual) and spatial variation in accordance with relevant Standards and taking into account relevant Guidelines and the relevant Regional Environmental Management Plan,

(b) Be carried out by ~~qualified~~ competent, independent experts,

(c) Include an environmental risk assessment and a survey of the seabed to identify Underwater Cultural Heritage that takes into consideration the region as a whole taking into account the objectives and measures of the relevant and applicable Regional Environmental Management Plan,

(d) Provide for Stakeholder consultation in accordance with Regulation 93bis, relevant Standards and taking into account the relevant Guidelines,

(e) Be subject to an independent scientific assessment prior to the submission of the proposed Environmental Impact Statement to the Authority.

(f) Take into account the results from test mining, ~~if applicable~~ in accordance with Regulation 48bis,

(g) Be conducted in accordance with the terms of reference developed during the scoping process, and

(h) Identify scientific and other knowledge gaps or data uncertainties, and the degree to which these influence the assessment.

3. The Environmental Impact Assessment ~~Process~~ must follow certain procedural steps ~~to having the plan of work assessed~~ and entail the following elements:

(a) A scoping Stage and scoping report in accordance with Regulation 47ter to identify and risk assess the anticipated activities and potential impacts associated with the proposed mining operation which are relevant to the Environmental Impact Assessment.

(b) An Environmental Impact Assessment, documented and reported by an Environmental Impact Statement to describe the impacts on the Marine Environment [~~and Underwater Cultural Heritage~~] and predict the nature and extent of the Environmental Effects of the mining operation including residual impacts, also considering other existing and foreseen mining operations. [This description of the impacts mentioned includes assessing:

(i) The intensity or severity of the impact at the specific site being affected;

(ii) The spatial extent of the impact relative to the availability of the habitat type affected;

(iii) The sensitivity/vulnerability of the ecosystem to the impact;

(iv) The ability of an ecosystem to recover from harm, and the rate of such recovery;

(v) The extent to which ecosystem functions may be altered by the impact; and

(vi) The timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life history stages affected for its long survival.]

(c) The Identification of measures envisaged to monitor, prevent, minimize control, mitigate [~~or, if possible, offset~~] and manage Environmental Effects and risks to as low as reasonably practicable, while within acceptable levels in accordance with environmental Standards, including through the development of an Environmental Management and Monitoring Plan,

(d) The Identification of measures envisaged to remediate, restore, rehabilitate (where possible) the Marine Environment, including through the development and preparation of an Environmental Management and Monitoring Plan,

(e) An analysis of reasonable alternatives to the planned activity ~~under the jurisdiction or control of a State Party~~, including the no-action alternative,

(f) The preparation and submission to the Authority of ~~the~~ an Environmental Impact Statement to document and report the results of the Environmental Impact Assessment in accordance with Regulation 47bis, the applicable Standards and taking into account the relevant Guidelines,

(g) Publication and review by the Commission of the Environmental Impact Statement, and publication of the report and recommendation by the Commission to the Council pursuant to Regulations 11 – 15.

(h) A decision by the Council to approve, or not approve, the proposed activities or proposed modification to the Plan of Work that was the subject of the Environmental Impact Assessment, including any conditions imposed upon an approval, which decision shall be recorded and published in accordance with Regulation 16, and

(i) A proactive consultation by an applicant or Contractor with Stakeholders at all stages, in accordance with relevant Standards and taking account of Guideline [, which includes:

(i) Providing Stakeholders with access to up-to-date and comprehensive information about the proposed activities and environmental data and impacts,

(ii) Using best efforts to obtain Stakeholder comments on the draft scoping report and draft environmental impact statement for a reasonable period.

(iii) Provide a reasonable opportunity for Stakeholders to raise enquiries and to make known their views,

(iv) Make publicly available Stakeholder comments received during the consultation process, including on the applicant or Contractor's own website, and

(v) Record and address, in the scoping report and Environmental Impact Statement respectively, any substantive and relevant Stakeholder comments received.]

Regulation 47 alt.

Environmental Impact Assessment Process

1. An applicant or Contractor shall carry out an Environmental Impact Assessment on the potential effects on the Marine Environment of the proposed operations and activities.

2. The purpose of an environmental impact assessment under this regulation shall be to predict environmental impacts anticipated from the proposed activities, to enable the Authority to assess the potential adverse Environmental Effects, with the aim to:

(a) Ensure effective protection for the marine environment from harmful effects which may arise from such proposed activities,

(b) Ensure that activities in the Area are carried out with reasonable regard for other activities in the Marine Environment,

(c) Avoid Serious Harm to the Marine Environment arising out of the proposed activities,

(d) Ensure, in accordance with article 142 of the Convention and Regulation 4, that the Sponsoring State and the Contractor, with respect to resource deposits in the Area which lie across limits of national jurisdiction, conduct the environmental impact assessment with due regard to the rights and legitimate interests and duties of affected coastal States by maintaining consultations and a system of prior notification to avoid infringement of their rights and legitimate interests, and

(e) Ensure that the proposed activities are carried out in accordance with the Rules of the Authority, general International Law, including the Convention and the applicable Standard and taking into account the relevant Guidelines as well as, Best Available Scientific Information, Best Environmental Practices, and Best Available Techniques

3. The Environmental Impact Assessment shall:

(a) Be based on relevant environmental baseline data that captures temporal, (seasonal and interannual) and spatial variation in accordance with relevant Standards and taking into account relevant Guidelines and the objectives and measures of the applicable Regional Environmental Management Plan,

(b) Be carried out by qualified, independent experts,

(b)bis Be based on the best available science and scientific information, and, where available, relevant traditional knowledge of Indigenous Peoples and local communities.

(c) Include an environmental risk assessment and a survey of the seabed to identify Underwater Cultural Heritage, that takes into consideration the region as a whole taking into account the objectives and measures of the relevant and applicable Regional Environmental Management Plan,

(d) Provide for Stakeholder consultation in accordance with Regulation 93bis, relevant Standards and taking into account the relevant Guidelines,

(e) Be subject to an independent scientific assessment prior to the submission of the proposed Environmental Impact Statement to the Authority,

(f) Take into account the results from test mining, if applicable, in accordance with Regulation 48bis,

(g) Be conducted in accordance with the terms of reference developed during scoping in accordance with Regulation 47ter 4(o), and

(h) Identify scientific and other knowledge gaps or data uncertainties, and the degree to which these influence the assessment.

(i) be an iterative process where specific stages are revisited and may be updated in the light of new information or new activity at a later stage

4. The Environmental Impact Assessment process must follow certain procedural steps and entail the following elements:

(a) A scoping Stage and scoping report in accordance with Regulation 47bis to identify and risk assess the anticipated activities and potential impacts associated with the proposed Exploitation which are relevant to the Environmental Impact Assessment.

(b) A stage for assessment of environmental impacts including:

(i) An update to the environmental risk assessment, as developed during scoping, describing the likely impacts on the marine environment and Underwater Cultural Heritage and predict the nature and extent of the Environmental Effects of the Exploitation including residual impacts, also considering cumulative impacts, including existing and foreseen mining operations, other activities and natural phenomena.

(ii) An evaluation of significant and harmful effects on the environment and ecosystem services, founded on clear and transparent

assessment criteria and a robust evidence base, using best available science and scientific information;

(iii) The presentation and evaluation of potential mitigation measures, and subsequent statement of management and monitoring commitments (together with the EMMP), to mitigate, avoid and minimize effects, and monitor residual impacts;

(c) A stage on the preparation and submission to the Authority of the Environmental Impact Statement to document and report the results of the environmental impact assessment in accordance with Regulation 47bis, the applicable Standards and taking into account the relevant Guidelines,

d) The publication and review by the Commission of the Environmental Impact Statement, and publication of the report and recommendation by the Commission to the Council pursuant to Regulations 11 – 15

(e) A decision by the Council to approve, or not approve, the proposed activities or proposed modification to the Plan of Work that was the subject of the Environmental Impact Assessment, including any conditions imposed upon an approval, which decision shall be recorded and published in accordance with Regulation 16, and

(f) A proactive consultation by an applicant or Contractor with Stakeholders at all stages, in accordance with relevant Standards and taking account of Guideline, which includes:

(i) Providing Stakeholders with access to up-to-date and comprehensive information about the proposed activities and environmental data and impacts,

(ii) Using best efforts to obtain Stakeholder comments on the draft scoping report and draft environmental impact statement for a reasonable period.

(iii) Provide a reasonable opportunity for Stakeholders to raise enquiries and to make known their views,

(iv) Make publicly available Stakeholder comments received during the consultation process, including on the applicant or Contractor's own website, and

(v) Record and address, in the scoping report and Environmental Impact Statement respectively, any substantive and relevant Stakeholder comments received

Explanation / comment

Overall comments:

- I have received a joint textual proposal for how to revise section 2. I thank the participants for their hard work and appreciate the submission of joint proposals.
- I propose that the joint textual proposal will form the basis for the regulations of this section as they (the regulations) are more streamlined and well-placed, which was something many participants asked for during our last meeting. Furthermore, I encourage participants to familiarize themselves with the joint textual proposal that has submitted as it entails the thoughts and

reasoning of the group for their proposed changes as well as suggestions for parts of the regulations to be moved to relevant Standards and Guidelines.

- The joint textual proposal suggest the structure of Section 2 as follows:
  - "***Reg 47:*** *Environmental Impact Assessment Process: outlines EIA purpose, including high-level requirements, and the steps included in the process (from scoping to decision).*
  - ***Reg 47bis*** *Scoping Report: outlines requirements for scoping phase and Report, including submission and decision.*
  - ***Reg 47ter****: Environmental Impact Assessment: outlines requirements for conducting an Environmental Impact Assessment*
  - ***Reg 48****: Environmental Impact Statement: outlines requirements for content of Environmental Impact Statement*
  - ***Reg 48bis:*** *New Environmental Impact Assessment and [Revised] [additional] Environmental Impact Statement: requirements for when a new Environmental Impact Assessment and a [new/revised/additional/supplementary] Environmental Impact Statement is required."*

Specific comments relating to Regulation 47:

- In relation to this draft regulation (47) I propose that the joint textual proposal will be the base which we work with going forward. I have inserted their proposal as "Regulation 47 alt.".
- I note that several participants have submitted proposals with changes to regulation 47 which I have attempted to incorporate to the extent possible.
- I noted suggestions to remove the detailed content in Regulation 47.alt paragraph 3 litra b) point i-vi and litra i) point i-v, which I support. Moreover, these points could be moved to the Standard and Guideline on The Environmental Impact Assessment Process, which can be found on the ISA's website (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) which I have also suggested in the accompanying Matrix I introduced earlier. I have therefore suggested this re-location in the accompanying Matrix which I introduced in my opening statement. I have for now placed the mentioned provisions (points) in paragraph 3 b) and i) in square brackets. I invite for views on this.
- One participant has suggested the insertion of an alternative litra c in paragraph 3 of Regulation 47 which I have tried to merge with the existing litra c. I invite for views on this.
- One participant submitted a proposal to merge regulations 47 and the following regulation 47.bis. However, I believe the joint proposal covers this and have therefore omitted this incoming proposal.

Regulation 47 bis
Environmental Impact Assessment

1. An applicant or Contractor shall carry out an Environmental Impact Assessment of proposed Exploitation in accordance with the Rules of the Authority.

2. The purpose of an Environmental Impact Assessment~~under this regulation~~ shall be to predict environmental impacts anticipated from the proposed activities, to enable the Authority to assess the potential adverse Environmental Effects, with the aim to:

(a) Ensure effective protection for the marine environment from harmful effects which may arise from such proposed activities,

(b) Ensure that activities in the Area are carried out with reasonable regard for other activities in the Marine Environment,

(c) Avoid Serious Harm to the Marine Environment ~~arising out of the proposed activities~~

(d) Ensure, in accordance with article 142 of the Convention and Regulation 4, that the Sponsoring State and the Contractor, with respect to resource deposits in the Area which lie across limits of national jurisdiction, conduct the environmental impact assessment with due regard to the rights and legitimate interests and duties of affected coastal States by maintaining consultations and a system of prior notification to avoid infringement of their rights and legitimate interests, and

(e) Ensure that the proposed activities are carried out in accordance with the Rules of the Authority, ~~general International Law, including~~ the Convention and the applicable Standards and taking into account the ~~relevant~~ applicable Guidelines as well as, Good Industry Practice, Best Available Scientific Information], Best Environmental Practices, and Best Available Techniques

3. A Contractor shall ~~periodically, and in accordance with Regulation 48bis~~ review, and when needed revise, previously performed Environmental Impact Assessments. This include reviewing cumulative effects of activities covered by the assessment whenever a material change in the mining operation has occurred, there is relevant new information or when the review indicates that such changes warrant a revision.

Regulation 47 bis alt. (47 ter)

Environmental Impact Assessment

1. The applicant or Contractor shall, in accordance with the Standards, and taking into

account the Guidelines, undertake an impact assessment, based on the Terms of Reference agreed in the Scoping report, to describe the impacts on the marine environment and Underwater Cultural Heritage and to predict the nature and extent of the Environmental Effects of the mining operation, including residual impacts, on the marine environment and Underwater Cultural Heritage, also considering cumulative impacts, including existing and foreseen mining operations, other activities and natural phenomena. This includes assessing:

(i) The intensity or severity of the impact at the specific site being affected;

(ii) The spatial extent of the impact relative to the availability of the habitat type affected;

(iii) The sensitivity/vulnerability of the ecosystem to the impact;

(iv) The ability of an ecosystem to recover from harm, and the rate of such recovery;

(v) The extent to which ecosystem functions may be altered by the impact; and

(vi) The timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life history stages affected for its long survival.

2. Undertaking the impact assessment, the applicant or Contractor shall complete:

(a) An analysis of reasonable alternatives remaining post Scoping to the planned activity under the jurisdiction or control of a State Party, including the no-action alternative,

(b) Identification of measures envisaged to mitigate and manage prevent, minimize, control, Environmental Effects and risks to as low as reasonably practicable, while within acceptable levels in accordance with environmental Standards, including through the development and preparation of an Environmental Management and Monitoring Plan

(c) An environmental risk assessment, which adds to the preliminary environmental risk assessment required during scoping by regulation 47bis (4j).

(d) An analysis of the results of the environmental risk assessment, including identification of high priority risks requiring particular focus, including in the Environmental Management and Monitoring Plan.

(e) A proactive consultation by an applicant or Contractor with Stakeholders at all stages, in accordance with relevant Standards and taking account of Guideline, which includes:

(i) Providing Stakeholders with access to up-to-date and comprehensive information about the proposed activities and environmental data and impacts,

(ii) Using best efforts to obtain Stakeholder comments on the draft scoping report and draft environmental impact statement for a reasonable period.

(iii) Provide a reasonable opportunity for Stakeholders to raise enquiries and to make known their views,

(iv) Make publicly available Stakeholder comments received during the engagement ~~consultation~~ process, including on the applicant or Contractor's own website, and

(v) Record and address, in the scoping report and Environmental Impact Statement respectively, any substantive and relevant Stakeholder comments received.

Explanation / comment

- Please see my overall comments stated in the comment box to Regulation 47.

Specific comments relating to the draft regulation on Environmental Impact Assessment;

- In relation to this draft regulation on "Environmental Impact Assessment" I propose that the joint proposal submitted will be the base which we work with going forward. Inserted as "Regulation 47 bis alt (ter)"
- The joint proposal mentioned above contained a proposal for this regulation on "Environmental Impact Assessment" to be inserted as "47 ter" but it has been inserted here (regulation 47 bis) for participants to compare with the previous provision on "Environmental Impact Assessment", i.e. "Regulation 47.bis".
- This means that the proposed order is not aligned with the order suggested in the joint textual proposal. (The groups "Regulation 47 bis" on Scoping will be discussed under "Regulation 47 ter", and the groups "Regulation 47 ter on Environmental Impact Assessment will be discussed under "Regulation 47 bis" in the following.)
- Again, I support the joint proposal, including the above-mentioned proposed restructuring and re-numbering of the Regulations. Thus, if consensus can be reached during the meeting, the regulations will follow the order as proposed in the joint textual proposal. (See my comments to regulation 47 for more on the proposed layout).
- I note that some participants have submitted proposals with changes to the previous regulation on "Environmental Impact Assessment" which I have attempted to incorporate to the extent possible.

Regulation 47 ter
Environmental Impact Assessment Scoping Report

1. An applicant or Contractor shall prepare and submit to the Secretary-General a scoping report in accordance with this regulation and in the format prescribed in Annex IV.

2. An application or Contractor shall use Environmental Impact Assessment scoping to identify and prioritize the main activities and potential impacts associated with the proposed Exploitation ~~mining operation~~ in order to focus the Environmental Impact Assessment and Environmental Impact Statement on the key environmental issues.

[3. In undertaking the Environmental Impact Assessment scoping process the applicant or Contractor shall:

(a) Review available data and knowledge, and propose additional data to be collected and studies needed to complete an Environmental Impact Statement in accordance with these regulations,

(b) Undertake a preliminary impact analysis and Environmental Risk Assessment which will be updated as the Environmental Impact Assessment proceeds,

(c) Proactively identify Stakeholders in accordance with relevant Standards and taking into account any Guidelines, and

(d) Identify and evaluate feasible alternative means of carrying out the project that will be examined in the environmental impact assessment.]

[4. An Environmental Impact Assessment Scoping Report shall include the following:

(a) A brief description of the proposed Exploitation activities and any ancillary features, including what is known or anticipated about where the mining will occur within a Contract Area and the mining machinery to be used,

(b) A description and overview of tentative timelines and deadlines for the proposed Exploration and any associated activities,

(c) A description of what is known about the environmental setting, including Underwater Cultural Heritage, for the project (Contract Area and regional setting),

(d) A description of information for the project that is not yet known but must be, or should be known, including baseline data, and a plan for gaining that information prior to commencement of the Exploitation ~~activities~~,

(e) A summary of existing environmental baseline studies, and, where available, relevant traditional knowledge of indigenous peoples and local communities including a description of methodology for collecting and analyzing the baseline data,

(f) A summary of gaps in environmental baseline including description of methodology for collecting and analyzing additional baseline data to inform the Environmental Impact Assessment.

(g) A description of the technical, spatial and temporal boundaries for the Environmental Impact Assessment,

(h) A list of any assumptions relied upon and identification and quantification of the uncertainties at this stage of the Environmental Impact Assessment, how they are being addressed, and assessment of their implications to the Environmental Risk Assessment findings,

(i) A preliminary impact analysis which categorizes the important issues into high-risk, medium-risk and low-risk for the Environmental Impact Assessment to address and evaluates the need for further information, taking into account the Environmental Risk Assessment,

(j) An Environmental Risk Assessment, which includes:

(i) The identification of potential hazards,

(ii) The environmental consequence for each identified potential impact(s) (the magnitude of the impact(s), the duration of the impacts, and the receptor characteristics, and the likelihood of the consequence occurring.

(iii) A description of the Cumulative Environmental Effects of the project, combined with other authorized, anticipated, or expected activities, actions, or natural phenomena,

(iv) The likelihood of the consequence occurring,

(v) The confidence levels of experts, in order to account for uncertainty and a precautionary approach,

(vi) A description of the methodology employed in the Environmental Risk Assessment,

(k) A description of the results of the Environmental Risk Assessment, including identification of high priority risks for local and

regional ecosystem functioning over short and long term, requiring particular focus in the subsequent impact assessment ~~phase~~ stage of the Environmental Impact Assessment,

(l) A preliminary Stakeholder list that proactively identifies likely Stakeholders, and an indicative schedule and methodology for engagement with key Stakeholders throughout the Environmental Impact Assessment process, taking into account privacy concerns related to ~~to not to publish~~ the publication of personal information of identified stakeholders,

(m) A report of consultations undertaken during scoping.

(n) A consideration of reasonable alternative means of carrying out the project that will be examined in detail in the Environmental Impact Assessment, including a no-action alternative, and any others that have been not carried forward for further analysis at this stage, and the reasons for that selection,

(o) A draft Terms of Reference for the Environmental Impact Assessment, which identifies the activities and studies planned for the Environmental Impact Assessment, and any additional baseline data that will be required,

(p) An explanation for how the activities and studies planned for the Environmental Impact Assessment will be sufficient to determine likely environmental impacts, and to propose Mitigation and management strategies and monitoring methodology,

(q) A brief description of the socioeconomic and sociocultural aspects of the project, including sociocultural uses of the project area (e.g., traditional navigation routes, migratory paths of culturally significant marine species, sacred sites and waters associated with ritual or ceremonial activities of Indigenous Peoples and local communities),

(r) A note describing and explaining any divergence from relevant ISA Guidelines.]

5. Upon receipt of a scoping report from an applicant or Contractor, the Secretary-General shall:

(a) Make the report available on the Authority's website, with an invitation for members of the Authority and Stakeholders to submit comments in writing within a period of [90 days];

(b) Following the close of the comment period under paragraph (1)(a), provide any comments received to the applicant or Contractor [within 2 weeks] [Russia] for their response within [60 Days];

(c) At the expiry of the timeframe specified in paragraph (1) (b), provide the Commission with the scoping report, any stakeholder comments received, and any responses to those comments from the applicant or Contractor.

6. The Commission shall consider a scoping report submitted in accordance with this regulation, and any comments and responses received, in accordance with any ~~relevant~~ applicable Standards and taking into account Guidelines. Based on this review, the Commission shall, within 60 days following the receipt of the report and any comments or responses under paragraph (5)(c), approve a scoping report, disapprove it or make recommendations to the applicant or Contractor regarding the proposed Environmental Impact Assessment, accompanied by a detailed rationale.

7. The Commission's recommendations under the previous paragraph [paragraph 6] may include recommendation:

(a) To revise the environmental risk assessment or other aspects of the scoping report based on different methodology or inputs,

(b) To amend the proposed terms of reference for the Environmental Impact Assessment, or

(c) To re-submit a revised scoping report for further Stakeholder consultation and Commission review, in the case where uptake of any of the Commission's recommendations are likely to lead to a Material Change in the Scoping Report.

8. The applicant or Contractor shall take into account the Commission's recommendations under this regulation, [or any recommendations or scoping reports concluded prior to the adoption of these Regulations and in accordance with an Exploration Contract], [and agree to the final contents of the Scoping Report with the Commission] before proceeding with an Environmental Impact Assessment process based on an adaptative management criteria to address uncertainty. Furthermore, the applicant or Contractor shall agree the final contents of the Scoping Report with the Commission either under these Regulations or pursuant to other applicable Regulations adopted by the Authority or in accordance with an Exploration Contract.

Regulation 47 ter (bis) alt.
Scoping Report

1. The applicant or Contractor shall prepare and submit to the Secretary-General a scoping report in accordance with this regulation and in the format prescribed in Annex IV.

2. An applicant or Contractor shall use environmental impact assessment scoping to identify and prioritize the main activities and potential impacts associated with the proposed mining operation, in order to focus the Environmental Impact Assessment and Environmental Impact Statement on the key environmental issues.

3. In undertaking the environmental impact assessment scoping process, the applicant or Contractor shall:

(a) Review available data and knowledge, and propose additional data to be collected and studies needed to complete an Environmental Impact Statement in accordance with these regulations,

(b) Undertake a preliminary impact analysis and environmental risk assessment which will be updated as the environmental impact assessment proceeds,

(c) Proactively identify Stakeholders in accordance with relevant Standards and taking into account any relevant Guidelines,

(d) Identify and evaluate feasible alternative means of carrying out the project that will be examined in the environmental impact assessment. and

(e) Use the best available science and scientific information and, where available, relevant traditional knowledge of Indigenous Peoples and local communities.

4. An environmental Impact Assessment Scoping Report shall include the following:

(a) A brief description of the proposed Exploitation activities and any ancillary features

(b) A description and overview of tentative timelines and deadlines for the proposed environmental baseline studies and Environmental Impact Assessment [conducted under the Exploration contract and any associated activities,

(c) A description of what is known about the environmental setting, including Underwater Cultural Heritage, for the project (Contract Area and regional setting),

(d) A description of data gaps, potential data gaps or data with a large uncertainty associated with it for the project,

(e) A summary of existing environmental baseline studies, and, where available, relevant traditional knowledge of indigenous peoples and local communities

(f) A description of the technical, spatial and temporal boundaries for the Environmental Impact Assessment,

(g) A brief description of the socioeconomic and sociocultural aspects of the project

(h) Any assumptions and how they are being addressed, and assessment of their implications to the environmental risk assessment findings,

(i) A preliminary impact analysis which categorizes the important issues into high-risk, medium-risk and low-risk for the Environmental Impact Assessment to address and evaluates the need for further information, taking into account the environmental risk assessment,

(j) A preliminary environmental risk assessment,

(k) A description of the results of the environmental risk assessment, including identification of high priority risks for local and regional ecosystem functioning over short and long term, requiring particular focus in the subsequent impact assessment phase of the Environmental Impact Assessment,

(l) A preliminary Stakeholder list that proactively identifies likely Stakeholders, and an indicative schedule and methodology for engagement with key Stakeholders throughout the Environmental Impact Assessment process,

(m) A report of consultations undertaken during scoping.

(n) A consideration of reasonable alternative means of carrying out the project that will be examined in detail in the Environmental Impact Assessment, including a no-action alternative, and any others that have been not carried forward for further analysis at this stage, and the reasons for that selection,

(o) A draft Terms of Reference for the Environmental Impact Assessment, which identifies the activities and studies planned for the Environmental Impact Assessment, and any additional baseline data that will be required,

(p) An explanation for how the activities and studies planned for the Environmental Impact Assessment will be sufficient to determine likely environmental impacts, and to propose Mitigation and management strategies and monitoring methodology,

(q) A note describing and explaining any divergence from ~~relevant~~ ISA Guidelines.

5. Upon receipt of a scoping report from an applicant or Contractor, the Secretary General shall:

(a) Make the report available on the Authority's website, with an invitation for members of the Authority and Stakeholders to submit comments in writing within a period of 90 days;

(b) Following the close of the comment period under paragraph (1)(a), provide any comments received to the applicant or Contractor [within 2 weeks] [Russia] for their response within [60 Days];

(c) At the expiry of the timeframe specified in paragraph (1) (b), provide the Commission with the scoping report, any stakeholder comments received, and any responses to those comments from the applicant or Contractor.

6. The Commission shall consider a scoping report submitted in accordance with this regulation, and any comments and responses received, in accordance with any relevant Standards and taking into account Guidelines. Based on this review, the Commission shall approve a scoping report, disapprove it or make recommendations to the applicant or Contractor regarding the proposed environmental impact assessment, accompanied by a detailed rationale.

7. The Commission's recommendations under the previous paragraph [paragraph 6] may include recommendation:

(a) To revise the environmental risk assessment or other aspects of the scoping report based on different methodology or inputs,

(b) To amend the proposed terms of reference for the environmental impact assessment, or

(c) To re-submit a revised scoping report for further Stakeholder consultation and Commission review, in the case where uptake of any of the Commission's recommendations are likely to lead to a Material Change in the Scoping Report.

8. The applicant or Contractor shall, before proceeding with an environmental impact assessment process:

(i) take full account of the Commission's recommendations under this regulation,

(ii) agree the final contents of the proposed terms of reference in the Scoping Report with the Commission.

Explanation / comment

- Please see my overall comments in the comment box to Regulation 47.

Specific comments relating to the draft regulation on Scoping Report;

- In relation to this draft regulation on "Scoping Report" I propose to continue the negotiations based on the joint textual proposal that has been submitted. Inserted as "Regulation 47 ter (bis) alt"
- The joint textual proposal contained a suggestion that this regulation on "Scoping report" to be inserted as "47 bis" but it has been inserted here (regulation 47 ter) for participants to compare

with the previous provision on "Scoping Report", i.e. "Regulation 47.ter".

- If consensus can be reached during the meeting, the regulations will follow the order as proposed by the group. (See my comments to regulation 47 for more on the proposed layout).
- I note that the very detailed regulations in Regulation 47 ter paragraph 3 and 4 could be moved to the Standard and Guideline on "Environmental Impact Assessment Process" (section on "Scoping") which can be found on the ISA's website (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) which I have also suggested in the accompanying Matrix I introduced earlier. They are placed in square brackets, and I invite for views on this.

Regulation 48
Environmental Impact Statement

1. An applicant or Contractor shall prepare an Environmental Impact Statement in accordance with this regulation, the applicable Standards and take account of the applicable Guidelines. Such an Environmental Impact Statement shall be considered by the Authority in accordance with Part II or Regulation 57 and is required for an application for a plan of work pursuant to Regulation 7(3)(d).

2. The purpose of the Environmental Impact Statement is to document and report the results of the Environmental Impact Assessment carried out in accordance with Regulations 47 and 47bis and to provide the International Seabed Authority, its member States and other stakeholders with unambiguous documentation of the potential Environmental Effects based on the Best Available Scientific Information, Best Environmental Practices, and Best Available Techniques, and Good Industry Practice on which the Authority can base its decision, and any subsequent approval that may be granted.

3. The Environmental Impact Statement shall be in a form prescribed by the Authority and must:

(a) Include a prior Environmental Risk Assessment prepared during the environmental impact assessment,

(b) Describe the results of the Environmental Impact Assessment including of the methodology used and evaluation of the identified environmental impacts,

(c) Demonstrate that the proposed activities and mining operations are in accordance with all [~~relevant~~] environmental Standards and the Authority's environmental objectives and take into account the requirements of the [~~relevant~~] Regional Environmental Management Plan, environmental baseline data as well as any additional objectives as set by the Contractor and any results of the performed test mining study, where applicable,

(d) Identify substantive and relevant comments received through public consultation on the Environmental Impact Assessment and explain how each comment has been incorporated or otherwise addressed,

(e) Be prepared in clear language and in an official language of the Authority together with an English-language version, where applicable,

(f) Include a non-technical summary of the main conclusions and information provided to facilitate understanding of the nature of the activity by Stakeholders

(g) [Be peer reviewed by competent independent experts, before submission and include a] ~~d~~[D]escription of the experts, their qualifications, and the results of their review.

4. The Environmental Impact Statement should, but not limited to, entail the following elements, ~~which are~~ described in greater detail in [Annex IV/ Standard]: the Guidelines:

(a) An executive summary to provide an overview of the project and a summary of the content of the Environmental Impact Statement for non-technical readers, including a description of the proposed project, its objectives, alternatives analysed, anticipated benefits, anticipated impacts and measures to minimize these, consultation efforts and linkage to the Environmental Monitoring and Management Plan and the Closure Plan,

(b) An introductory section containing information on the project background and history, project viability and proponents as well as a description of the report, including its scope and structure and overview of the stakeholder consultation process and consultations,

(c) An outline of applicable national and international legislation, procedures and policies, and other applicable standards, principles and guidelines, for example the Convention including the 1994 Agreement [relating, relevant rules from the International maritime Organization and International Law in general],

(d) A description of the proposed project including information on location, associated activities, required infrastructure, mineral resources (type, size, shape, tonnage, volume, grade), technologies and (mining-)equipment to be used, project scale overview (spatial, temporal, operational depth), transport and handling of materials, on-site processing, commissioning, construction and operating standards, design codes, health and safety aspects, workforce, decommissioning and closure, other considered alternatives and a timetable for the entire operation,

(e) A description of methodologies for describing collecting and analyzing baseline and 'test mining' data and assessing the potential environmental impact and Environmental Effects from the proposed operations and alternatives considered. ~~Marine Environment, the Environmental Effects of the proposed project and [collecting baseline data],~~

(f) A description of the existing physiochemical and geological oceanography, including information on prior research/Exploration studies, meteorology, seabed and sub-seabed characteristics, natural hazards, noise, light and greenhouse gas emissions,

(g) A description of the existing biological environment, including information on prior research/Exploration studies, on biological properties and communities and ecosystem that could be impacted by proposed activities in the area, also taking into consideration studies and research on this,

(h) A description of the existing human activities socioeconomic and sociocultural environment in the area, containing information on fisheries,

marine traffic, submarine cables, tourism, ongoing scientific research, sociocultural use, and sites of cultural or historical significance,

(i) An assessment of environmental impacts and effects on the physical, chemical and geological environment and proposed Mitigation, including description of the impact source, potential impact categories and pathways, ~~as well as~~ receptors and impacts, any potential Cumulative Environmental Effects, unavoidable residual impacts and effects that may remain, and the extent to which any potential impacts and effects may occur in areas under a State's national jurisdiction,

(j) An assessment of environmental impacts and Environmental Effects on the biological environment and proposed ~~Mitigation~~, including description of ~~key~~ the impact source, potential impact categories and pathways, receptors and impacts ~~and cumulative operation effects~~, any potential Cumulative Environmental Effects, unavoidable residual impacts and effects that may remain, and the extent to which any potential impacts and effects may occur in areas under a State's national jurisdiction,

(k) An assessment of impacts on the socioeconomic and sociocultural environment and proposed Mitigation, including description of potential impact categories and pathways and impact identification of existing use (fisheries, marine traffic, submarine cables, tourism, ongoing scientific research, sociocultural use, area-based management tools), sites of cultural or historical significance, ecosystem services ~~gender~~ impact on gender and residual impacts,

(l) A[~~n outline~~] description of hazards arising from natural, accidental and discharge events, for example related to extreme weather, natural hazards, accidental events, maritime safety, emergency response, handling waste and ~~blast~~ ballast water, and the measures taken to prevent or respond to such events and conduct an assessment of residual impacts,

(m) A summary of key issues in the Environmental Impact Statement and how they will be addressed in the Environmental Management, and Monitoring Plan and Closure Plan,

(n) A description of responsible product stewardship related to the intended use of the mineral-bearing ore once it leaves the Area, including how the Contractor will minimize effects on health, safety, environmental as well as socioeconomic and sociocultural impacts,

(o) A summary of consultations that have taken place with Stakeholders, and how their comments have been addressed in the environmental impact assessment~~ and stakeholder engagement and methods~~,

(p) A ~~summary~~ description of the study team outlining the people involved in the environmental impact assessment studies and in writing the Environmental Impact Statement,

(q) A list of glossaries, abbreviations, references, and appendices.

5. The Environmental Impact Statement of every ~~project~~ Plan of Work, including any revisions, should be available on the official website of the International Seabed Authority in the interests of transparency. ~~of the whole process~~

Regulation 48 alt.
Environmental Impact Statement

1. An applicant or Contractor shall prepare an Environmental Impact Statement in accordance with this regulation. Such an Environmental Impact Statement shall be considered by the Authority in accordance with Part II or Regulation 57 and is required for an application for a plan of work pursuant to Regulation 7(3)(d).

2. The Environmental Impact Statement shall document and report the results of the Environmental Impact Assessment carried out in accordance with Regulation 47ter and shall provide the International Seabed Authority, its member States and other Stakeholders with unambiguous documentation of the potential Environmental Effects based on the Best Available Scientific Information, Best Environmental Practices, and Best Available Techniques, and Good Industry Practice on which the Authority can base its decision, and any subsequent approval that may be granted.

3. The Environmental Impact Statement shall be in a form prescribed by the Authority in the relevant Standard and in accordance with the relevant Guideline:

(a) Detail the results of the environmental impact assessment including the methodology used, and evaluation of the identified environmental impacts

(b) Demonstrate that the proposed Exploitation is in accordance with all relevant environmental Standards and the Authority's environmental objectives and in accordance with the requirements of the relevant Regional Environmental Management Plan, environmental baseline data as well as any additional objectives as set by the Contractor and any results of the performed test mining study, where applicable,

(c) Identify substantive comments received through public consultation on the environmental impact assessment and explain how each comment has been incorporated or otherwise addressed,

(d) Be prepared in clear and non-technical language and in an official language of the Authority together with an English-language version, where applicable,

(e) Be peer reviewed by competent independent experts, before submission,

4. The Environmental Impact Statement shall, but not limited to, entail the following elements, which are described in greater detail in [Annex IV/ Standard]:

(a) An executive summary to provide an overview of the project and a summary of the content of the Environmental Impact Statement for non-technical readers,

(b) A description of the proposed project

(c) Methodologies

(d) A description of the existing oceanographic, physiochemical and geological environment,

(e) A description of the existing biological environment,

(f) A description of the socioeconomic and sociocultural environment. including existing human activities.

(g) An assessment of impacts on the physical, chemical and geological environment and proposed Mitigation,

(h) An assessment of impacts and Environmental Effects on the biological environment and proposed Mitigation,

(i) An assessment of impacts on the socioeconomic and sociocultural environment and proposed Mitigation,

(j) An outline of hazards arising from natural, accidental and discharge events, for example related to extreme weather, natural hazards, accidental events, maritime safety, emergency response,

(k) An outline of waste management,

(l) A summary of key issues in the Environmental Impact Statement and how they will be addressed in the Environmental Management, and Monitoring Plan and Closure Plan,

(m) A description of responsible product stewardship related to the intended use of the mineral-bearing ore once it leaves the Area, including how the Contractor will minimize effects on health, safety, environmental as well as socioeconomic and sociocultural impacts,

(n) A summary of consultation and stakeholder engagement and methods,

5. The Environmental Impact Statement of every project, including any revisions, should be available on the official website of the International Seabed Authority in the interests of transparency of the whole process in accordance with regulation 92.

Explanation / comment

- Please see my overall comments in the comment box to Regulation 47.

Specific comments relating to the draft regulation on Regulation 48;

- In relation to this draft regulation (48) I propose that the negotiations continue based on the joint textual proposal. This version has been inserted as “Regulation 48 alt.”
- Some participants have submitted proposals with changes to the original regulation 48 which I have attempted to incorporate to the extent possible.
- In paragraph 3 g) of Regulation 48, one participant has proposed to delete the reference to the Environmental Impact Statement being peer reviewed by competent independent experts, before submission. I have placed this is square brackets and invite for views on this.
- In paragraph 4 c, on participant has proposed to delete the reference to rules from the International maritime Organization and International Law in general. It has been placed in square brackets. I propose that these references are retained but invite for a discussion on this.
- It has been proposed to restructure paragraph 4 litra e, which entails the reference to “collection of baseline data” being deleted. This has been placed in square brackets and I invite for a discussion on this.

- One participant submitted a proposal for an alternative paragraph 3. However, I believe the joint textual proposal covers this, and I have therefore omitted this incoming proposal.

Regulation 48 bis
New Environmental Impact Assessment and Revised Environmental Impact Statement

1. A Contractor shall conduct a new Environmental Impact Assessment and submit a revised Environmental Impact Statement in accordance with regulation 57 when:

(a) A Material Change to an existing Plan of Work is proposed which is likely to ~~increase the~~ cause adverse Environmental Effects ~~caused by the activities,~~ that are unable to be mitigated by the measures identified in the previous Environmental Impact Assessment,

(b) A Material Change in the Marine Environment is detected through monitoring or other data sources which would call for a new or reviewed Environmental Impact Statement,

(c) ~~An activity~~ The Material Change described in the Plan of Work is predicted to exceed the impact thresholds set out in the Standards on environmental thresholds, as well as the impacts identified in the previous Environmental Impact Assessment;

(d) A relevant Standard, ~~and this~~ activity, ~~and~~ or predicted impact has not already been addressed by an Environmental Impact Statement,

(e) Otherwise deemed necessary by the Commission, in accordance with applicable Standards and taking into account Guidelines, e.g. when changes to an existing Plan of Work is proposed other than the type described under sub-paragraph (1)(a) or [when the Commission considers that the Environmental Impact Statement from the Revised Environmental Impact Assessment is not appropriate under Regulation 7 para. (5), or] [if relevant Standards and/or thresholds have been substantially revised, or] when the Commission requests an applicant to ~~change~~ amend its proposed Plan of Work during the application stage under Regulation 14, or

(f) When the Material Change of the proposed Plan of Work require changes in the Environmental Management and Monitoring Plan, due to the impacts identified in the revised Environmental Impact Assessment;

Regulation 48 bis alt.

New Environmental Impact Assessment and Revised additional Environmental Impact Statement

1. A Contractor shall conduct a new Environmental Impact Assessment in accordance with regulation 47ter and submit an additional revised Environmental Impact Statement when:

(a) A Material Change to an existing Plan of Work is proposed which is likely to increase the adverse Environmental Effects caused by the activities,

(b) A Material Change in the Marine Environment is detected through monitoring or other data sources which would call for a new or reviewed Environmental Impact Statement,

(c) An activity described in the Plan of Work is predicted to exceed the impact thresholds set out in the Standards on environmental thresholds,

(d) A relevant Standard, activity or predicted impact has not already been addressed by an Environmental Impact Statement, or

(e) Otherwise deemed necessary by the Commission or Council, in accordance with applicable Standards and taking into account Guidelines.

Explanation / comment

- Please see my overall comments to the submitted work in the comment box to Regulation 47.

Specific comments relating to the draft regulation on Regulation 48 bis;

- In relation to draft regulation 48 bis I propose that the joint textual proposal will be the base which we work with going forward. This is listed as "Regulation 48 bis alt."
- Several participants have submitted proposals with changes to regulation 48 bis" (the original version) which I have attempted to incorporate to the extent possible.
- In litra e, two different proposals suggest listing additional examples relating to when the Commission could find it necessary to require the contractor to produce a new Environmental Impact Assessment and Revised Environmental Impact Statement. Both proposals have been inserted but placed in individual square brackets. I invite for a discussion on this.
- One participant suggested inserting a new litra "d bis" relating to "when the Material Change of the proposed Plan of Work require changes in the Environmental Management and Monitoring Plan, due to the impacts identified in the revised Environmental Impact Assessment". However, I believe this suggestion should be placed as an individual (i.e. new) litra, wherefore this has been inserted as a new "litra f". I invite for views on this.

Regulation 48 ter
Test mining

1. Subject to this Regulation, an applicant shall conduct ~~a~~ "test mining" [prior] to submitting an application for a Plan of Work for Exploitation. Information gathered through "test-mining" shall be compiled in a test mining report in accordance with Annex IV, be in accordance with and take into account the relevant Standard and Guideline and shall inform on the ~~Environmental Plans~~ application for a Plan of Work for Exploitation ~~pursuant to Regulation 11~~.

[2. "Test mining" means an *in situ* testing of the integrated system of all ~~relevant~~ equipment ~~(e.g. collector, raiser and release techniques)~~ and process steps (e.g. collector, raiser and release techniques) for ~~an~~ exploitation activities in a contract area under such technical, spatial and temporal conditions which allows the "test mining" ~~to provide~~ for the provision of evidence to support the information provided by an applicant

in its application for a Plan of Work for Exploitation, and to assist the Commission in its evaluation of the application to ~~ensure~~ demonstrate that the proposed mining equipment is technically and operationally appropriate, and that assumptions regarding impacts on the Marine Environment is effectively protected from harmful effects, can be validated. Data collected during test mining can be used to validate numerical models and predict ~~including the~~ cumulative effects, in accordance with Article 145 of the Convention. ~~and that the effects could be monitored~~. "Test mining" should also be undertaken in order to optimize the integrated system with regard to its potential effects on the Marine Environment.]

2.alt. The purpose of test mining is to ensure that effective protection of the marine environment from harmful effects is ensured. Test mining projects shall as a general rule provide evidence that appropriate equipment is available to ensure the effective protection of the Marine Environment in accordance with Article 145.

3. "Test mining" in the Area requires a prior approval by the Authority consistent with the criteria in Regulation 13(1), and shall be carried out with reasonable regard for other activities in the Marine Environment, in accordance with articles 87 and 147 of the Convention, and in accordance with the [~~relevant~~] Standard and taking into account the relevant Guideline and Recommendations, in particular to ensure that the Marine Environment is effectively protected from [harmful effects] [serious harm], including the cumulative effects, in accordance with Article 145 of the Convention.

4. Test mining does not have to be undertaken if the evidence pursuant to Paragraph 1 has been provided through other "test-mining" nby the applicant, by other contractors, or in the context of another approved Plan of Work for exploration or exploitation. In such a case, the applicant shall compile in its "test-mining" report the information already available and explain why this is sufficient evidence and the Commission shall assess whether the evidence pursuant to Paragraph 1 has been demonstrated in its review of the application and report to the Council pursuant to Regulations 11-15.

5. After the approval of a Plan of Work, a validation monitoring system shall be established by the contractor, in line with the Environmental Management and Monitoring Plan, in order to monitor whether the requirements of the Plan of Work are complied with. In case of non-compliance, Regulation 52 will apply.

6. The gains from mineral resources which have been collected during 'test mining' shall be paid to the Environmental Compensation Fund, as established by Regulation 54.

[6 alt. Prior to the commencement of Commercial Production, the contractor shall provide the Authority with a test mining royalties report containing the information specified in the Standards and Guidelines in respect of any minerals collected during 'test mining'. Royalties in respect of mineral resources that have been collected during 'test mining' shall be paid at the time the contractor makes its first payment of royalties after the date it commences Commercial Production.]

7. If a material change has been determined in accordance with Regulation 25 and 57 (2), the relevant organ of the Authority shall consider and determine whether and on which aspects an additional "test mining" ~~has~~ may have to be undertaken in order to provide sufficient information pursuant to paragraph (2). In this case, paragraphs (1) and (3) apply.

Explanation / comment

- In paragraph 1, one participant has suggested to delete the word "prior" regarding whether test mining should be done before submitting an application for Plan of Work. I have placed it in square brackets and invite for a discussion on this.
- The Intersessional Working Group on "Underwater Cultural Heritage" has submitted a proposal for an alternative wording of paragraph 2. This has been inserted as "paragraph 2 alt." I thank the group for its hard work and propose that the groups work will be used as basis for paragraph 2 in regulation 48 ter going forward as it is a clear, streamlined paragraph. However, as I also believe it is important to retain the level of detail in paragraph 2, I propose to relocate this section to the relevant standard or guideline, e.g. the "draft standard and guidelines for the environmental impact assessment process" which can be found on the ISA's website (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm). I have suggested this in the accompanying Matrix. I invite for views on this.
- In paragraph 3 it suggested to change the reference to effectively protecting the Marine Environment against "harmful effects" to protecting it against "serious harm". I propose to keep the original wording ("harmful effects") as it covers a broader term, but I have put it in square brackets and invite for a discussion on this.
- An alternative for paragraph 6 has been submitted and is inserted as paragraph 6 alt. However, I believe the current paragraph 6 is adequate clear and precise and I therefore instead propose to move paragraph 6 alt to the relevant guideline, e.g. the "draft standard and guidelines for the environmental impact assessment process" which can be found on the ISA's website (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm). I have suggested this in the accompanying Matrix. I invite for views on this.

Section 3
Pollution control and management of waste

Regulation 49
Pollution control

1. A Contractor shall take all ~~the necessary~~ ~~and appropriate~~ measures to protect and preserve the Marine Environment [~~and the coastlines~~] from [harmful effects] [Serious Harm], in accordance with Article 145 of the Convention, by preventing, reducing and controlling pollution and other hazards, [including marine litter and underwater noise,] that arise from its activities in the Area. This is to be done in accordance with its Environmental Management and Monitoring Plan and the Convention, the Agreement, and all relevant Rules of the Authority the relevant applicable Regional Environmental Management Plan, and taking account ~~of~~ the Environmental Management and Monitoring Plan and the applicable Standards or Guidelines~~ and the relevant applicable Regional Environmental Management Plan~~. If a potentially polluting wreck is discovered and it is an object of an archaeological and historical nature, then

the duty to protect such heritage must also be considered consistent with Article 149 of the Convention.

Regulation 49 alt

1. A Contractor shall take all the necessary and appropriate measures to protect and preserve the Marine Environment and coastlines by preventing, reducing and controlling pollution and other hazards, including marine litter and underwater noise, from its activities in the Area. This is to be done in accordance with its Environmental Management and Monitoring Plan and all relevant Rules of the Authority, the relevant applicable Regional Environmental Management Plan, taking account of the applicable Guidelines.

Explanation / comment

Overall comments to Regulation 49-61 and the annexes:

- As I also stated in my introduction, we managed to go through regulations 44 – 48 ter during our last meeting in July, wherefore changes to these regulations submitted before that meeting have been accepted. However, as the following regulations (and annexes) where not discussed in July, the changes proposed to these (submitted before the last meeting) are still visible in track change alongside my comments to these.
- Furthermore, submissions which have been sent by participants before this meeting pertaining to these regulations (49-61 plus annexes) have also been incorporated to the extent possible and I have added comments to these when relevant.

Specific comments to Regulation 49:

- The Intersessional Working Group on "Underwater Cultural Heritage" has submitted a proposal for an alternative wording of the regulation. This has been inserted as "Regulation 49 alt." I thank the group for its hard work and propose that the groups work will be used as basis for Regulation 49 going forward. Alternatively, the two versions could be attempted merged. I invite for views on this.
- To Regulation 49, I noted during our last meeting that some participants requested the insertion of a reference to Article 145 of the Convention relating to protection of the marine environment, including coastlines. This has been included.
- It has been suggested to change the reference to protecting the Marine Environment against "harmful effects" to protecting it against "serious harm". I propose to keep the original wording ("harmful effects") as it covers a broader term, but I have put both words in square brackets and invite for a discussion on this.
- One participant submitted a proposal to include a reference to "coastline" while other participants now have proposed deleting it. It has been placed in square brackets. I note that this is not defined in the Schedule and invite for a discussion on whether this should be included.
- During our last meeting it was also discussed whether the explicit reference to "marine litter" and "underwater noise" should be kept. I noted support for keeping this. However, I also noted that

several participants during our meeting requested general language, e.g. by referring to protecting the marine environment from harmful effects according to art. 145. This has therefore not been deleted but placed in square brackets. I invite for a discussion on this matter.

- One participant proposed to delete the reference to polluting wrecks and Article 149 of the Convention. However, I noted support for this wording during our last meeting and have therefore kept it. I invite for a discussion on this.

Regulation 50
Restriction on Mining Discharges

1. A Contractor shall not dispose, dump or discharge into the Marine Environment any Mining Discharge, except where such disposal, dumping or discharge is permitted in accordance with:

(a) The assessment framework for Mining Discharges as set out in the Standard;

(b) The Environmental Management and Monitoring Plan; and

(c) International [agreed] [~~applicable~~] rules, standards and recommended practices and procedures. ~~regulations set out by the International Maritime Organization.~~

2. Paragraph 1 above shall not apply if such disposal, dumping or discharge into the Marine Environment is necessary for the safety of the vessel or Installation or the safety of human life, provided that such disposal, dumping or discharge is conducted so as to ~~all~~minimize the ~~likelihood~~ possibility of harm to ~~human life and prevent Harm to~~ the Marine Environment. If ~~Serious~~ Harm to the Marine Environment occurs as a result of disposal, dumping or discharge, the Contractor shall monitor, [~~and~~] Mitigate [and remediate] the impacts of such harm, and shall report forthwith about such disposal, dumping or [discharge] to the Authority.

[2.Alt. Paragraph 1 above shall not apply if such disposal, dumping or discharge into the Marine Environment is necessary for the safety of the vessel or Installation or the safety of human life, provided that such disposal, dumping or discharge is conducted so as to minimize the likelihood of harm to human life and prevent Harm to the Marine Environment.]

3. The disposal, dumping or discharge into the Marine Environment of any Mining Discharge that is not permitted in accordance with paragraphs 1 and 2 above is considered an unauthorized Mining Discharge and constitutes a Notifiable Event under regulation 34 and Appendix 1.

4. The applicant or contractor must also keep a register of discharges to be updated at least [~~weekly~~] [monthly,] where possible, ~~allowing to it be consulted in real~~ that shall be reported annually to the Authority as part of the mandatory annual report that must be prepared throughout the operation.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- One proposal included a request for referencing relevant international law in para 1. I have attempted to merge that

proposal with the existing litra c in the paragraph and this by referencing the relevant wording of the Convention.

- One participant has submitted an alternative to paragraph 2. This is inserted as paragraph "2.Alt.". I invite for comments on this.
- One participant had submitted a request to refer to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters, 1972 and the 1996 Protocol (the "London Convention"). I propose to not include such a reference. Both the London Convention and the London Protocol explicitly exclude deep seabed mining activities from their scope of application. In particular, the London Protocol, article 1(4)(3) excludes from the definition of "Dumping", the disposal or storage of wastes or other matter directly arising from, or related to the exploration, exploitation and associated offshore processing of seabed mineral resources. Furthermore, it should be recalled that UNCLOS provides a specialised regime for the conduct of activities in the Area and the protection of the marine environment. The overriding provisions of part XI and XII of UNCLOS places the obligation on the Authority to adopt rules, regulations and procedures in this respect, and no other authority or organization is mentioned or tasked in this respect. Finally, one should remember that several delegations to UNCLOS are not contracting parties to the London Convention, so also for that reason it would be doubtful to include such a reference.
- In paragraph 4 (previously para 5), it has been proposed to change the interval on how often the applicant or contractor must update the register of discharges from "weekly" to "monthly". These suggestions are placed in square brackets. However, after given it careful consideration, I would – in my capacity of Facilitator – suggest deleting the phrase "to be updated at least [weekly] [monthly,] where possible" as the focal point of the provisions is the following reference to reporting annually to the Authority on any discharges. It is placed in double square brackets. Alternatively, I could also propose a reference to the register being updated "immediately" after a discharge event. I invite for a discussion on this.

Section 4
Compliance with Environmental Management and Monitoring Plans and performance assessments

Regulation 51
Compliance with the Environmental Management and Monitoring Plan

1. A Contractor shall, in accordance with these regulations, implement and adhere to its Environmental Management and Monitoring Plan ~~and these regulations,~~ and shall:

(a) Monitor continuously in accordance with the applicable Standard, on Environmental Monitoring ~~release~~submit environmental monitoring data [publicly], in accordance with regulation 46~~ter~~bis, paragraph 4 in an accessible format consistent with best scientific practice, ~~in real~~ where possible or at monthly intervals ~~on a monthly basis~~ and report annually under regulation 38 (2) (g) on the Environmental Effects of its

activities on the Marine Environment, including a comparison between baseline data and monitoring data, as well as a comparison between baseline data and threshold values, to document the actual effects on the Marine Environment and manage all such effects as an integral part of its Exploitation activities as set out in the relevant Standards and taking into account the relevant Guidelines referred to in regulation 45;

(b) ~~Apply best endeavours to improve~~ Implement all applicable mitigation and management measures to ensure the effective protection of the Marine Environment from harmful effects, as set out in the [~~relevant~~] Standards, inter alia those referred to in regulation 45, and taking into account ~~relevant~~ Guidelines ~~referred to in regulation 45~~; and

(c) Monitor compliance with, assess, and maintain the currency and adequacy of the Environmental Management and Monitoring Plan and its Environmental Management System during the term of its exploitation contract including through management review under regulation 46, performance assessment under regulation 52, and with modification to the Plan of Work under regulation 57 where required.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- A submission proposed to delete the reference in point a to publicly submitting the monitoring data. I have placed this in square brackets and invite for views on this.

Regulation 52
Review of the Performance assessments of the Environmental Management and Monitoring Plan

1. A Contractor shall conduct performance assessments of their Environmental Management and Monitoring Plan. The Commission shall review the performance assessments of the Environmental Management and Monitoring Plan undertaken by a competent and independent auditor hired by a Contractor in accordance with the relevant Standards and taking account of the relevant Guidelines. [In conducting such a performance assessment of the Environmental Management and Monitoring Plan, the Contractor shall ~~ensure~~ assess:

(a) The compliance of the mining operation with the mitigation and management measures included in the Environmental Management and Monitoring Plan, as a part of the approved ~~p~~Plan of Work;

(b) The continued appropriateness and adequacy of the plan, including the management conditions and actions attaching thereto;

(c) ~~The conformity of~~ ~~That~~The conformity of the plan with the ~~plan~~ measures included in the Environmental Management and Monitoring Plan and take into consideration ~~with~~ the applicable Regional Environmental Management Plan, ~~if any~~

(d) The accuracy of the findings of the environmental impact assessment as set out in the Environmental Impact Statement.

(e) The changes in knowledge, technology, mining patterns, monitoring techniques and detection capabilities are reflected;

(f) The outcomes of management reviews of the environmental management system are conducted under regulation 46(2)(e); and

(g) Information and data derived from monitoring at the mine site and impact area as well as from any Exploitation by other Contractors is provided.

(g)bis The implementation report of the Environmental Management and Monitoring Plan, as well as the comments and evaluation from the Commission in accordance with Regulation 48 above.

(g)ter Any finding of the Inspectors, especially those findings that indicate the non-compliance of the Contractors towards the submitted and approved Environmental Monitoring and Management Plan, as well as the recommendations on measures to be taken as shown in the inspection result.]

2. The frequency of a performance assessment shall be in accordance with the period specified in the approved Environmental Management and Monitoring Plan and shall occur at least every twenty-four months

2bis. An ad hoc performance assessment may be requested by the [Council] [Compliance body] following:

(a) An Incident ~~or Notifiable~~;

(b) Receipt of an unsatisfactory annual report;

(c) Issuance of a compliance notice or

(d) When deemed necessary by the Council in response to third-party ~~or whistle blower~~ information submitted to the Council.

3. A Contractor shall hire a competent and independent auditor to compile and submit a performance assessment report to the Secretary-General in accordance with, and in the format set out in, the relevant Guidelines.

4. The Secretary-General shall publish the Performance Assessment Report and provide opportunity for Stakeholders to comment, and at the end of that consultation period shall transmit the report and any Stakeholder's comments to the Commission [and Compliance Committee / Inspector-General]. The Commission shall in consultation with the [Compliance Committee / Inspector-General] review ~~a~~ the performance assessment report and any stakeholder comments received to it at its next available meeting, provided that the report has been circulated at least 30 Days in advance of such meeting. ~~If the Commission does not possess sufficient expertise amongst its members, it shall consult independent experts to review the performance assessment.~~ The Commission should, where necessary and appropriate, consult external experts to review the performance assessment. ~~The Secretary-General shall publish the report and provide opportunity for Stakeholders to comment, and at the end of that consultation period shall transmit the report and any Stakeholders' comments to the Commission for review.~~

5. Where the Commission upon review of the report and any Stakeholder comments received in relation to it, and upon the advice of the [Compliance Committee / Inspector-General] considers the performance assessment to be unsatisfactory or the report submitted to be inadequate, ~~in relation~~ to the applicable Standards, relevant Guidelines and the Environmental Management and Monitoring Plan, the Commission may require, after providing the Contractor with a reasonable opportunity to address any inadequacies, the Contractor to:

(a) Submit any relevant supporting documentation or information requested by the Commission including a revised report; or

(b) Appoint, at the cost of the Contractor, an independent competent person to conduct the whole or part of the performance assessment and to compile a report for submission to the Secretary-General and review by the Commission.

6. Where the Commission has reasonable grounds to believe that a performance assessment cannot be undertaken satisfactorily by a Contractor consistent with the applicable Standards ~~Guidelines, the Commission may procure,~~ at the cost of the Contractor, an independent competent person to conduct the performance assessment and to compile the report.

7. Where, as a result of paragraphs 5 and 6 above, a revised assessment and report is produced, paragraph 4 above shall apply to the revised assessment.

8. Where, as the result of a review by the Commission under paragraph 4 above, the Commission concludes that a Contractor has failed to comply with the terms and conditions of its Environmental Management and Monitoring Plan or that the plan is determined to be inadequate in any material respect, the Commission shall:

(a) Recommend to the Council to issue a compliance notice under regulation 103 or;

(b) Require the Contractor to deliver a revised Environmental Management and Monitoring Plan, taking into account the findings and recommendations of the Commission. A revised plan shall be subject to the process under regulation 11.

9. The Commission shall report annually to the Council on such performance assessments and any action taken pursuant to paragraphs 5 to 8 by it or the Secretary-General. Such report shall include any relevant recommendations for the Council's consideration. Such report shall be published on the Authority's website.

10. The Secretary-General shall inform the S~~s~~ponsoring State or States of any action taken pursuant to this regulation.

Explanation/comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- A submission proposed to insert new litras "g bis" and "g ter" in paragraph 1. I see merit in especially proposed litra "g ter" but invite for a discussion on these.
- One participant proposed to have the reference in paragraph 2 bis to the "Council" deleted and instead refer to the "compliance body". I have placed this in square brackets invite for views on this.
- Two participants submitted proposals relating to the Secretary-General publishing the Performance Assessment Report and providing opportunity for Stakeholders to comment and submit the report to the Commission. One participant submitted this as an amendment to paragraph 4 while the other proposed to include it as a new paragraph "3bis". I see merit in the proposals and have therefore included these. The two proposals were, to a large extent, similar in wording and content and I have therefore

merged them into one amendment to (the beginning of) paragraph 4.

- During our last meeting, one participant reflected on possibly amend paragraph 1 to separately state/list the different elements of this provision. Another participant suggested to alter the structure of paragraph 1 to better align with the mining process. I propose that the listed elements in paragraph 1 litras a-g ter could be moved to the "Draft guidelines for the preparation of Environmental Management and Monitoring Plans" (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) which I have also suggested in the accompanying Matrix. I invite for comments to these views and also encourage that concrete proposals for re-wording/re-structuring paragraph 1 are submitted to reflect these positions.

Regulation 53 [50bis]
Emergency Response and Contingency Plan

1. A Contractor shall develop an Emergency Response and Contingency Plan prior to the development and application of Plan of Work, taking into account the result of the Environmental Impact Assessment (EIA). Furthermore, a~~A~~ Contractor shall maintain:

(a) The currency and adequacy of its Emergency Response and Contingency Plans based on the identification of potential Incidents and in accordance with Good Industry Practice, Best Available Techniques, Best Environmental Practices and the applicable Standards and Guidelines, as well as the implementation and monitoring results of the Environmental Management and Monitoring Plan, and shall be tested at least annually; and

(b) Such resources, training and procedures as are necessary for the prompt execution and implementation of the Emergency Response and Contingency Plans and any Emergency Orders issued by the Authority including on-vessel presence for rapid emergency response.

2. The Authority shall facilitate the exchange of knowledge, information and experience relating to incidents between Contractors and States, and shall draw on the advice of other relevant international organizations, so that such knowledge and information can be used to prevent, reduce and control pollution and other hazards to the Marine Environment, ~~including the coastline,~~ by:

(a) Contractors to meet their requirements, inter alia under regulation 53(1), and

(b) the Authority to prepare and revise relevant Standards and Guidelines ~~where appropriate~~ and to develop and disseminate other appropriate materials.

3. Following an Incident, a Contractor must submit a detailed report on whether the Emergency Response and Contingency ~~p~~Plan was adequate and to what extent it was complied with, including, among other aspects, expenses incurred, responsibilities and updating of the plan if necessary.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.

- I believe we have an outstanding/unfulfilled matter from our last meeting relating to the placement of this regulation. Should it continue to be placed as "regulation 53" or should it be moved to "regulation 50bis" in section 3 (on Pollution control and management of waste) after regulation 50 (related to restrictions on discharges from mining activities)? I propose to keep it in this section.
- One participant has submitted a proposal to insert a new paragraph 1. I have tried to merge this proposal into the existing paragraph 1 and invite for a discussion on this.
- One proposal suggested deleting litras a and b in paragraph 2. However, I have not noted any such objections to these provisions during the meeting, wherefore I propose to keep it.
- I have suggested to broaden para 2(b) in order to ensure the exchange of knowledge as this is vital to the ongoing sustainability of the industry and improved management measures.

Section 5
Environmental Compensation Fund

Regulation 54
Establishment of an Environmental Compensation Fund

1. The Authority hereby establishes the Environmental Compensation Fund. Referred to as "the Fund" in the following.

2. The rules and procedures of the Fund shall be established by the Council on the recommendation of the Finance Committee before the [~~approval of a first plan of work for an exploitation contract~~ beginning of Commercial Production] under these regulations.

[Those rules and procedures shall include, inter alia:

(a) A mechanism for financing the funds in accordance with Regulation 56, including replenishment upon disbursement;

(b) A description of how the funds and any interest generated will be managed and by whom;

(c) The process for accessing the funds;

(d) The type of damages and purposes eligible for claims against the funds in accordance with regulation 55;

(e) The standard of proof required for claims against the funds;

(f) A policy on refunds of Contractor payments into the funds;

(g) A process for determining disbursements or refunds from the funds; and

(h) The promotion of the participation of affected persons or other Stakeholders in decisions about disbursement of funds.]

3. The Secretary-General shall, in consultation with the Finance Committee, within 90 Days of the end of a Calendar Year, prepare an

independently audited statement of the income and expenditure of the Fund for circulation to the members of the Authority.

Explanation/comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- It is noted that one submission to this regulation welcomes the additions but recalls that it has yet to be decided whether these rules and procedures for the Fund should be developed within the regulations or as a separate standard. I support this view and propose that such a standard or/ guideline is developed, and the content of paragraph 2 litra a-h is placed there as I have also suggested in the accompanying Matrix. I have placed it in square brackets and invite for a discussion on this.
- When reading this regulation, I see a need for underlining the importance of that the rules and procedures of the Fund shall be established by the Council *before* the approval of a first plan of work is given. Also, it is important that the rules and procedures of the finance committee are clarified to assist in streamlining the regulations. I invite for views on whether participants share this view and, if so, how this can be stressed.

Regulation 55
Purpose of the Environmental Compensation Fund

1. The purpose of the Fund is to finance the implementation of any necessary measures designed to mitigate or compensate for any [unlawful] loss or damage to the Marine Environment of the Area or coastal states, or damage caused to third parties arising from ~~exploration~~ Exploitation ~~activities in the Area~~ when the costs of such measures ~~and efforts~~ cannot be recovered from a Contractor or Sponsoring State. This includes the remediation restoration and rehabilitation of the ~~Area~~ Marine Environment (when the rehabilitation is technically and economically feasible) ~~and~~ in accordance with Good Industry Practice, Best Environmental Practices and Best Available Techniques ~~when the costs of such measures and efforts cannot be recovered from a Contractor or Sponsoring State, as the case may be for environmental damage outside of consented activity~~. Compensation can be used in cases when the restoration and rehabilitation are impossible. ~~shall include the costs for implementation of any necessary measures designed to prevent, reduce, mitigate, limit, and remediate any damage to the marine environment and its resources~~.

1. Alt. The purpose of the Fund is to finance compensation [and mitigation costs], which cannot be borne by the Contractor or Sponsoring State as the case may be, for environmental damage outside of consented activity.

2. Based on the ~~precautionary~~ polluter pays principle the Contractor pay for any necessary measure to limit, remedy and compensate any [unlawful] damage to the Area arising from their ~~mining~~ Exploitation activities.

[2.Alt. Based on the precautionary principle the contractor shall pay for necessary measures to limit, remedy and compensate damage to the Area arising from exploitation, outside of consented activity.]

[3. In cases where the contractor' payment is insufficient to limit, remedy and compensate any damage to the Area arising from] [~~the mining activities~~] [Exploitation,] the compensation fund may be used.]

[4. In cases where situations may arise, where a Contractor does not meet its liability in full while the Sponsoring State is not liable under Article 139 (2) of the Convention, the compensation fund may be used.]

Regulation 55 Alt.
Purpose of the Environmental Compensation Fund

1. The Environmental Compensation Fund has two purposes:

(a) In the event that there is environmental damage caused by contractor activities that were not consented, then in accordance with the polluter pays principle the contractor shall bear liability for the financing of any measure to mitigate that environmental damage and shall also be liable for compensation to any person affected by that environmental damage, but if the contractor is unable to meet that liability in full, then, as a last resort, the environmental compensation fund may be called upon; a~~nd~~

(b) In the event that there is unforeseen environmental damage caused by contractor activities that were consented activities then the environmental liability fund shall be used to finance any measure to mitigate that environmental damage and compensate any person affected by that environmental damage.

Explanation / comment

- Several participants have submitted alternative proposals for rewording/restructuring the draft regulation, both ahead of the meeting in July and this meeting. I have inserted one of these alternative proposals as "Regulation 55 Alt." as it represents a more streamlined and precise version which I support. To the participants who forwarded very detailed proposals, including to the previous alternative to Regulation 55 which has now been omitted in order to focus discussions, this specific information could perhaps best be placed in a standard or guideline which I have proposed drafted in my comment to the previous regulation (54.) I invite for comments to this.
- If the participants favour the original regulation 55 (or this is to merge with "regulation 55 Alt. I") I would highlight that during our last meeting one participant suggested to suggested to delete paragraph 3. I propose to discuss the scope of paragraph 3, which currently states that Fund covers any damages arising from the Exploration (/mining activity) and invite for views on the extent of the Fund's scope and how this is best addressed in clear language in the Regulation.
- To regulation 55, one participant has submitted an alternative wording to paragraph 1, which is more condensed. This is inserted as "paragraph 1.Alt." I invite for a discussion on this.
- Proposals have been put forward to paragraphs 1 and 2 to specify that compensation relates to any "unlawful" damage or loss. I propose not to include this as it could limit the scope of the

provision, but I have placed it in square brackets and invite for views on this matter.

- Several participants have proposed to refer to the "polluter pays principle" in paragraph 2 instead of the "precautionary principle". I fully support this suggested change.
- One participant has submitted an alternative wording to paragraph 2. This is inserted as "paragraph 2.Alt." I note that the original paragraph 2 refers to the "polluter pays principle" while the alternative paragraph (now) refers to the "precautionary principle" In this context I believe that the original wording (referring to the "polluter pays principle") is correct and this version should be used going forward. I have placed 2 alt. it in square brackets and invite for a discussion.
- Several participants have proposed deleting paragraph 3 relating to cases where the contractor's payment is insufficient to remedy the damage which has arisen from the exploitation, thus allowing the compensation fund to be used. As this is a principal discussion, I have put the paragraph in square brackets and invite the proponents of this proposal to present their views and all participants to have a discussion on this. I believe that there is merit to these proposals.
- As stated above, I have omitted the previous alternative to Regulation 55 in order to focus discussions. However, ahead of the meeting in July one participant had submitted a suggested paragraph (para 2 in the previous alternative version) which sought to incorporate the principles of the 2011-Advisory Opinion from ITLOS on "Responsibilities and Obligations of States sponsoring persons and entities with respect to liability Sponsoring States for activities in the Area under article 139 of the Convention". (See para 206 of the Advisory Opinion). I believe there is great merit to this inclusion and have therefore inserted this paragraph from the previous alternative and placed it (in square brackets) as a new paragraph 4 in Regulation 55. I invite for a discussion on this.

Regulation 56
Funding of the Environmental Compensation Fund

1. In adherence to the ~~precautionary~~ polluter-pays principle the Fund will consist of, but not be limited to, the following monies:

(a) The prescribed percentage or amount of fees paid after approval of a plan of work and prior to the commencement of ~~mining~~ activities (Commercial Production) in the Area under an Exploitation Contract by Contractors or the Enterprise to the Authority;

(a) alt. The requirements and modalities governing contributions to the Fund in accordance with regulation 56, including the establishment of the minimum size of the fund, and the modalities for replenishment of the fund upon disbursement.

(b) The prescribed percentage of any penalties paid by Contractors or the Enterprise to the Authority;

(c) The prescribed percentage of any amounts recovered by the Authority by negotiation or as a result of legal proceedings in respect of a violation of the terms of an exploitation contract;

(c) alt. Establishment of rules, guidelines and modalities for determining entities eligible to access the Fund, which may include states and private entities that have suffered damages.

(d) Any monies paid into the Fund at the direction of the Council, based on recommendations of the Finance Committee;

(e) Any income received by the Fund from the investment of monies belonging to the fund;

(f) An annual levy paid by Contractors or the Enterprise to the Fund; and

(g) ~~The prescribed~~ Any contributions paid by S~~s~~ponsoring States to the Fund.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- Two participants have submitted almost identical proposals for amending litra a. I have tried to merge these two and invite for comments to this.
- One participant has submitted a proposal to establish that the fees should be paid "after approval of a plan of work" (and prior to the commencement of mining). I have merged this proposal into the existing litra a and invite for a discussion on this.
- One participant submitted a proposal for an alternative wording of litra a. This proposal has been inserted as "litra a. Alt." I note that this alternative provision refers to "regulation 56" i.e. this regulation which is being discussed. If this is a mistake the correct regulation should be inserted. If this is not a mistake, I propose to reword this part to e.g., state; "*The requirements and modalities governing contributions to the Fund in accordance with this regulation, (...)*". I invite for a discussion on utilizing this alternative litra a.
- On litra a, I recall comments, during our previous meeting where this was regulation discussed, on how the fund compensate in the early years of mining? This needs to be clarified, wherefore I invite for a discussion on this.
- One participant noted during our previous meeting where this regulation was discussed that the reference to "prescribed contributions" in litra g needs to be clarified in terms of what the scope is. I invite for views on this.

Part VI

Closure plans

Regulation 59
Closure Plan

1. A Contractor shall develop a Closure Plan, in accordance with Regulation 7 (3) (i), Annex VIII to these regulations, the Environmental Management System and other Environmental Plans of the Contractor, as

well as ~~applicable~~ Standards, also taking into consideration Guidelines and the ~~relevant~~ Regional Environmental Management Plan.

[1.bis. The objectives of a Closure Plan are to ensure that:

(a) The marine environment is effectively protected and will have a clear and healthy status following the end of mining activities,

(b) The adverse effects arising from closure activities are avoided, ~~remedied~~, or mitigated,

(c) Any remaining environmental effects continue to be monitored and reported for a period prescribed in the closure plan,

(d) The mined site is returned to its natural state, or returned to its natural state to the extent possible, through rehabilitation and restoration,

(e) The closure of mining activities is a process that is incorporated into the mining life cycle,

(f) Contractors take appropriate steps to minimise harm to the environment and to human health during any period of temporary suspension.]

2. The Closure Plan shall, in accordance with the requirements of Annex VIII, set out the responsibilities and actions of a Contractor during any temporary suspension, and also for the decommissioning and closure of activities in a Mining Area, including the post-closure management and monitoring of remaining Environmental Effects. [In fulfilling these responsibilities, the Contractor shall, *inter alia*:

(a) Undertake activities and the scheduling of studies, based on available baseline data, to inform about Closure,

(a bis) Undertake a gap analysis of existing environmental data to determine if additional baseline information and/or surveys will be required, and

(a ter) Utilise Best Industry Practice, Best Environmental Practices, Best Available Techniques and Best Available Scientific Information,

(b) Set a date of cessation or suspension of mining activities, at which point a management and monitoring plan must also be in place for the period prescribed in the Closure Plan and in accordance with the Standards and taking into account the relevant guidelines and results obtained in previous monitoring activities,

(b bis) Undertake early discussions between the Authority and contractors so that regulators understand the likely timing of

(i) mining cessation,

(ii) decommissioning,

(iii) post-closure monitoring.

(c) ~~Identify, quantify, assess and detail the management measures for the~~ Final environmental condition of the area, including the state of remaining reserves, the oceanographic, geological, biological, socioeconomic and sociocultural condition, and the risks relating to remaining Environmental Effects are identified, quantified, assessed and managed in accordance with Best Available Scientific Information, Best Available Technologies Best Available Technologies and Best Environmental Practices, which includes the gathering of information relevant to closure or suspension,

(d) Comply with ~~the necessary~~ health and safety requirements related to closure activities,

(e) Report on the identification, monitoring, and quantification of remaining Environmental Effects to the Authority, including data to inform about recovery or lack thereof, over a period established in the closure plan, and management responses are implemented in a timely manner, including plans for further surveys, data collection, Mitigation, or remediation where appropriate. [~~The collected monitoring data shall inform the Authority about the recovery, or lack thereof, over a time period required by the Closure Plan, in accordance with the applicable Standard and taking into account relevant guidelines.~~]

(f) Make and fulfil required disposal, restoration and rehabilitation commitments in accordance with the relevant Standards and taking into account the relevant Guidelines,

(f bis) Remove completely any Installations and equipment, or parts therefrom, from the Mining Area, as well as any kind of abandoned waste. The Closure Plan should include an assessment of options leading to the identification of the contractor's preferred decommissioning solution for Installations and equipment, as well as parts therefrom, and

(g) The mining activities are closed or suspended efficiently and safely.]

2bis. The Contractor shall ~~take steps to promote~~ ensure transparency during the Closure process and consult Stakeholders in the Closure Plan design, review, and implementation.

3. The Closure Plan shall cover the aspects prescribed by the Authority in annex VIII to these regulations and in accordance with the relevant Standards and taking into account the relevant guidelines.

4. A contractor shall maintain and update its Closure Plan in accordance with these regulations, and Good Industry Practice, Best Environmental Practices, Best Available Techniques, Best Available Scientific Information and the Standards and taking account of the relevant Guidelines.

[5. The Closure Plan shall be reviewed and updated taking into account the results obtained from monitoring closure activities;

(a) Each time there is a Material Change in a Plan of Work, including new knowledge, technologies, devices and new scientific findings, change of contractor or sponsoring State,

(b) Every five years, when no Material Change has required an earlier update, and

(c) In the five years preceding the planned end of the period of Exploitation, the Closure Plan shall be updated [annually] [every 2 years] [every 3 years] [in the third and fifth year] [in the year before closure] and finalized in accordance with Regulation 60 (1).]

5. Alt. In the five years preceding the planned end of the period of Exploitation, or any other period as deemed necessary by the Contractor and the Sponsoring State, the Closure Plan shall be reviewed annually and, if necessary, be updated and be finalized in accordance with regulation 60(1). The review and update of the Closure Plan shall take into account the results obtained from monitoring post-closure activities and each time there is a Material Change in a Plan of Work. In cases where no such Material Change has occurred and no monitoring data and information or improved knowledge or technology has signalled need for updates, every five years and at the end of the project and be finalized in accordance with regulation

60 (1). Details on the procedures of review of the Closure Plan, including conditions requiring updates thereof, shall be further elaborated in the Standards and Guidelines.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- At a previous meeting, several participants called for streamlining this and other regulations. Some participants agreed to form an intersessional working group to rework and submit a revised/streamlined version of regulation 59, using the previous version of the regulation as a basis. I thank the group for its hard work and for the submitted proposal which I have reviewed and will use as the basis of this regulation going forward.
- In para 2(e), one group suggested to delete the last sentence as this is already covered by a separate insertion in the beginning of the para.
- I note that the group has presented a draft where the participants weigh in with (sometimes diverging) views and comments to the submitted provision. For example, in paragraph 5, litra c there is a reference to requiring the Closure Plan to be updated at a specific interval in the last five years leading up to the planned end of the period of exploitation. These different intervals (annually, every 2 years, every 3 years, in the third and fifth year or in the year before closure) have been placed in square brackets. I invite for views on this.
- Some participants have proposed an alternative to paragraph 5. This has been inserted as paragraph 5 alt and I invite for a discussion.
- In general, and as also referred to in paragraph 5 alt, several participants have stated a need for consolidation or rewording or formal drafting of the regulation, perhaps moving parts to a relevant standard or guideline. I fully agree and propose that the detailed provisions in paragraph 1 bis, paragraph 2 litra a-g and paragraph 5 litras a-c are moved to a standard and/or guideline, either to be developed or in the existing "Draft guidelines for the preparation of Environmental Management and Monitoring Plans" which has references to the Closure Plan (see The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) or Annex VIII. I have also suggested this in the accompanying Matrix. I have placed these mentioned sections (eligible for transfer to standard and guideline) in square brackets and invite for a discussion on this and/or concrete suggestions on streamlining this provision to be able to proceed on finalizing these Draft Regulations.

Regulation 60
Final Closure Plan: cessation of production

1. A Contractor shall, at least 24 months prior to the planned end of Commercial Production, or as soon as is reasonably practicable in the case of any unexpected cessation including a temporary suspension, submit to the Secretary-General, for the consideration of the Commission, a Final Closure Plan, taking into account the results of monitoring and data and information gathered during the exploitation phase and the applicable Regional Environmental Management Plan.

1bis. The Secretary-General shall make the final Closure Plan submitted pursuant to paragraph (1) available on the Authority's website for a period of at least [60] [90] days and invite members of the Authority and Stakeholders to submit comments in writing.

1 ter. The Secretary-General shall, within [seven calendar days] [14 calendar days] following the close of the commenting period under paragraph 1bis, provide the comments submitted by members of the Authority and Stakeholders, to the applicant Contractor for its consideration and to the Commission. The Contractor shall consider the comments and provide responses to the substantive comments received and shall submit any revised plans and responses to the Commission within 90 days from receiving the comments from the Secretary-General.

2. The Commission shall examine the Final Closure Plan and any comments received pursuant to paragraph 1bis and revisions and responses made pursuant to paragraph 1ter at its next meeting, provided that these have been circulated at least [30] [60] [[90] Days in advance of the meeting or of receipt of the Final Closure Plan. The Commission should, where necessary and appropriate to ensure sufficient technical expertise, consult external independent experts, identified in accordance with Annex VIII to evaluate the Final Closure Plan.

3. If the Commission determines that the final Closure Plan meets the requirements of Regulation 59, it shall recommend approval of the final Closure Plan to the Council.

4. If the Commission determines that the final Closure Plan does not meet the requirements of Regulation 59, the Commission shall require the Contractor to make and submit amendments to the final Closure Plan as a condition for recommendation of approval of the plan in accordance with paragraph 3 of this regulation.

5. The Commission shall give the Contractor written notice of its decision under paragraph 4 above and provide the Contractor with the opportunity to make representations or to submit a revised final Closure Plan for the Commission's consideration, within 90 Days of the date of notification to the Contractor.

6. At its next available meeting, the Commission shall consider any such representations made or revised final Closure Plan submitted by the Contractor when preparing its report and recommendation to the Council, provided that the representations have been circulated at least [30] [60] [90] Days in advance of that meeting.

7. The Commission and Finance Committee shall review the amount of the Environmental Performance Guarantee provided under Regulation 26 and include the results of that review and any recommendations in its report to the Council on the final Closure Plan.

8. The Council shall consider and take a decision on the report and recommendation of the Commission relating to the approval of the final Closure plan and the amount of the Environmental Performance Guarantee.

9. Any reports and recommendations submitted to the Council and decisions made by the Council under this regulation shall be published on the Authority's Website by the Secretary-General within [7] [14] days of a submission or decision being made.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- At a previous meeting, several participants called for streamlining this and other regulations. Some participants agreed to form an intersessional working group to rework and submit a revised/streamlined version of regulation 60, using the previous version of the regulation as a basis. I thank the group for its hard work and for the submitted proposal which I have reviewed and will use as a basis on this regulation going forward.
- I noted that not all paragraphs have been amended by the group; for example, paragraph 1 bis to which one participant has submitted a proposed change regarding deadlines for uploading on the Authorities website and submitting comments in writing. I have left these proposed changes in square brackets for your consideration and invite for views on this.
- I invite the group members to lead the discussion during our meeting, including the deliberations on whether reports, responses and recommendations should be circulated at least 30, 60 or 90 days ahead of meetings as suggested in paragraph 2 and 6 as well as whether decisions should be published on the Authority's website within 7 or 14 days as suggested in paragraph 9. (Suggestions left in square brackets). I invite for a discussion on this following the introduction by the group.
- Finally, I would note that – as I also referred to in my comments to the previous regulation (60) – parts of this regulation could perhaps be relocated to Annex VIII or a standard and/or guideline, either to be developed or in the existing "Draft guidelines for the preparation of Environmental Management and Monitoring Plans" (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm). although I have no concrete proposal for which parts should be moved. I invite for a discussion on this.

Regulation 61
Post-closure monitoring

1. A Contractor shall implement the Final Closure Plan in accordance with Best Environmental Practices and Good Industry Practice and shall report to the Secretary-General on the progress of such implementation on an [annual] [two year] basis [after an initial 5 year period] [or on a case-by-case basis agreed by the Council on recommendation from the Commission]. This report shall include a summary of the results of monitoring, conducted in accordance with the applicable Standard and pursuant to the post closure monitoring programme, and management actions taken in response to any

adverse Environmental Effects identified through monitoring, until completion of execution of the Final Closure Plan.

1 alt. A Contractor shall implement the Final Closure Plan and shall report to the Secretary-General on the progress of such implementation, including a summary of the results of monitoring, conducted in accordance with the applicable Standard and pursuant to the monitoring programme, and management actions taken in response to any adverse Environmental Effects identified through monitoring, until completion of execution of the Final Closure Plan. Such report will be submitted in accordance with the following schedule: on annual basis during the first [three] [five] years after cessation of mining activity, on two year basis during the next [six] [four] years, on five yearly basis during the remaining term of the Closure Plan. This schedule can be corrected in agreement with the Council on recommendation from the Commission.

2. The Contractor shall continue to monitor the Marine Environment for a minimum of [such period] [X years] after the cessation of activities, or until the closure objectives have been achieved, as set out in the Closure Plan and for the duration provided for in the Standards and taking into account Guidelines.

2 bis. Monitoring data shall be released publicly in an accessible format according to the relevant Standard and taking into account Guidelines in intervals defined in the Final Closure Plan according to the Standard ~~in intervals defined in the Standard~~ adhering to internationally recognized data principles, consistent with Best Scientific Practices, [~~in monthly intervals~~] [in annual intervals] [~~at intervals appropriate to the monitoring schedule~~]

3. Upon completion of implementation of the Final Closure Plan, the Contractor shall, in accordance with the procedure described in the Standard, hire a competent, independent and accredited auditor to conduct a final compliance assessment and submit a final compliance assessment report according to the relevant Standards and taking into account relevant Guidelines to the Secretary-General to ensure that the closure objectives contained in the final Closure Plan have been met. Such report shall be reviewed by the Commission at its next meeting, provided that it has been circulated at least 30 Days in advance of the meeting.

3 bis. The Commission shall provide a report and recommendations ~~on that performance assessment report~~ to the Council for consideration, ~~-~~ who shall decide whether ~~the final Closure Plan has been satisfactorily delivered~~, the objectives of the final Closure Plan have been achieved, which decision shall be relevant to the retention, release, forfeiture or use by the Authority of the Contractor's Environmental Performance Guarantee. The report shall be published on the website of the Authority.

4. If, on the basis of the auditor's report and Commission's recommendations provided pursuant to paragraph~~s (3) and~~(3bis),~~,~~ the Council decides that a Contractor has failed to meet ~~the conditions of, or deadlines related to~~, , the objectives of the Final Closure Plan and reporting hereon, the Council shall direct the Contractor what further action must be taken to achieve ~~satisfactory delivery of~~ the objectives of the Closure Plan.

Explanation / comment

- For overall remarks to Regulation 49-61 and the annexes, please see my comments to Regulation 49.
- At a previous meeting several participants called for streamlining this and other regulations. Some participants agreed to form an

intersessional working group to rework and submit a revised/streamlined version of regulation 61, using the previous version of the regulation as a basis. I thank the group for its hard work and for the submitted proposal which I have reviewed and will use as basis on this regulation going forward.

- I note that the group has presented a draft where the participants weigh in with, sometimes diverging, views and comments to the submitted provision. Exemplified by there being both a “paragraph 1” and “Paragraph 1 alt.”.
- I invite the group members to lead the discussion during our meeting, including the deliberations in paragraph 1 and 1 bis as well as in paragraph 2 and 2 bis, on specific intervals – listed in square brackets – for different periods of monitoring. I invite for a discussion on this following the introduction by the intersessional working group.
- In paragraph 1, several participants have submitted different proposals regarding the timeframe for the Contractor to submit a report to the Secretary-General on the progress of the implementation of the Final Closure Plan. I have placed these suggestions in square brackets and invite for views on this.
- I also note that several references are made to the need for consolidation or rewording or formal drafting of the regulation.
- As mentioned in my previous comments to the Closure Plan regulations, parts of this regulation could perhaps be relocated to Annex VII to a standard and/or guideline, either to be developed or in the existing “Draft guidelines for the preparation of Environmental Management and Monitoring Plans” (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) although I have no concrete proposal for which parts should be moved. I invite for a discussion on this.
- On a final note, this group has also proposed definitions of “Closure”, “Decommissioning" and “Final Closure Plan” which have been inserted in the Schedule.

Annex IV

Environmental Impact Statement

Explanation / comment

General comments by the Facilitator relating to the work on streamlining this annex and relevant regulations:

- Ahead of our meeting in July, I highlighted that there seems to be a tendency to include much detailed methodological suggestions. For example, I received a proposal to reference "particle modelling or other means of establishing dispersal kernels or connectivity paths" in section 3.1.1 of this annex. I believe that we should attempt to avoid such references as they might not be sufficiently accurate and comprehensive. I therefore urged participants to keep this in mind through the reading of this annex and other annexes. Furthermore, I urged for participants attempting to simplify the annexes and try to identify areas that could be more suitable for the Standards and Guidelines.
- As a result, I moved some parts of this annex to the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report and the Environmental Impact Statement as suggested by the intersessional working group on this.
- Ahead of this meeting in October/November, I have received proposals to keep and reinstate some of the parts which was moved previously. I have followed those suggestions as it aligns with the work of the intersessional working group on streamlining section 2.
- Furthermore, as I stated previously, I have attempted to introduce a Matrix overview of what regulations and parts of the annexes could be moved to relevant Standards and Guidelines. I have for example suggested in the Matrix to move different parts of this annex (IV) into the "Draft guidelines for the preparation of environmental impact statements" as can be seen here; (The Mining Code: Standards and Guidelines – International Seabed Authority (isa.org.jm) Furthermore, it could be relevant to consider drafting a Standard on this matter to entail the more overall provisions.
- This to have a better overview going forward as it is imperative that we move on with this work output to create the needed regulatory basis. I therefore propose, when we read through this annex, that we decide after each section whether it should be *included* in the relevant regulation(s), be *moved* to a Standard or *kept* as an annex. I invite for a discussion on this.
- Some participants proposed to delete point "5.5.4" and use "Alt. 5.4.4" going forward. However, as other participants have submitted changes to 5.5.4, I propose to have a discussion on which to use going forward.
- I propose to follow all recommendations from the intersessional working group on "Underwater Cultural Heritage", both in respect to suggested deletions, but also regarding proposed insertions, e.g. point Alt. 6.2.5 which I believe should serve as basis going forward.

- One participant proposed to move parts of point 7.9 (on noise and light emissions) and 7.10 (on GHG emissions and climate change) top point 8.6.1. I see merit in this proposal and suggest using this.

1. Preparation of an Environmental Impact Statement

The Environmental Impact Statement prepared under these regulations and the present annex shall:

(a) Be prepared in clear language and in an official language of the Authority together with an English-language version, where applicable;

(b) Provide information [based on data from,] [as a general rule, a minimum of 15 years of] [monitoring], in accordance with the ~~relevant~~ regulations, and taking into account the applicable regional environmental management plan..[~~[requirements of regional environmental management plans,] and]~~Standards and [~~[taking into account the relevant]~~] Guidelines ~~and the relevant applicable regional environmental management plan, and taking into account the relevant applicable regional environmental management plan~~], corresponding to the scale and potential magnitude of the activities, to assess the likely Environmental Effects of the proposed activities. Such effects shall be discussed in proportion to their significance. Where an applicant or Contractor considers an Environmental Effect to be of no significance, there should be sufficient information to substantiate such conclusion, or a brief discussion as to why further research is not warranted; and

[(c) Include a non-technical summary of the main conclusions and information provided to facilitate understanding of the nature of the activity by Stakeholders.]

[(d) Be peer reviewed by competent independent experts, before submission and include a description of the experts, their qualifications, and the results of their review.]

2. Template for Environmental Impact Statement

~~[The [required] recommended format and contents for an Environmental Impact Statement is outlined below. It is intended to provide the International Seabed Authority, its member States and other stakeholders with unambiguous documentation of the potential Environmental Effects based on the Best Available Scientific Evidence, Best Environmental Practices, and Best Available Techniques, and Good Industry Practice on which the Authority can base its decision, and any subsequent approval that may be granted. Further detail for each section is provided following the overview.]~~

The required contents and recommended format for an Environmental Impact Statement is outlined below. It is intended to provide the International Seabed Authority, its member States and other stakeholders with unambiguous documentation of the potential Environmental Effects based on the Best Available Scientific Evidence, Best Environmental Practices, and Best Available Techniques, and Good Industry Practice on which the Authority can base its decision, and any subsequent approval that may be granted. Further detail for each section is provided following the overview.

This document is a template and does not provide details of methodology or thresholds that may be resource- and site-specific. These methodologies and thresholds may also change over time in according to, for example, development of new technologies, ~~or~~ new scientific data or new knowledge, and will be developed as Standards and Guidelines to support the regulations.

Contents

Executive summary

One of the main objectives of the executive summary is to provide an overview of the project and a summary of the content of the Environmental Impact Statement for non-technical readers. Information provided in the executive summary should include:

(a) A description of the proposed project, its objectives, if any, a description of alternatives analysed, and a justification of the alternative chosen;

Alt (a)bis A description of alternatives analyzed;

(b) Anticipated Economic, financial and other benefits to be derived from the project, and the beneficiaries for each;

(c) A description of anticipated and cumulative, [risks and] impacts of the activity, as assessed by experts, (. including, but not limited to, oceanographic, geological, biological, socioeconomic and sociocultural) including the expected spatial extent and duration of impacts and cumulative impacts in relation to the identified baselines, and the expected recovery rates of the system to its original state;

(d) Measures to [minimize and] [[~~to~~]] mitigate anticipated and cumulative environmental impacts [support recovery of the marine environment from impacts,] and a description of any anticipated and cumulative residual impacts, that may occur despite Mitigation, noting how the mitigation hierarchy is being employed in assessing impacts;

[[Alt (d bis) A description of any residual impacts;]]

[[Alt (d ter) Expected recovery rate of the marine environment impacted;]]

(e) Linkages with development of the Environmental Monitoring and Management Plan and the Closure Plan; [and]

~~[[(e)bis Conformity with the Authority's global environmental policy and strategy and the applicable regional environmental management plan; and]]~~]

(f) Consultation undertaken with other parties and Stakeholders.

1. Introduction

The purpose of the Introduction section is to set the scene for the Environmental Impact Assessment. This section should contain enough detail for a reader to form an overall impression of the proposed project and how it has developed and understand how the Environmental Impact Assessment is structured. As this section mainly provides a 'roadmap' to more detailed material in the Environmental Impact Assessment, it may be relatively short.

1.1 Background

Summarize briefly the project being proposed, including all main activities and locations.

1.2 Project viability

Provide information on the viability of the proposed development, its economic context and why the project is needed.

Provide understanding of the policy on alternatives being followed by the applicant. The determination of project viability may include a summary of feasibility investigations related to geophysical, engineering, geotechnical, oceanographic, biological and other components of project operations.

1.3 Project history

Summarize briefly the work undertaken up to the date the Environmental Impact Statement was finalized and ready to be submitted to the International Seabed Authority. This should include a brief description of the resource discovery, the exploration undertaken depth zones. and any component/ system testing conducted to date. The time, location, and parties involved in exploration work should be included. For the component/ system testing, provide a brief description of activities here. If applicable, include any report(s) related to results of component/system testing and Test Mining studies including any monitoring and assessment of the environmental impacts in an appendix.

1.4 Project proponent

Summarize the credentials of the proponent, including major shareholders, other contracts or licences held (including in other jurisdictions), previous and existing contracts with the Authority The proponent's technological and environmental expertise, capacity and financial resources should be outlined, and the proponent's environmental record for this work and any previous comparable works should be summarised as well as how they intend to support commitments made elsewhere in the application.

1.5 This report

This section should constitute a guide for users of the Environmental Impact Statement on how to effectively use the information contained in the Environmental Impact Statement.

1.5.1 Scope

Provide detail as to what is and is not included, and which risks have been prioritised and which received less emphasis, in this Environmental Impact Statement, based on the Scoping Report and previous feedback from the Authority and Stakeholders. Link to other supporting information.

1.5.2 Report structure

This subsection should refer to the prescribed structure of the template but should also indicate where to find information that is not obvious from the table of contents, for example in cases where the Environmental Impact Statement relates to a larger project covering several Mining Areas within the Contract Area or for an Environmental Impact Statement that contains a large volume of information (especially multiple volumes). Authorship should be provided for chapters.

1.5.3 Consultation overview.

Provide overview of mandatory [, as well as any] voluntary stakeholder consultation processes and consultations.

2. Policy, legal and administrative context

Provide information on the relevant policies, legislation, agreements, Standards and Guidelines that are applicable to the proposed mining operation.

2.1 Applicable national and international legislation policies and procedures,

Outline the national and international legislation, procedures and policies, for example those adopted in accordance with article 209 of the Convention to prevent, reduce and control pollution of the marine environment[, including the coastline,] from activities in the Area, as well as applicable rules, regulations, procedures, standards and Guidelines and the Regional Environmental Management Plan of the Authority, that is applicable to the proposed mining operation in the Area, including any guidance provided for implementation and how the proposed operation will comply with them.

2.2 Other applicable /national legislation, policies and regulations

Outline any other legislation, policies, regulations or Sustainable Development Bills that do not necessarily apply specifically to seabed mining or the environment, but may be relevant to the proposal (e.g., shipping regulations, maritime declarations, flag State laws, climate [~~change policies~~)]. This section should also refer to national regulations and laws that relate to the effects of Exploitation activities on coastal States, or other places where components of Exploitation (e.g., processing) could occur.

2.3 Applicable international and regional agreements

In addition to the United Nations Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the Convention, list the international and regional agreements applicable to the operation, (whether directly or via incorporation into domestic laws cited in section 2.2 above), such as relevant conventions, including annexes and Guidelines, of the International Maritime Organization related to protection of the environment, biodiversity and safety. These include the International Convention for the Safety of Life at Sea (SOLAS), the International Convention for the Prevention of Pollution from Ships (MARPOL), the Ballast Water Management Convention (BWMC), the International Convention on the Control of Harmful Anti-fouling Systems on Ships and the 1996 Protocol thereof and the Convention on Biological Diversity and the Convention on Migratory Species of Wild Animals and 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); and describe how the proposed operation will comply with them.

2.4 Other applicable standards, principles and Guidelines

Discuss applicable standards and Guidelines, including those mandated by the source(s) of funding for the operations, that will be adhered to or aligned with throughout the operation, such as those of the International Seabed Authority not already included in section 2.1, the Equator Principles, the Environmental Management Standards of the International Organization for Standardization, the Code for Environmental Management of Marine Mining of the International Marine Minerals Society, the Performance Standards on Environmental and Social Sustainability of the International Finance Corporation and the Standards of the Extractive Industries Transparency Initiative.

2.5 National Processes related to [Ss]ponsoring State permits

Describe any national processes followed and permits received from the Ssponsoring State in relation to the environmental impact assessment.

2.6 Ecologically and/or Biologically Significant Areas (EBSAs) and Area-based management tools

Describe any relevant area-based [designation and/or] management [tools] established under subregional, regional or global processes and the scope, geographical coverage [, supporting data,] and objectives of such tools. Also describe any relevant area-based [designation and/or] management [tools] in adjacent areas under national jurisdiction.

3. Description of the proposed project

Provide details of the proposed project and the area of influence of the project or impact area, including relevant diagrams and drawings. It is understood that most projects will likely involve the recovery of minerals from the Area, with the concentrating process(es) occurring on land within a national jurisdiction (outside the jurisdiction of the Authority). While this section should provide a description of the entire project, including offshore and land-based components, the Environmental Impact Statement should focus on those activities occurring within the Authority's jurisdiction (e.g., activities related to the recovery of the minerals from the Area up to the point of trans-shipment).

Details to be provided under this section should include the headings listed below.

3.1 Project area definition

3.1.1 Location

Include coordinates of the project area, detailed location maps (drawn to scale), showing the relevant sites proposed as Contract Area and Mining Area and any other features that can be usefully marked upon the map at the time of application, including the locations of impact reference zones and preservation reference zones as well as locations of other nearby contract areas or known seabed infrastructure. Provide general location of the project on a regional map.

[The map should indicate Areas of Particular Environmental Interest, Sites[/Areas] in Need of Protection, or other sites designated for particular status under the rules, regulations, procedures, Standards, or Regional Environmental Management Plans of the Authority. This may also include sites of other competent authorities, as well as information on any other known conservation or spatial measures and other uses of the marine environment (e.g. submarine cables and pipelines, long-standing scientific research sites and established fishing areas) in the vicinity of the project area. The map shall also identify the nearest coastal States and States that may be affected by mining activities, and any adjacent ISA contract sites. This map may be the same as the map supplied in Annex 1 Section II.

3.1.2 Associated activities

Describe the supporting activities and infrastructure required (e.g., transportation corridors, ports for disembarkation of vessels, ports for unloading of ore that are outside the direct mining site, anchoring areas for vessels and machinery).

3.2 Mineral resource

Provide details of the type of resource proposed for extraction (e.g. sea floor massive sulphides, polymetallic nodules, ferromanganese crusts), the type, size, shape, tonnage, volume ~~and~~ grade and distribution pattern [Italy] of the mineral deposits. Estimates of the inferred indicated resource should be provided on the basis of the international CRIRSCO reporting template or national accepted codes (NI 43-101, JORC Code) and the official ISA mineral classification (PMN, PMS and CFC).

3.3 Project components

Provide background information on the proposal and the technologies and equipment to be employed, and include the subsections set out below.

3.3.1 Project scale

Provide an overview of the spatial (horizontal and vertical) and temporal (seasonal and annual) scales of the mining operation, including volumes, depth of penetration into the seabed. Provide an overview of physical, chemical, geological and oceanographic properties of material to be recovered, dewatered and deposited or discharged into the water column or back to the seabed, and the target depth range for any such discharge. This should include an account of the area to be directly impacted over time, including the water column and seafloor beyond the contract area, if applicable, as well as the likely extent of any secondary impacts (e.g., sediment plumes, noise, light), which will be discussed in greater detail later.

3.3.2 Mining Equipment

Describe any equipment expected to qualify as Best Available Technology for mining and support operations (e.g., mining vessels/platforms, supply vessels, barges), including the anticipated frequency of vessel movements for these activities. Also, including a description of any specific technologies developed to reduce impacts should be included.

Provide details of [methodologies of exploitation (drilling, dredging, excavating, disposing of waste, constructing and operating or maintaining installations, pipelines and other devices) and give specifications of] the technologies to be employed in relation to Best Environmental Practice, including relevant diagrams and drawings, that address: the Mining Workplan, timelines and the general mining sequence, the technologies to be employed to recover the resource from the seabed, the depth of penetration into the seabed the specific technologies developed to reduce the direct impact of mining activities (e.g. noise, light, plumes) and other details of the mining activities subsea and on the surface. [Describe the energy requirements of the requisite machinery.]

3.3.3 Transport/materials handling

Provide a description of all methods to be used to transport the mineral-bearing ore, including from the sea floor to the surface in relation to Best Environmental Practice, and any methods related to the trans-shipment of the mineral-bearing ore, including transfers at sea. Describe the energy requirements of the requisite machinery. Also, a description of any specific technologies developed to reduce impacts should be included[, highlighting at which levels, in the water column (generation of plume at the seafloor, turbidity in the water column, addition of bottom sediments to the surface waters) resulting impacts to the marine ecosystem,

may be mitigated during the different phases for collection, separation, lifting, transportation, processing, and discharge of effluents.]

3.3.4 On-site processing

Provide a [detailed] description of the [plan for] processing of the mineralized material that will occur within or above the Area in relation to Best Environmental Practice, including water column activities (such as riser pipe transfer) and shipboard processing. Include a description of any methods to be used on the sea floor to separate the mineralized material from surrounding sediment and/or rock, as well as any dewatering and separation of the mineralized material at the surface. This section should also cover any disposal of seawater/fines [and include the spatial layout of the activities over time which will provide a comprehensive map of the disturbance area from which to assess harm to the Marine Environment].

Include a description of the waste management, transport, disposal and discharge of sediment, wastes or other effluents into the Marine Environment and the disposal of waste from general ship operations, including the specific technologies and methods to be adopted to reduce harmful impacts of such disposal to the marine environment. The description should acknowledge respective ISA Standards and Guidelines as well as other applicable legal frameworks. Describe the management of shipboard wastes to be transported to shore-based disposal facilities, including the handling and management of hazardous materials should also be described, together with a description of the nature of such material and its transportation, storage and disposal. [Describe the energy requirements of the requisite machinery.] Also, a description of any specific technologies developed to reduce impacts should be included.

3.4 Commissioning

Describe the pre-production activities that will take place with regard to the establishment and set-up of the site for mining operations. The management of this process (such as the establishment of safety zones around vessels) should also be described.

3.5 Construction and operating standards

Outline the design codes or certification standards to which the equipment will be or has been built, as well as the operating standards that will be applied to mining operations, including those for Best Available Technology and Best Environmental Practice issued by the ISA [International Seabed Authority]. This section should include subsections such as those set out below.

3.5.1 Design codes

3.5.2 Health and safety

3.5.3 Workforce description

This section should also outline capacity-building objectives and commitments.

3.6 Decommissioning and closure

Describe the steps that will occur when the mining operation is completed or in the event of an emergency, including the decommissioning and removal of offshore infrastructure or the temporary suspension of mining activities, under a Closure Plan.

3.7 Other alternatives considered

Provide an account of alternative options that were rigorously explored and objectively evaluated, including a no-action alternative, that were considered and rejected in favour of the current proposal with justification as to why the alternatives were rejected. Aspects should include the selection of the mine site, mine production scenarios, equipment design and engineering decisions, including technologies selected to reduce the direct impact of mining activities, environmental impacts, financial feasibility, transport and materials handling, shipboard processing and stakeholder support. A no mining scenario must be included.

3.7bis Environmental management measures to mitigate impacts

Provide a summary description of reasonable measures taken to mitigate adverse impacts to the physical, chemical, geological, biological[, ~~and~~] socioeconomic[, and sociocultural] environment.

3.8 Development timetable (detailed schedule)

Provide a description of the overall timetable, from initiation and equipment construction the implementation of the mining programme, through to the decommissioning and closure of operations. The description should include the major phases of the operation as well as the milestone dates on which relevant tasks are expected to be completed. Information on the development timetable provided under this section should clearly communicate the different phases in the development proposal. For reasons of clarity, a flow chart or a Gantt or PERT (Programme Evaluation and Review Technique) chart should be used where appropriate. Information provided in this section should include the following:

(a) The funding arrangement for the proposed activity, or whether the availability of funds is subject to this or other approvals being granted;

(a) bis Timing of expected regulatory approvals

(b) Pre-construction activities including the development and testing of mining equipment, operations and systems in situ (if applicable);

(c) A construction schedule and staging timetable;

(d) An infrastructure development schedule;

(e) A monitoring schedule (during and after operations); and

(f) A closure schedule.

Whether the availability of funds is subject to approvals should be noted on the timetable.

Section 3bis1 Summary of Scoping results, including of the risk assessment process [

Provide a brief overview of the results of the scoping exercise including with regard to the sufficiency of the scientific baseline data collected during exploration to support a robust Environmental Impact Assessment.

Section 3bis [2] Methodology for Description of the Marine Environment and Assessment of Impacts and Environmental Effects

[Methodological approaches should be consistent with established community standards. In the case that novel sampling techniques, new technology, or sampling designs are employed, particularly detailed methodology and justification should be provided in this section.]

3bis.1 Studies completed

Describe any prior research/Exploration that could provide relevant information for this Environmental Impact Statement and future activities. These [studies] should be detailed in the appendices.

3bis.2 Methodology for Collecting Baseline Data

For each of the baseline descriptions of the Marine Environment in sections 4 and 5 and socioeconomic [and sociocultural] environment in section 6, describe the methodology for collecting and analysing baseline data, including:

1. spatial and temporal extent of sampling;
2. spatial and temporal frequency of sampling;
3. gear used for sampling and any modifications or calibrations conducted to the gear;
4. results of power analysis;
5. limitations of sampling and how this may impact certainty of impact assessments; and
6. any cooperation with other research programmes in the Area, such as with the ISA, States, other Contractors, or non-governmental organizations.

Highlight any deviations from baseline data collection requirements provided in relevant Standards and Guidelines, and the Regional Environmental Management Plan [, and provide a rationale for those deviations.]

Assess the sufficiency of baseline data collected and compiled in view of the aim to establish mining-related environmental change in relation to natural variability.

Raw baseline data and computer code[, with sufficient metadata and code comments,] used to analyse and provide a description of the Marine Environment shall be included in the annexures of the Environmental Impact Statement or, if the data and/or code ha~~s~~ve been previously submitted to the Authority, the applicant may provide a link to the Authority's database where the data and/or code [~~is~~][are] stored or other location where such information has been made available online.

3bis.3 Methodology for Summarizing Baseline Data

Provide a description of the methodology used to summarize baseline data collected. This shall include:

a description and justification of transformations performed to the data and analyses used to summarize the data;

a list of program(s) used to analyze results;

a list of methods to determine species identification and life history; and,

any limitations associated with the results of the analysis.

3bis.4 Methodology for Assessments of potential environmental impacts and Environmental Effects to the Marine Environment

For each assessment of potential environmental impacts and Environmental Effects in sections 7 and 8 and socioeconomic [and sociocultural]

environment in section 9, describe the methodology used to assess impacts and Environmental Effects from proposed operations and alternatives considered in section 3.7. in line with the applicable regulations and standards and taking into account the applicable guidelines.

Data, predictive models, and computer code used to analyse and provide a description of the Marine Environment shall be included in the annexures to the Environmental Impact Statement or, if the data, model, and/or code has been previously submitted to the Authority, [~~the applicant may provide a link to the Authority's database where the data and/or code is stored~~] other location where such information has been made available online. Each description of methodology used to assess impacts shall include:

a) a description and justification of analyses and models used to summarize the data; and

b) any limitations associated with the analysis or results.

In accordance with Regulation 47quater, where predictive models have been used these shall be reviewed by competent independent experts and the relevant review reports shall be provided as annexures to the Environmental Impact Statement

4. Description of the existing physiochemical and geological oceanography

Give a detailed account of knowledge of the oceanographic (physical, chemical and geological) conditions at each mining the stie and impact area as well as Reference Zones, which should include information from a thorough literature review as well as from on-site studies in accordance with the Regulations and applicable Standard and taking into account the relevant Guidelines to be specified. The Guidelines on baseline data collection as updated from time to time by the Commission, shall guide the drafting of this section by providing information on the minimum amount of detail required for an acceptable baseline description. The account will provide the baseline description of the oceanographic conditions, including physical, chemical and geological oceanographic setting, including its spatial and temporal variability and temporal trends [conditions], against which impacts will be measured and assessed. The detail in this section is based on the prior environmental risk assessment carried out in line with the respective standard and guideline, that will have identified the main impacts, and thus the priority elements that need to be [~~measured~~] considered and assessed in the environmental impact assessment.

4.1 Key messages

Provide an overview of key content (this information can be provided in a box that contains up to 6 bullet points on either the main aspects covered or the main findings).

4.2 Regional overview

Describe the general baseline environmental conditions of the site and impact area, in accordance with the Standard and Guideline on baseline data collection, including but not limited to the physical, chemical and geological oceanographic setting [~~as well as known or suspected Underwater Cultural Heritage~~] within a broader regional context and [taking into account] [~~in accordance with~~] the applicable Regional Environmental Management Plan.

This should be a brief section that includes a map. ~~[While intangible cultural heritage may not lend itself to a map, known intangible human connections to the area should also be acknowledged.]~~ A more detailed site-specific and impact area description will be provided in accordance with the sections below.

4.3 Studies completed

Describe any prior research/Exploration studies (including methods used for completing the studies based on Best Available Science using Best Available [Germany] Techniques~~, [including surveys of the seabed for Underwater Cultural Heritage~~ that could provide relevant information for this Environmental Impact Statement. This research should be detailed in the appendices or in reports attached to the appendices.

4.4 Meteorology and air quality

Provide a general [~~overview~~] [Characterization of the local meteorology (e.g., wind directions and speeds, seasonal [and interannual] patterns and variability). Provide description of air quality, including chemical characteristics. This section may be most relevant to surface operations and the general risk assessment.

4.5 Geological properties and habitat classification

Provide a baseline description of the nature and extent of the mineral resource and bedrock within a broader geological context. Describe the geological petrographic and geomorphological setting of the mining sites, the impact areas, and the designated preservation reference zones (PRZs) including sea floor mapping (bathymetry and backscatter), high-resolution sub-bottom profiling, and sedimentation rates, and refer to submarine features such as hydrothermal vents, seamounts abyssal hills and canyons as appropriate.

Provide habitat classification using an appropriate system as prescribed in the relevant Standard [and taking into consideration the] [~~or~~] Regional Environmental Management Plan.

4.6 Oceanographic setting

Provide a description of oceanographic aspects including but not limited to thermohaline conditions, optical properties and turbidity, [surface, mid-water and bottom] currents regime, tides, waves, turbulence, and oceanographic fronts, eddies and climate change projections, including spatial variation at and above the site. Seasonal and longer-term variability is an important element. Detail is required on the regional setting, as well as the specific mining site and impact area, and the designated Preservation Reference Zones (PRZs), and should include changes in physical conditions and processes according to depth and horizontal distance from the proposed mine site to boundaries of the Impact Area. [For activities conducted in areas of seamount chains, hydrothermal vent fields, trenches and canyons or other areas with complex bathymetry, oceanographic currents will be influence by topographic forcing and will require a more detailed oceanographic assessment, including targeted sampling programs, to determine the impact area.] Climate change projections should also be included.

4.7 Chemical oceanographic setting

Provide a description of water mass characteristics at the mining sites, the impact areas, and the designated Preservation Reference Zones (PRZs) and above the sites at various depths of the water column, including the structure and development of the oxygen minimum zone in particular near the sea floor (up to 200m above bottom), that includes nutrients, particle

loads, temperature and dissolved gas profiles, vent-fluid characteristics if applicable, turbidity, etc.

Provide a description of chemical oceanographic properties at the mining sites the impact areas, and the designated Preservation Reference Zones (PRZs), [~~above the site~~] throughout the water column and horizontally from the proposed mine site, that includes nutrients, particle loads, temperature, oxygen, salinity, density, particulate and dissolved organic matter, pH, chemical composition, including[, but not limited to] concentrations of trace metals, dissolved gas profiles, depth range and characteristics of oxygen minimum zone, redox regimes, carbonate saturation, [hydrocarbon] and spatial (horizontal and vertical) and temporal (seasonal and interannual) variability of these properties, and vent-fluid characteristics if applicable.

4.8 Seabed substrate and sub-seabed characteristics

Provide a description of seabed substrate and sub-seabed composition (to benthic subsurface layers) of the wider mine sites, the impact areas, and the designated Preservation Reference Zones (PRZs), including, but not limited to, physical, chemical, geological and oceanographic properties, specific gravity, bulk density, sediment composition, physical and chemical composition of pore-water and pore-water profiles, grain size, [mineralogy] sediment mechanics, dissolved and particulate organic and inorganic carbon, nutrients, carbonates, redox regimes, and spatial (horizontal and vertical) and temporal (seasonal and interannual) variability in these characteristics). Substrate composition shall [~~should~~] be described to a depth below the seafloor prescribed in the relevant Standard on Baseline Information and the applicable [as indicated in the] [~~or~~] Regional Environmental Management Plan.

4.8bis Rare or sensitive habitats

Identify and describe the physical and chemical characteristics of rare or sensitive habitats in line with the respective international guidelines (FAO 2009, Azores Criteria 2010) and policy decisions (, UN, CBD …) such as hydrothermal vents, ridges, seamounts, as well as oceanographic fronts or eddies, abyss hills and canyons and other geological and oceanographic features.

4.9 Natural hazards

Provide a description and trend analysis of variation related to applicable potential natural hazards for the site, including, but not limited to, volcanism, seismic activity, cyclone/hurricane, tsunamis, climate-related oceanographic changes and variability [, slides, slumps,] etc. and how these may develop [~~vary~~] in future, e.g. as a consequence of climate change.

4.10 Noise and light

Provide a description of local ambient noise and light at the seabed, [~~in~~] throughout the water column and at the surface, including, but not limited to, light intensity, backscatter, and attenuation, bioluminescence, and spatial (horizontal and vertical) and temporal (seasonal and interannual) variability in these characteristics, indicating pertinence to fauna where known.

4.11 Greenhouse gas emissions [~~and climate change~~]

Provide a description [and quantification] of the level of gas and fluid emissions from [~~both natural and~~] anthropogenic activities in the Area, as well as those affecting sea floor and water-column chemistry. [~~The climate~~

~~mitigation functions and services of the ocean should also be described (including CO2 update and sequestration, or nutrient cycling).]~~

4.11bis Climate Change

Description of the expected changes in physical and chemical oceanographic conditions and processes in the broader area of the mine site due to climate change.

4.12 Summary of the existing physicochemical environment

Summarize key findings and include notes on special considerations for rare or sensitive habitats hydrothermal vents, ridges, seamounts and oceanographic fronts or eddies, abyss hills [, fracture zones] and canyons and other geological and oceanographic features described in this section. It is anticipated that this summary will be up to one page and be more extensive than the key messages section.

5. Description of the existing biological environment

Give a detailed account of knowledge of the biological communities' composition and structure and ecosystem functions in the proposed mining sites and impact areas, and the designated Preservation Reference Zones (PRZs), including information from a thorough literature review and baseline data collected from on-site campaigns, in accordance with the Regulations and applicable Standard and taking into account the relevant Guidelines. The description of the site should be divided by depth regime (surface, midwater from 200m depth to 50m above bottom and benthic including benthopelagic, where appropriate) or otherwise as indicated in the relevant Regional Environmental Management Plan and provide a description of the various biological components and communities that are present in or utilize the area. The Standard [~~Guidelines~~] on baseline environmental data collection shall guide the drafting of this section by providing information on the minimum amount of detail required for an acceptable baseline description. The detail in this section is expected to be based on a prior environmental risk assessment that identified, and thus the elements that need to be measured and assessed in the environmental impact assessment.

5.1 Key messages

Provide key messages (overview of main findings, covered in six or fewer bullet points).

5.2 Regional overview

Provide regional context for the baseline environmental conditions of the mining site and impact areas, and the designated Preservation Reference Zones (PRZs), including but not limited to the general biological setting, [taking into account] in accordance with the applicable Regional Environmental Management Plan. This should be a brief section that includes a habitat classification map. A more detailed description of the mining site, the Preservation Reference Zones (PRZs) [~~specific~~] and impact area description will be provided in accordance with the sections below.

5.3 Studies completed

Describe any prior research/Exploration studies (including methods used for completing the studies based on Best Available Techniques) that could provide relevant information for this Environmental Impact Statement and future activity. This research should be detailed in the appendices, and

the environmental reference baseline data collected for the Authority, as outlined in the exploration contract conditions, should accompany the Environmental Impact Statement.

5.4 Biological environment

Provide a description of biological [and ecological] properties in the [region and the mine site, with special focus on the designated preservation reference zones PRZ and the total [mine site and] Impact Area, including diversity, abundance, biomass, life history parameters, relevant behaviour, including feeding rates, community-level analyses, connectivity, trophic relationships, resilience, ecosystem functions and services as well as seasonality and spatial (horizontal and vertical) and temporal variability. Any work on ecosystem models and appropriate ecosystem indicators, etc., should also be presented here. This section should span the size range from megafauna to microbial communities and shall be guided by the variables given by the Standard for the establishment of baseline environmental data.

The description of the [benthic ecosystem] fauna and its food web is structured by depth range, as this enables a direct link[~~age~~] to the source and location of an impact. For each depth zone, (at least surface, midwater and benthic as below) there should be a[n inventory] [USA] [description] [Canada] of the known taxonomic/ecological groups (e.g., plankton, fish, marine mammals, marine turtles, benthic microbial invertebrates, demersal scavengers) [in accordance with] the Authority's Guidelines.

Describe the biological communities and ecosystem functions, structured by depth ranges in accordance with the relevant Standards and [taking into account] Regional Environmental Management Plans, may encompass:

1. surface seawater

2. epipelagic zone (< 200 metres)

3. mesopelagic zone (200-1000 metres),

4. bathypelagic zone (1000 - 4000 metres),

5. abyssopelagic zone (4000 - 6000 metres),

6. hadalpelagic zone (> 6000 meters),

7. demersal zone (part of the water column near to and significantly affected by the seabed), and

8. benthic zone.

The description should evaluate the temporal and spatial variability in distribution and composition.

The description should include the size and habitat distributions of the fauna and their life history stages (such as larval and juvenile stages, which differ from the adult stage) as well as trophic pathways. Discussions of species and communities should include considerations of whether they are endemic (restricted to just the site, resource substrate or region) or are known to be rare, threatened or endangered.,

Migratory and highly mobile species should be included where foraging ranges / migration pathways / management units have been noted as overlapping with proposed operations during scoping.

The climate mitigation functions and services of the ocean shall also be described (including CO2 update and sequestration, or nutrient cycling).

5.4.1 Surface

Describe the biological communities from the surface to a depth of 200 metres, including microbes plankton (phytoplankton and zooplankton, microbial plankton and organic matter), micro-nekton [Germany] surface/near-surface fish such as tuna, and seabirds, marine turtles and marine mammals. Address factors provided in 5.4, as well as spatial and temporal variability and trends.

[~~Alt. 5.4.1 Surface~~

~~Describe the biological communities and ecosystem functions, structured by depth ranges in accordance with relevant Standards and [taking into account] Regional Environmental Management Plan, which may encompass:~~

~~surface seawater~~

~~epipelagic zone (< 200 metres)~~

~~mesopelagic zone (200-1000 metres),~~

~~bathypelagic zone (1000 – 4000 metres),~~

~~abyssopelagic zone (4000 – 6000 metres),~~

~~hadalpelagic zone (> 6000 meters),~~

~~demersal zone (part of the water column near to and significantly affected by the seabed), and~~

~~benthic zone.~~

~~The description should evaluate~~ the temporal and spatial variability in distribution and composition.]

5.4.2 Midwater

Describe the pelagic communities [~~fauna~~] and their habitat in the open water from a depth of 200 metres down to 50 metres above the sea floor, and include particulate organic matter, microbes, zooplankton, nekton, mesopelagic, bathypelagic and abyssopelagic fishes and deep-diving mammals. Address factors provided in 5.4, as well as spatial and temporal variability.

5.4.3 Benthic

Describe the [known] benthic microbial, invertebrate and fish communities, including infauna, epifauna, benthopelagic fauna, and demersal fish and scavengers, up to an altitude of 50 metres above the sea floor [and at least 5 meters below (into the sediments).] This inventory should include considerations of species richness, biodiversity, faunal densities, taxonomic uniqueness, community structures and connectivity, etc. Ecosystem functions, such as [~~B~~]bioturbation, habitat and food [Germany] creation [~~supply~~] and elemental cycling etc. should also be covered in this section. Address factors provided in 5.4, as well as spatial and temporal variability and patchiness.

[5.4.4 Ecosystem/community-level description

Summarize existing community and ecosystem studies that integrate elements of the above sections. The summary should consider productivity, habitat heterogeneity, food-web complexity, carbon and nutrient cycling, benthopelagic coupling, biodiversity, succession, stability, the potential toxicity effects of plumes, bioavailability of toxins, trophic relationships, ecosystem functioning, benthic-pelagic couplings, ecosystem connectivity, early life-history stages, recruitment and behavioural information. Identify, preserve and distribute to the scientific community [~~Name~~] any unique, rare

and threatened elements, outline which habitats and communities can be considered representative and their distribution, indicate existence and connectivity to the same habitats and communities outside the mine site and the potential impact zone.]

[Alt. 5.4.4 Ecosystem/community-level description

Summarize existing community and ecosystem-level studies. This should include integration of connectivity studies (e.g. life history and recruitment research), trophic interactions and the linkages between food energy and contaminants in the food chain (including benthopelagic couplings) and ecosystem functioning / services. Food energy linkages and the complexity of the food web should be included, giving consideration to the impacts that may result from contaminants or other disruptions to the food web. Understanding across depths should be provided. Emphasis might be placed on knowledge of trophic levels, the degree of interaction between benthic and pelagic communities, whether there are specialized predators that could be more vulnerable than generalists, and the complexity of the food web and species interactions, with a view to gaining an idea of the resilience of the system to disturbances. It is important to consider wider community relationships to enable assessments to move beyond community descriptions to incorporate potential changes in ecosystem function.]

5.5 Summary of the existing biological environment

Summarize the findings focusing on key ecosystems and species determined above. It is envisaged that this summary will be up to one page in length.

5.6 Rare or sensitive habitats and species

Identify and describe the biological characteristics of rare or sensitive habitats and species potentially affected by the planned mining operation. The identification (as in 4.8bis) shall be guided by the respective international guidelines (FAO 2009, Azores Criteria 2010) and policy decisions (UNGA, CBD) and include features such as hydrothermal vents, ridges, seamounts, as well as oceanographic fronts or eddies, abyss hills and canyons and other geological and oceanographic features.

Identify any unique, rare and threatened elements, outline which habitats and communities can be considered representative and their distribution, indicate existence and connectivity to the same habitats and communities outside the mine site and the potential impact zone.

6. Description of the existing human activities / the socioeconomic and sociocultural environment

This section should describe the socioeconomic and sociocultural environment aspects and potential impacts of the project [~~based~~] on [~~the~~] existing human activities. This may include consideration of the scale of effects (such as the creation of jobs and estimates of the risk of environmental impacts), extent of duration of impacts in time and space, intensity or severity of social impacts and an assessment of whether impacts are likely to be cumulative. It is important to consider the social equity or distribution of impacts across different populations: in other words, which groups are likely to be affected in which ways.

6.1 Key messages

Provide key messages (overview of main findings, covered in six or fewer bullet points). 6.2 Existing uses

6.2.1 Fisheries

Relevant fisheries shall be described here to further assess the socioeconomic impacts. This should include description of areas of significance for migratory fish stocks, such as spawning grounds, nursery areas or feeding sites. Any closed fishery areas such as VME closures, MPAs, or voluntary closures must be named and taken into consideration. Provide a 'heat map' showing important fishery areas in relation to proposed operations and note any areas of interaction or cumulative impact.

6.2.2 Marine traffic

This section describes the non-project-related marine traffic occurring within the Contract area and uses the Regional Environmental Management Plan in accordance with IALA's regulations to provide a summary of regional movements. Provide a 'heat map' showing densities of marine traffic in relation to proposed operations and note any areas of interaction or cumulative impact. Provide this per season if repeatable seasonal variation exists.

6.2.2bis Submarine cables

This section describes the in situ non-project-related submarine cables occurring within the Contract area. Provide a map showing known submarine cables in relation to proposed operations and note any areas of interaction or cumulative impact.

6.2.3 Tourism

Describe areas used by cruise liners and for game fishing, sightseeing, marine mammal watching and other relevant tourism activities. Provide a 'heat map' showing densities of tourism in relation to proposed operations and note any areas of interaction or cumulative impact. Provide this per season if repeatable seasonal variation exists.

6.2.4 Marine scientific research

Outline the ongoing current scientific research programmes taking place in the area, studying the essence of phenomena and processes occurring in the marine environment and the interrelations between them.

6.2.5 Sociocultural uses

List [human activities in] [sociocultural uses of] the project area (e.g., traditional navigation routes, migratory paths of culturally significant marine species, sacred sites and waters associated with ritual or ceremonial activities of Indigenous Peoples and local communities [~~as well as known or suspected Underwater Cultural Heritage~~).]

Alt **6.2.5**

List sociocultural uses the project area (e.g., traditional navigation routes, migratory paths of culturally significant marine species, sacred sites and waters associated with ritual or ceremonial activities of Indigenous Peoples and local communities as well as known or suspected objects or sites of an archaeological or historical nature, taking into account the work of the United Nations Educational, Scientific and Cultural Organization referred to in Regulation 35(2).

6.2.6 Other

List other uses of the project area that are not related to the above (e.g., other, exploitation projects [sports and leisure).

~~**6.2.7bis Other mineral exploration**~~

6.2bis Planned uses

Describe the planned uses of the area for which information is publicly available (e.g. other exploitation contracts, exploration contracts, fisheries, maritime traffic, tourism, marine scientific research, submarine cables, area-based management tools).

6.3 Sites of an archaeological, historical significance

List any sites of archaeological or historical significance that are known to occur [~~or may occur~~] within the potential area of impact. Provide a map as applicable showing known archaeological and historical sites in relation to proposed operations and note any areas of interaction or cumulative impact taking into account the work of the United Nations Educational, Scientific and Cultural Organization referred to in Regulation 35(2). [~~Known human connections to or uses of the area should also be acknowledged. Copies of surveys of the project area shall be submitted with notes about anomalies that may [indicate the presence of objects of an archaeological and historical nature that should be subject to further research before any potentially destructive activities occur.~~]

6.4 Summary of existing socioeconomic and sociocultural environment

Summarize key findings regarding the socioeconomic and sociocultural environment. It is envisaged that this section will be up to a page in length, and more extensive than the key messages.

7. Assessment of impacts on the physical, chemical and geological environment and proposed Mitigation

Provide a detailed description and evaluation of potential impacts and Environmental Effects of the operation to components of the physical chemical and geological environment identified in section 4. This should consider the entire lifespan of the project, i.e. construction/development (precommissioning-) of the mine site, operational and decommissioning phases, and following Closure of the site. The potential for accidental events and natural hazards. The detail in this section is expected to be based on a prior environmental risk assessment prepared, reviewed, and revised in accordance with [~~Annex IVbis (h)~~] Regulation 47ter and respective Standard and Guideline for Environmental Impact Assessment (chapter III Scoping, D). It should include for each component a description of:

(a) The source (action, temporal and spatial duration) and nature of the disturbance;

(a)bis The nature, duration and extent of any actual or potential impact, including cumulative effects and taking into account ecological and biologically significant areas;

(a)ter The methods used to determine impacts (including the assumptions and limitations of any impact modelling or other analysis undertaken);

(b) Measures that will be taken to prevent, mitigate and manage such impacts; and

(c) The unavoidable residual impacts that will remain, including their expected longevity.

(d) The extent to which any potential impacts and Environmental Effects may occur in areas under a State's national jurisdiction.

The detail in this section is expected to be based on the environmental risk assessment carried out according to the relevant regulations, Standards and Guidelines that will have identified the main impacts, and thus the elements that need to be emphasized in the environmental impact assessment.

7.1 Key messages

Provide an overview of the key content covered in section 7.

7.2 Description of potential impact categories

Provide an overview and description of the categories of potential impacts caused by the proposed mining operation.

Key elements that need to be included are:

(a) The major types of potential impacts, such as habitat removal, variations in communities' composition, the creation of sediment plumes, dewatering plumes, noise, light, etc.;

(b) Descriptions of impact studies carried out during exploration (e.g., component testing and the resulting observations from the associated monitoring);

(b bis) Descriptions of test mining studies undertaken prior to the application;

(c Descriptions of the results of any environmental risk assessments, which should be included as separate reports or appendices where appropriate; and

(d) Descriptions of the methods applied to describe and quantify impact categories and assessment from impact to receptor (including the assumptions and limitations of any impact modelling undertaken);

7.2 bis Description of impact pathways

The preferred approach for this template is to include for each receptor descriptions of:

(a) The methods used to determine the pathway from impact to receptor (including the assumptions and limitations of any impact modelling undertaken);

(b) The source(s) of impact

(c) The nature, spatial extent and temporal extent of potential impact(s), including cumulative impacts;

(d) Measures that will be taken to avoid, minimise or mitigate such impacts; and

(e) The unavoidable (residual) impacts that will remain, including their expected longevity and outline the measures that will be taken to ensure long-term site compliance with the environmental quality objectives, quantitative thresholds, and indicators in accordance with these regulations and the applicable Standard, and taking into account the relevant Guidelines.

7.2 ter Receptors and impacts

Receptors for which this will be done include:

(a) Meteorology and air quality

(b) Geology [and Geophysics]

(c) Physical oceanography

(d) Chemical oceanography of the mine site and impact area

(e) Seabed substrate characteristics

Impacts to be considered include:

(a) Sediment plume generation,

(b) discharge of water

(b)bis Energy flow pathways (such as hydrothermal fluid);

(c) Noise and light

(d) Greenhouse gas emissions and climate change emissions (including estimated greenhouse gas emissions and a greenhouse gas emissions assessment where appropriate)

Effects to be considered include:

(a) changes in temperature and salinity of water,

(b) optical characteristics / water clarity

(c) turbidity / particulate loading

(d) sediment characteristics (including changes in the sediment composition, grain size, density and pore-water profiles)

(e) discharge plumes (frequency, spatial extent, composition and concentration, etc.)

(f) primary sediment plume (frequency, spatial extent, composition and concentration)

(g) dissolved gas levels

(h) nutrient levels

(i) For a sea floor massive sulphide project, the modification of vent-fluid discharges, if present, should be addressed.

7.8 Accidental events and Natural hazards

Discuss impacts of accidental events and the cumulative effects of the mining operation in relation to any natural hazards that could occur, including, but not limited to, volcanism, seismic activity, cyclone/hurricane, tsunamis, etc. and the measures that will be taken to avoid, remedy or mitigate those impacts.

7.9 Noise and light

Provide a description of the expected emissions of noise and light from the proposed operations [~~and any potential environmental effects, especially any impacts of noise on avoidance, masking and availability of prey (e.g., on marine mammals) and fish.~~ Provide a description of the ~~measures that will be taken to ensure compliance with applicable environmental quality objectives and quantitative thresholds for noise and light levels for relevant fauna, in accordance with these regulations and the applicable Standard, and taking into account the relevant Guidelines.~~] [*The deleted part has been suggested moved to section 8.6.1.1. See facilitator comment for more information*].

7.10 Greenhouse gas emissions and climate change

Provide an assessment of gas and chemical emissions from proposed operations, relative to emissions both natural and anthropogenic activities. Subsections should include estimated greenhouse gas emissions and a greenhouse gas emissions assessment where appropriate. ~~[Effects of mining on ocean climate mitigation functions and services should be described (including any anticipated alteration of CO2 uptake and sequestration, or nutrient cycling.)]~~ [*The deleted part has been suggested moved to section 8.6.1.2. See facilitator comment for more information*].

7.13 Cumulative impacts

Provide a description of the source of nature and extent of any interactions between various potential environmental impacts and Environmental Effects across the environment. Where they may have cumulative effects, they must be considered on both spatial and temporal scales over the lifetime of the proposed mining operation and in the post-Closure period and alternatives considered.

7.13.1 Proposed operations impacts

Cumulative within the mining site and Impact Area of the mining proposed herein.

7.13.2 Regional operation impacts

Cumulative between activities, actions, or natural phenomena, where known in the region.

7.14 Other issues

Outline here other, more general issues, as applicable.

7.15 Summary of residual effects

Summarize key findings on potential environmental impacts and Environmental Effects, environmental management measures, and any potential impacts and effects to areas under any State's national jurisdiction. A table may be a useful summary format to pull together the above elements in a simple visual mode. The table should include a column outlining the measures that will be taken to address potential environmental impacts and manage residual effects and ensure long-term site compliance with the environmental quality objectives, quantitative thresholds, and indicators in accordance with these regulations and the applicable Standard and taking into account the relevant Guidelines.

8. Assessment of impacts and Environmental Effects on the biological environment and proposed Mitigation

Provide a detailed description and evaluation of potential impacts and Environmental Effects of the proposed operation and alternatives considered in section 3.7 to the biological environment components identified in section 5 in the mine site and the Impact Areas. Consider impacts and effects that could happen during the entire lifespan of the project i.e. construction/development (pre-commissioning), operational and decommissioning phases and following Closure of the site. The potential for accidental events and natural hazards should be considered.

The detail in this section is expected to be based on a prior environmental risk assessment prepared, reviewed, and revised in accordance with [Regulation 47ter][~~Annex IVbis(h)~~] and respective

Standards and Guidelines for Environmental Impact Assessment Process. The [description] analysis shall be structured by the depth ranges described in section 5 and shall for each component, provide a description of:

(a) The source (action, temporal and spatial duration) and nature of the disturbance;

(a)bis The nature and extent (temporal and spatial) of any actual or potential impact, including cumulative effects;

(a)ter The methods used to determine impacts (including the assumptions and limitations of any impact modelling or other analyses undertaken);

(b) Measures that will be taken to prevent, mitigate and manage such impacts with reference to the submitted Environmental Management and Monitoring Plan; and

(c) The unavoidable residual impacts that will remain, including their significance and expected longevity.

(d) An evaluation of the impacts and effects against the applicable environmental goals and objectives, [~~and~~] indicators and thresholds as identified in the [~~in~~] relevant environmental standards and Guidelines and in the applicable Regional Environmental Management Plan. (e) The extent to which any potential impacts and Environmental Effects may occur in areas beyond the contract area or under a State's national jurisdiction.

The detail in this section is expected to be based on the [~~scoping~~] environmental risk assessment, carried out according to the relevant regulations, Standards and Guidance that will have identified the main impacts, and thus the elements that need to be emphasized in the environmental impact assessment.

8.1 Key messages

This section should provide an overview of the key content covered in section 8.

8.1bis Description of the key sources of environmental impacts

This section should describe the key sources of impacts on the marine environment from the mining operation.

8.2 Description of potential impact categories

Provide an overview and description of the categories of potential impacts caused by the hazards arising from the proposed mining operation and alternatives considered. This should introduce the major types of impacts and their effects on the biotic environment, such as habitat removal, the crushing of animals, the creation of sediment plumes, noise and light, etc. and be referred to in subsequent descriptions and evaluations of potential environmental impacts and Environmental Effects from the hazards posed by the proposed operation and alternatives considered. A description should be included of any lessons learned from activities during the exploratory phase of the programme (e.g., mining system component tests).

Key elements that need to be included are:

(a) Description of the major types of potential impacts, such as habitat removal, the biological effects of sediment plumes and dewatering plumes, noise, light, etc. These impact categories should be used in subsequent descriptions and evaluations of potential

environmental impacts and Environmental Effects from the proposed operations.

(b) Descriptions of impact studies carried out during exploration (e.g., component testing and the resulting observations from the associated monitoring);

(b bis) Descriptions of test mining studies undertaken prior to the application; Descriptions of the results of any environmental risk assessments, which should be included as separate reports or appendices where appropriate; and

(c) Descriptions of the methods applied to describe and quantify impact pathways and assessment in line with the relevant Standard and Guideline, i.e. EIA Guideline.

8.2 bis Description of impact pathways

The preferred approach for this template is to include for each impact pathway an overarching description of:

(a) The methods used to determine the pathway from impact to receptor (including the assumptions and limitations of any impact modelling undertaken);

(b) The source(s) of impact

(c) The nature, spatial extent and temporal extent of potential impact(s), including cumulative impacts;

(d) Measures that will be taken to avoid, minimise or mitigate such impacts; and

(e) The unavoidable (residual) impacts that will remain, including their expected longevity and outline the measures that will be taken to ensure long-term site compliance with the environmental quality objectives, quantitative thresholds, and indicators in accordance with these regulations and the applicable Standard, and taking into account the relevant Guidelines.

8.2 ter Receptors and impacts

Receptors for which this must be done include:

(a) Microbial communities

(b) Phytoplankton ~~[/ zooplankton / nekton~~]

(b)bis zooplankton and micronekton

(b)ter nekton

(b)quart benthopelagic fauna, including scavengers

(c) Meiofauna (infauna / epifauna)

(d) Macrofauna (infauna / epifauna / demersal fish)

(e) Megafauna, including surface/near-surface fish such as tuna, and seabirds, marine turtles and marine mammals

As appropriate, these receptors are to be considered:

(a) at the surface (from the surface down to a depth of 200 metres)

(b) midwater (from a depth of 200 metres down to 50 metres above the sea floor)

(c) up to an altitude of 50 metres above the sea floor, including zooplankton, nekton, mesopelagic and bathypelagic fishes and deep-diving mammals.

Impacts to be considered include:

(a) Sediment plume generation,

(b) discharge of water

(c) Noise and light

(d) Greenhouse gas emissions and climate change emissions (including estimated greenhouse gas emissions and a greenhouse gas emissions assessment where appropriate)

Effects to be considered include:

(a) changes in temperature and salinity of water,

(b) optical characteristics / water clarity

(c) turbidity / particulate loading

(d) sediment characteristics (including changes in the sediment composition, grain size, density and pore-water profiles)

(e) discharge plumes (frequency, spatial extent, composition and concentration, etc.)

(f) primary sediment plume (frequency, spatial extent, composition and concentration)

(g) dissolved gas levels

(h) nutrient levels

(i) For a sea floor massive sulphide project, the modification of vent-fluid discharges, if present, should be addressed.

8.6 Ecosystem/community level

Describe estimated effects on the ecosystem or where linkages between the various components above are known.

8.6.1 Potential impacts and issues to be addressed

8.6.1.1 Noise and light Provide a description of the expected emissions of noise and light from the proposed operations and any potential environmental effects, especially any impacts of noise on avoidance, masking and availability of prey (e.g., on marine mammals) and fish. Provide a description of the measures that will be taken to ensure compliance with applicable environmental quality objectives and quantitative thresholds for noise and light levels for relevant fauna, in accordance with these regulations and the applicable Standard, and taking into account the relevant Guidelines. [*This part has been inserted from section 7.9. See facilitator comment for more information*].

8.6.1.2 Greenhouse gas emissions and climate change Effects of mining on ocean climate mitigation functions and services should be described (including any anticipated alteration of CO2 uptake and

sequestration, or nutrient cycling.) [*This part has been inserted from section 7.10. See facilitator* comment *for more information*].

8.6.2 Environmental management measures to mitigate impacts

8.7 Cumulative effects

The nature and extent of any interactions between various impacts where they may have cumulative effects must be considered. This should include an evaluation of the spatial and temporal intensity of mining and its effects on other impacts including existing uses considered in the Assessment and described in Section 9 of the Environmental Impact Statement as well as an evaluation of the resulting cumulative effects to the ecological balance of the marine environment, including the spatial and temporal extent of such effects. Describe how spatial and temporal cumulation will differ between faunal groups and different habitats.

Provide a description of the source of nature and extent of any interactions between various potential environmental impacts and Environmental Effects across the environment. Where they may have cumulative effects, they must be considered on both spatial and temporal scales over the lifetime of the proposed mining operation and in the post-Closure period and alternatives considered.

8.7.1 Proposed operations effects

Cumulative effects within the scope of the site and Impact Area of the mining proposed herein.

8.7.2 Regional operation effects

Cumulative effects between activities to be analysed by the Secretariat according to the REMPs, [~~where known in the region~~].

8.8 Summary of residual effects

Summarize key findings on potential environmental impacts and Environmental Effects, environmental management measures, residual effects, and any potential impacts and effects to areas under any State's national jurisdiction. Information on potential recovery times following disturbance and the longevity of residual effects should be included. This will give readers an understanding of the temporal component and efficacy of proposed mitigation measures. A table may be a useful summary format to pull together the above elements in a simple visual mode. The table should include a column outlining the measures that will be taken to address potential environmental impacts and residual effects and ensure long-term site compliance with the environmental quality objectives, quantitative thresholds, and indicators in accordance with these regulations and the applicable Standard and taking into account the relevant Guidelines.

8.9 Practicable restoration and rehabilitation of the project area – approach
The restoration and rehabilitation of the project area should be considered as a part of the mitigation hierarchy. At this stage in the Environmental Assessment Process, there might be no final knowledge on the potential of restoration and rehabilitation in the area, so a plan should be proposed to develop this knowledge throughout the lifespan of the project and to prepare the decision on the issue at the end of the project. This should be done in accordance with relevant Standards and taking into account relevant guidelines.

Alt. 8.9 Accidental events and Natural hazards

Discuss impacts to the biological environment of accidental events and the cumulative effects of the mining operation and natural hazards and the measures that will be taken to avoid, remedy or mitigate those impacts.

9. Assessment of impacts on the socioeconomic and sociocultural environment and proposed Mitigation

Provide a detailed description and evaluation of potential impacts and Environmental Effects of the operation to the socioeconomic and sociocultural components identified in section 6. This should include projections on the potential impacts in national waters outside the mining area and should also consider the entire lifespan of the project i.e. construction/development (pre-commissioning), operational (including maintenance) and decommissioning phases. A description of the benefits to mankind may be included. Attitudes towards, and perceptions of, the proposed project are among the variables that should be considered in determining the significance of impacts. The potential for accidental events [and natural hazards] should also be considered.

9.1 Key messages

This section should provide an overview of the key content covered in section 9.

9.1 bis Description of potential impact categories

Provide an overview and description of the categories of potential impacts caused by the proposed mining operation. Key elements that need to be included are:

(a) the major types of potential impacts, such as habitat removal, the creation of sediment plumes, noise, light, etc. These impact categories should be used in subsequent descriptions and evaluations of potential environmental impacts and Environmental Effects from the proposed operations.

(b) Descriptions of impact studies carried out during exploration (e.g., component testing and the resulting observations from the associated monitoring);

(c) bis Descriptions of test mining studies undertaken prior to the application;

(d) Descriptions of the results of any environmental risk assessments, which should be included as separate reports or appendices where appropriate; and

(e) Descriptions of the methods applied to describe and quantify impact pathways and assessment.

9.1 ter Description of impact pathways

The preferred approach for this template is to include for each impact pathway an overarching description of:

(a) The source

(a)ter The methods used to determine impacts (including the assumptions and limitations of any impact modelling undertaken);

(a)bis The nature, spatial extent and temporal extent of potential impacts, including cumulative impacts;

(b) Measures that will be taken to avoid, minimise or mitigate such impacts, including a comparative analysis of how measures taken may differ across alternative operations considered;

(c) The unavoidable (residual) impacts that will remain, including their expected longevity. The detail in this section is expected to be based on the scoping environmental risk assessment that will have identified the main impacts, and thus the elements that need to be emphasized in the environmental impact assessment; and

(d) The extent to which any potential impacts and effects may occur in areas under a State's national jurisdiction.

9.2 Impact identification

9.2.1 Impacts on [E]existing human uses

For each of the following marine uses, describe:

(a) Potential impacts and effects and issues to be addressed;

(b) Environmental management measures to Mitigate impacts and effects;

(c) Residual impacts and effects; and

(d) Potential impacts and effects in areas under any State's national jurisdiction.

9.2.1.1 Fisheries and biological conditions

A description of potential impacts, e.g., effects from light and noise on fisheries and biological conditions, with proposed management measures and a description of residual impacts.

9.2.1.2bis Submarine cables

A description of potential impacts on non-project-related submarine cables occurring within the project area, along with proposed management measures and a description of residual impacts.

9.2.1.3 Tourism

A description of potential impacts and issues to be addressed, along with proposed management measures and a description of residual impacts.

9.2.1.4 Marine scientific research

A description of potential impacts and issues to be addressed, along with proposed management measures and a description of residual impacts [, according to the IALA's regulations.].

[~~9.2.1.5bis~~] 9.2.2 Impacts on Sociocultural values and uses

A description of potential impacts and issues to be addressed pertaining to sociocultural uses of the area (e.g., traditional navigation routes, migratory paths of culturally significant marine species, sacred sites and waters associated with ritual or ceremonial activities of Indigenous Peoples and local communities), along with proposed management measures and a description of residual impacts.

[~~9.2.1.5ter~~] 9.2.3 Impacts on Ecosystem Functions and Services

A description of potential impacts of the operation on any ecosystem functions and services, for example, carbon burial and sequestration, taking into account the relevant Guidance.

[~~9.2.1.6~~] 9.2.4 Other impacts

List other potential impacts that are not related to the above (e.g., submarine cables, other mineral Exploration or Exploitation projects).

[~~9.2.1bis~~] 9.2.5 Impacts on Planned uses

Describe the potential impacts on planned uses of the area for which information is publicly available (e.g. fisheries, maritime traffic, tourism, marine scientific research, submarine cables, area-based management tools).

9.[2.6~~2~~] Impacts on Area-based management tools

A description of potential impacts and cross-boundary issues to be addressed, along with proposed management measures and a description of residual impacts.

9.[3] Impacts on Sites of an archaeological or historical nature

Describe, as applicable, potential impacts to sites of archaeological, [~~paleontological~~] or historical significance that are known to occur within the potential area of impact, along with proposed management measures, taking into account the work of the United Nations Educational, Scientific and Cultural Organization referred to in Regulation 35(2) [~~and a description of residual impacts~~.]

9.4 Gender Impact analysis

Assess and analyse how the proposed operations may impact on gender roles and relationships.

[~~9.5 Socioeconomic and sociocultural issues~~

~~This section will highlight and provide a description of socioeconomic and sociocultural benefits or impacts, including any applicable social initiatives.~~]

9.5.1 Summary of socioeconomic and sociocultural environment

Summarize findings on management measures, residual effects, and any potential impacts and effects, (including to sociocultural conditions). A table may be a useful summary format to pull together the above elements in a simple visual mode. Potential cumulative effects should also be included.

9.5bis. Assessment of Uncertainty

9.5bis.1 Uncertainty Assessment

Provide a detailed description and evaluation of any uncertainties in the assessments described in section 7, 8, and 9. This uncertainty assessment shall:

(1) Identify any relevant areas of uncertainty and gaps in knowledge and their implications for the environmental impact assessment and its findings; and,

(2) Describe the measures taken in the environmental impact assessment to reduce uncertainty in its findings to as low as reasonably practicable.

9.5bis.2 Addressing Significant Uncertainty

Where significant uncertainty exists despite the efforts described in 9bis.1(b), provide a detailed description of environmental monitoring and management measures for managing and reducing uncertainty during the proposed operations, to be incorporated into the Environmental Monitoring and Management Plan and describe how these will enable the applicant to ensure compliance with relevant Rules of the Authority.

9.6 Accidental events and Natural hazards

Discuss any impacts of accidental events and the cumulative effects of the mining operation and natural hazards, and the measures that will be taken to avoid, remedy or mitigate those impacts.

9.6.1 Potential impacts and issues to be addressed

9.6.2 Environmental management measures to mitigate impacts

9.6.3 Residual effects

Provide a description of any residual impacts that may remain following the application of mitigation measures, including the expected longevity of those impacts, and outline the measures that will be taken to ensure long-term site compliance with the environmental quality objectives, quantitative thresholds, and indicators in accordance with these regulations and the applicable Standard, and taking into account the relevant Guidelines.

10. Hazards arising from natural, accidental and discharge events

This section should outline the possibility/probability of accidental events and natural hazards occurring, an assessment of the impact they may have, to the mine site and impact area, the measures taken to prevent or respond to such an event and an assessment of the residual impact should an event occur. This should include an overview of potential environmentally hazardous discharges resulting from accidental and extreme natural events as these are fundamentally different from normal operational discharges of wastes and wastewaters. Reference should be made to the ERCP.

For each component include:

(a) The nature and extent of any impact;

(b) Measures that will be taken to avoid, mitigate or minimize such impact; and

(c) Residual impacts.

10.1 Extreme weather

For example: hurricanes/cyclones.

10.2 Natural hazards

For example: volcanic eruptions, seismic events.

10.3 Accidental events

For example: leakage or spillage of hazardous material, fires and explosions, and collisions, including potential loss of equipment.

10.4 Maritime safety and interactions with shipping

Provide a description of predicted maritime safety issues and potential interactions with other vessels from the proposed activities with reference to compliance with the relevant conventions.

10.5 Emergency response and contingency plan

Provide a description of an emergency response and contingency plan.

10.6 Waste management

Provide a description of proposed vessel waste management, with reference to compliance with relevant conventions, legislation and principles, and methods of cleaner production and energy balance.

10.7 Blast Water management

Provide a description of proposed vessel blast water management where applicable, with reference to compliance with relevant rules and principles, and methods of cleaner production and energy balance.

11. Environmental management, monitoring and reporting

Provide sufficient information to enable the Authority to anticipate possible environmental management, monitoring and reporting requirements for an environmental approval. Information listed include a description of the applicant's environmental management system and should reflect the proponent's environmental policy and the translation of that policy to meet the requirements of this section and previous sections during different stages of the project life (i.e., from construction to decommissioning and closure and the post-closure period).

The Environmental Management and Monitoring Plan is a separate report from the Environmental Impact Statement, but this could be a useful opportunity to highlight some of the key issues from the Statement that will be addressed in the full Environmental Management and Monitoring Plan. Information detailed in this section should include the headings set out below.

11.1 Organizational structure and responsibilities

This section should show how the Contractor's environmental team fits into its overall organizational structure. Responsibilities and professional qualifications of key personnel should be outlined.

11.2 Environmental management system

A full environmental management system shall exist at the time the Environmental Impact Statement is submitted. The applicant has to demonstrate that it will be capable of managing appropriate relevant environmental questions and outline the standards that will be considered and/or aligned with when developing the system for the project.

11.3 Environmental Management and Monitoring Plan

An Environmental Management and Monitoring Plan will be submitted as a separate document for the Authority's approval prior to the commencement of mining operations. This section should provide an

overview of what the Plan would entail. With reference to, the headings set out below and Annex VIII of the Exploitation Regulations of the Authority.

11.3.1 Mitigation and management

Summarize the mitigation and management measures that will be taken, based on the impact minimization and mitigation analysis undertaken as part of the environmental impact assessment. and as described in the environmental impact statement in Sections 7, 8, and 9.

11.3.3 Closure Plan

A Closure Plan will be submitted as a separate document for the Authority's approval prior to the commencement of mining operations. However, this section should provide an overview of what the Closure Plan will entail, including decommissioning, continued monitoring and rehabilitation measures, if applicable.

11.4 Reporting

Outline how data collected at the mine site and impact area will meet reporting requirements and best scientific practices outlined in Annex VII on the Environmental Management and Monitoring Plan.

11.4.1 Monitoring

Outline how the results of monitoring studies will be reported to the Authority, as well as the frequency and format of data releases in accordance with the regulations and any relevant Standards and taking into account any relevant Guidelines.

11.4.2 Incident reporting

Outline how Incidents will be reported and managed.

12. Product stewardship

Provide a brief description of the intended use of the mineral-bearing ore once it leaves the Area. The description should also address how the Contractor will minimize health, safety, environmental, ~~and~~ socioeconomic and sociocultural effects of the intended product or products to meet standards for environmental management, and should address the following potential impacts:

(a) Energy and materials consumption;

(b) Waste generation;

(c) Toxic substances;

(d) Air and water emissions.

The intention is not to provide a full and highly detailed account, but, where information is known about environmental impacts, these impacts should be described briefly here.

13. Consultation

Consultations shall be inclusive, transparent and open to all relevant stakeholders, including States, global, regional, subregional and sectoral bodies, as well as civil society, the scientific community, indigenous peoples and local communities.

13.1 Consultation methods

Provide a description of the nature and extent, participation and outcomes of consultation(s) that have taken place with relevant Stakeholders, and how their ~~substantive and relevant~~ comments have been addressed in the Environmental Impact Assessment. This will include the description of the mechanisms used to manage the diversity of Stakeholders addressed and comments provided.

This includes describing the mechanism(s) used to consult with different groups and how this aligns with the relevant Standards and Guidelines, also incorporating criteria for Preservation Reference Zones and Impact Reference zones.

13.2 Stakeholders

List Stakeholders that have been consulted and explain the process by which Stakeholders were identified. This should include a brief description of the Stakeholders and a historic overview of any previous activities conducted by the Stakeholders in The Area.

13.3 Public consultation and disclosure

Provide a description of the goals and consultation workshops/meetings that occurred prior to the preparation of the report, including outlining any concerns and comments made by Stakeholders and how these will be addressed, and, if not, describe the reasons for that decision.

13.4~~.3bis~~ Commission consultation

Summarize the Legal and Technical Commission's recommendations on the Scoping Report and proposed Terms of Reference for the applicant's environmental impact assessment submitted to the Commission, and justification for any deviation either from those submitted Terms of Reference, or from the Commission's recommendations. ~~[If the Legal and Technical Commission has not issued a recommendation concerning the Scoping Report and proposed Terms of Reference for the applicant's environmental impact assessment, then the applicant is to summaries efforts taken to consult with the Legal and Technical Commission and any response received.]~~

13.5~~.3 ter~~ [Germany] Stakeholder and coastal State Consultation

Describe how comments received under Stakeholder consultation have been or will be taken into account, or why they have not been taken into account, and the reasons for that decision. The summary should be based on the detailed response of the applicant to each consulted party and be available for review.

13.4 Continuing consultation and disclosure

Outline any further consultation with Stakeholders that has been deemed necessary and is being planned.

14. Glossary and abbreviations

Include a glossary of terms, acronyms and abbreviations used throughout the document. The glossary should include definitions for, and key terms defined in the regulations so as to ensure that users of the Environmental Impact Statement, including the decision-makers and

relevant stakeholders, have a clear understanding of the intention behind the use of certain terms in the Environmental Impact Statement. The glossary should be included in the table of contents for the Environmental Impact Statement and referenced in the introduction section.

15. Study team

Outline the people involved in carrying out the environmental impact assessment studies and in writing the Environmental Impact Statement. If independent scientists or other experts were involved in any of the work, they should be listed. Any remuneration should be mentioned. The names, [current and validated contact information,] occupational qualifications and their role in the generation of the Environmental Impact Statement of such people should also be included. [A statement that those individuals so named concur with the content of the report should be included.] Any conflict of interest must be identified, disclosed in detail in this section including the way it was and continues to be managed.

16. References

Evidence obtained from outside sources should be documented throughout the Environmental Impact Statement, with the use of footnotes or other suitable reference mechanism. In addition, all sources used in preparation of the Environmental Impact Statement (including those specifically referenced in the body of the document) should be listed in bibliography format, with full details of the source (including website addresses, if applicable). This enables users of the Environmental Impact Statement to review the supporting documentation independently.

17. Appendices

The appendices section should include a list of all the technical reports carried out for parts of the environmental impact assessment or that are used in support of any aspect of the environmental impact assessment (such as prior risk assessments or monitoring activities conducted as part of exploration contracts). Copies of these reports should be provided as appendices to the Environmental Impact Statement, with clear indications as to which section(s) the document is being provided to support.

Annex (IV bis)

Scoping Report

Explanation / comment

- This entire annex has been moved to paragraph 4 of the new regulation 47ter following the outline by the intersessional working group on streamlining the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report and the Environmental Impact Statement. From there, further parts can be moved to the relevant Standard and Guideline as suggested in the Matrix I have introduced.
- For an overview of these new regulations see my comments to the new regulation 47 or in my initial statement.
- I note that no suggested amendments to this annex was received after our last meeting.

~~[A Scoping Report should be submitted to the Authority in accordance with the Standards and taking into account the relevant Guidelines, and should include:~~

~~A brief description of the proposed Exploitation activities and any ancillary features, including what is known or anticipated about where the mining will occur within a Contract Area and the mining machinery to be used.~~

~~A description and overview of tentative timelines and deadlines for the proposed Exploration and any associated activities.~~

~~(c) A description of what is known about the environmental setting, including Underwater Cultural Heritage, for the project (Contract Area and regional setting),~~

~~(c bis) A description of information for the project that is not yet known but must be, or should be known, including baseline data, and a plan for gaining that information prior to commencement of the exploitation activities;~~

~~(d) Summary of existing environmental baseline studies, and, where available, relevant traditional knowledge of indigenous peoples and local communities including a description of methodology for collecting and analyzing the baseline data,~~

~~(d)bis Summary of gaps in environmental baseline including description of methodology for collecting and analyzing additional baseline data to inform the Environmental Impact Assessment~~

~~(e) Description of the technical, spatial and temporal boundaries for the Environmental Impact Assessment,~~

~~(f) A list of any assumptions relied upon and identification and quantification of the uncertainties at this stage of the Environmental Impact Assessment, how they are being addressed, and assessment of their implications to the environmental risk assessment findings~~

~~(g) A preliminary impact analysis which categorizes the important issues into high risk, medium risk and low risk for the Environmental Impact Assessment to address and evaluates the need for further information, taking into account the environmental risk assessment,~~

~~(h) An environmental risk assessment, which includes:~~

~~(i) The identification of potential hazards,~~

(ii) The environmental consequence for each identified potential impact(s) (the magnitude of the impact(s), the duration of the impacts, and the receptor characteristics),

(ii bis) A description of the cumulative effects of the project, combined with other authorized, anticipated, or expected activities, actions, or natural phenomena,

(iii) The likelihood of the consequence occurring;

(iv) The confidence levels of experts, in order to account for uncertainty and a precautionary approach;

(i) A description of the methodology employed in the environmental risk assessment

(j) A description of the results of the environmental risk assessment, including identification of high priority risks for local and regional ecosystem functioning over short and long term, requiring particular focus in the subsequent impact assessment phase of the Environmental Impact Assessment;

(k) A preliminary Stakeholder list that proactively identifies likely Stakeholders, and an indicative schedule and methodology for engagement with key Stakeholders throughout the Environmental Impact Assessment process, taking into account to not to publish personal information of identified stakeholders;

(l) A report of consultations undertaken during scoping;

(m) Consideration of reasonable alternative means of carrying out the project that will be examined in detail in the Environmental Impact Assessment, including a no-action alternative, and any others that have been not carried forward for further analysis at this stage, and the reasons for that selection;

(n) A draft Terms of Reference for the Environmental Impact Assessment, which identifies the activities and studies planned for the Environmental Impact Assessment, and any additional baseline data that will be required;

(o) Explanation for how the activities and studies planned for the Environmental Impact Assessment will be sufficient to determine likely environmental impacts, and to propose Mitigation and management strategies and monitoring methodology;

(p) A brief description of the socioeconomic and sociocultural aspects of the project, including sociocultural uses of the project area (e.g., traditional navigation routes, migratory paths of culturally significant marine species, sacred sites and waters associated with ritual or ceremonial activities of Indigenous Peoples and local communities);

(q) A note describing and explaining any divergence from relevant ISA Guidelines.]

Annex VII

Environmental Management and Monitoring Plan

Explanation / comment

- One of the other Working Groups on Draft Regulations asked if the content of Regulation 102 could be inserted in this annex as it pertains to information the Environmental Management and Monitoring Plan shall include. Litra a) from Regulation 102 was merged into litra p) below, while litra's b), c) and d) from Regulation 102 has been inserted as new litra's d), e) and f) in this annex. (The subsequent litra's has been restructured accordingly). I invite for views on this.

1. The Environmental Management and Monitoring Plan prepared under these regulations and this annex VII shall be:

(a) Prepared in clear language and in an official language of the Authority, together with, where applicable, an official English-language version;

(a)bis Prepared in accordance with the relevant Regulations [~~and Regional Environmental Management Plan~~], taking into account applicable Guidelines [and Regional Environmental Management Plan], on the basis of Best Environmental Practice, Best Available Scientific [Information~~Evidence~~], and Best Available Information; and

(b) Verified by the report of independent competent persons appointed by the Authority.

2. An Environmental Management and Monitoring Plan shall contain:

(a) A non-technical summary of the main conclusions and information provided to facilitate understanding by members of the Authority and Stakeholders;

(a)bis Outline the guiding principles which apply to the monitoring approaches;

(b) A description of the project and the area likely to be affected by the proposed activities and by any suspension plumes they generate. Include detailed location maps showing proposed impact reference zones and preservation reference zones as well as locations of other nearby contract areas or known seabed infrastructure the Preservation Reference Zones, the Impact Reference Zones and the surrounding area with reference to the Regional Environmental Management Plan including any buffer zones to prevent damage to these areas;

(b)ter A description as to how the Environmental Management and Monitoring Plan has been prepared;

(c) The project-specific environmental objectives, indicators and thresholds based on baseline environmental data and relevant standards ;

(c)bis A description of the environmental baseline data, [~~including baseline studies for Underwater Cultural Heritage~~,] measured baseline values for parameters at the site, a characterization of the area proposed to

be mined, adjacent areas that could be affected by mining, and areas that will be avoided due to their environmental value.

(d) A description of how the monitoring data will be transmitted during operations, how the data will be labelled and monitored by qualified personnel, and how the data will be stored;

(e) The qualifications and proposed location of the personnel monitoring the data;

(f) A description of the procedures for providing the Authority and the sponsoring State or States access to or receipt of the monitoring data for the purposes of monitoring compliance with the terms of an exploitation contract and collection of data.

(gd) Details of or cross-references to the Contractor's Environmental Management System documentation;

(i) implementing the measures reflected in the Environmental Management and Monitoring Plan,

(ii) monitoring, recording and reporting fulfilment of the Environmental Management and Monitoring Plan, and

(iii) regularly reviewing and updating the Environmental Management and Monitoring Plan to ensure that it complies with rules, regulations, and procedures of the Authority;

(he) An assessment of the predicted Environmental Effects of the proposed activities on the Marine Environment, and any significant changes likely to result, consistent with the environmental impact assessment and the Environmental Impact Statement;

(he)bis A description of uncertainties identified from the environmental impact assessment and the plan to reduce or manage these;

(if) An assessment of the significance of the potential Environmental Effects to receptors identified in the Environmental Impact Statement, their key uncertainties, proposed monitoring approach and objectives, and proposed mitigation measures and management control procedures and responses to minimize, prevent, reduce and control the harm from Environmental Effects, consistent with the environmental impact assessment and the Environmental Impact Statement;

(jg) A description of the planned monitoring programme, with reference to the applicable Standard on Monitoring, and the overall approach, standards, protocols, methodologies, procedures and performance assessment of the Environmental Management and Monitoring Plan, including the necessary risk assessment and techniques for managing these risks, including the use of monitoring data to validate predictive models and reduce uncertainties, and adaptive management techniques, if appropriate, needed to achieve the desired outcomes Each component should be described separately in a manner consistent with sections 7-10 of Annex IV. Monitoring methodology/results should provide a sufficient degree of confidence that conclusions in the Environmental Impact Statement can be validated and that agreed performance standards are being met (monitoring should have the statistical power to detect changes in environmental state). The components of the monitoring programme should, at a minimum, include those applicable to the Contractor during its exploration phase to allow for comparison of monitoring data.

(kh) Details of the proposed monitoring stations across the contract area, including the frequency of monitoring and data collection, the spatial and temporal arrangements for such monitoring and the justification for

such arrangements, including how in situ validation of modelled results will be carried out. The proposed monitoring stations should, at a minimum, include the monitoring stations used during mining tests carried out in the Exploration phase;

(li) The location and planned monitoring and management of Preservation Reference Zones and Impact Reference Zones designed in accordance with the criteria contained in Annex [Xter], as well as other spatial management planning tools if any;

(li)bis The location and boundaries of planned or established long-term protected areas within the Contract Area as [~~indicated~~] [determined] in the applicable Regional Environment Management Plan as well as of declared PRZs of neighbouring Contract Areas, if known;

(li)ter Details of any plans outside of the Contract Area to increase scientific knowledge and other knowledge/information in the relevant region, including in collaboration with other contractors or via international cooperation efforts, as well as in collaboration with Indigenous Peoples and local communities;

(mj) A description, with threshold levels, of the applicable environmental performance Standards and indicators (trigger and threshold points) to be monitored, including decision rules based on the results of the monitoring of these indicators;

(nk) A description of a system for ensuring that the plan shall adhere to Good Industry Practice, Best Available Techniques, Best Environmental Practices and Best Available Scientific [Information~~Evidence~~], and a description of how such practices are reflected in the proposed Exploitation activities;

(ol) Details of the quality control and management standards, and how the effectiveness of management measures will be monitored, assessed and reviewed, including list of reporting deliverables to the Authority and time schedule, plans for real-time reporting of environmental data to the Authority, internal and external auditing and reporting of environmental performance, and including the frequency of the review of the performance of the Environmental Management and Monitoring Plan for the purposes of Regulation 51;

(p~~m~~) A description of the monitoring technology and system to be to be implemented, including the types of data to be collected and monitored, and frequency of monitoring~~deployed~~, in accordance with Good Industry Practice and Best Available Techniques, reflecting the types of data and formats to be collected and monitored, the use of remote monitoring technology and the types of data available in real time together with a description of the procedures for providing the Authority and the S~~s~~ponsoring State or States access to the monitoring system and data for the purposes of monitoring compliance with the Environmental Management and Monitoring Plan and collection of data;

(q~~n~~) Details of the training programme for all persons engaged or to be engaged in activities in the project area;

(r~~o~~) Details of discharges, including those defined and regulated by relevant rules and regulations issued by the International Maritime Organization, within the project area;

(s~~p~~) Details of ongoing consultation with other users of the Marine Environment;

(sp)bis Details of arrangements made or planned with other marine users, with the aim to ensure due regard to each other's rights and activities.

(tq) Details of any practicable restoration and rehabilitation of the project area and the monitoring of their success;

(ur) A plan for further research and studies;

(ur)bis Detail of the process and measures to be taken in case of non - compliance with the Environmental Monitoring and Management Plan.

(ur)ter bis A description of the measures that will be taken to address non-compliance with the Environmental Monitoring and Management Plan, including reporting, recording and response action protocols;

(ur)quart ter A description of the document control system that will be used for environmental management documentation;

(vs) Details of reporting requirements and timing (<2 years) including details of the methodology to be applied to ensure that monitoring data submitted are provided in an accessible and interpretable format consistent with best scientific practices; and

(xt) An overview program (list) of all proposed activities

Annex VIII

Closure Plan

Explanation / comment

- One participant has submitted a proposal entailing different changes to this annex, which I have included to the extent possible.
- I highlight the proposed change to point "j" which now refers to "*rehabilitation (where possible)*" instead of merely "*rehabilitation*". I invite for views on this.

1. The Closure Plan or Final Closure Plan shall be prepared and implemented in accordance with regulation 7, the Environmental Management System, Standards and taking into account the relevant Guidelines and the relevant Regional Environmental Management Plan and shall include the following information:

(a) A description of the closure objectives to ensure that the closure of mining activities is a process that is incorporated into the mining life cycle, any **measures** agreed or proposed to implement these, and how these relate to the mining activity and its environmental, socioeconomic and sociocultural setting;

(b) The period during which the plan will be required, which shall be determined by reference to a specified duration, achievement of a specified event or target indicator or compliance with specified terms agreed with the Authority and shall relate to the objectives of the Environmental Impact Assessment, such as recovery of impacted environment;

(c) Coordinates showing the area(s) subject to the closure objectives accompanied by a map;

(d) A summary of the relevant regulatory requirements, including conditions previously documented, e.g. baselines;

(e) Details of the closure implementation and timetable, including descriptions of the arrangements for the temporary suspension of mining activities or for permanent closure as well as decommissioning arrangements for vessels, Installations, plant and removal of equipment (where applicable);

(f) Summary of data and information relating to [environmental] baselines~~.~~ [~~[~~Russia suggests deleting~~]~~] for monitoring measures;

(g) A summary of the Environmental Impact Statement entailing an updated environmental impact assessment for the activities that will be undertaken during closure, if any, together with details of the identifiable [~~residual~~] [remaining] Environmental Effects, including any relevant technical documents or reports [as well as the expected period until recovery of the environment towards natural state conditions];

(h) Details of monitoring to be undertaken during and after closure (comparable to monitoring efforts prior and during exploitation) that specify the sampling design (spatial and temporal sampling), the methods to be used and the duration of the post-closure activities;

(i) Details of the management measures to [~~mMitigate, prevent~~]] [minimize, control, mitigate] [~~reduce and control~~] the [~~residual~~] [remaining] Environmental Effects;

(j) Details of the [~~restoration and~~] remediation[, restoration and rehabilitation (where possible)] objectives and activities building on those detailed in the Environmental Impact Statement and the Environmental Management and Monitoring Plan;

[(k~~j~~)] Documentation of environmental recovery and [D]details of any anticipated residual impacts that may remain even after Mitigation measures;

([l~~k~~]) Information on reporting and management of data and information postclosure- including information on how data will be archived and made [publicly] available post-closure, and how the formatting of submitted datasets and reports will be consistent with best scientific practices;

([m~~l~~]) Details of the persons or entity (subcontractor, consultant(s)) that will carry out the monitoring and management measures under the Closure Plan or Final Closure Plan, including their qualification(s) and experience, together with details of the budget, (incl. inflation adjustment for long-term monitoring), project management plan and the protocols for reporting to the Authority under the Closure Plan or Final Closure Plan;

([n~~m~~]) Details of the amount of the Environmental Performance Guarantee provided under these regulations; and

([o~~n~~]) Details of consultations with Stakeholders in respect of the plan.

2. The level of detail in the Closure Plan or Final Closure Plan is expected to differ between cases involving a temporary suspension of mining operations, cases involving unplanned abandonment of work, and cases involving final mine closure. The content of the Closure Plan or Final **Closure** Plan is to be commensurate with the nature, extent and duration of activities associated with the level of closure and maturity of the project.

Annex Xter

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

Explanation / comment

- In general, I have noted that in this Annex Xter many scientific and technical terms are not clearly defined, e.g. “environmentally similar” and “most species” and would need to be further developed and included in the Schedule.
- Furthermore, I believe that there would be merit in considering placing the content in a relevant standard. In any circumstance, to my understanding this annex should be more concise and focused on the purpose of the IRZ/PRZ and the design criteria, while specific details related to baseline data collection and monitoring should refer to the respective standards and guidelines. I therefore, kindly invite for discussions on that.
- Recalling our discussion during March 2023, several participants expressed support for including an annex on design criteria for Impact Reference Zones (IRZs) and Preservation Reference Zones (PRZs). There were two annex versions “Annex Xter” and “Annex Xter ALT”. There seems to be a consensus using the “Annex Xter ALT” version, also considering that all comments received pertained to this version. I therefore propose using this version going forward.
- A proposal to describe characterisation of the pelagic and benthic environment has been forwarded and included. I invite for views on this.
- A proposal, listed as point “13 ALT”, suggests the continued monitoring of post mining *until ecosystem function returns to the level of the pre-mining condition*. This in contrast to the current point 13 which states monitoring should merely “*last until monitoring results show a trajectory towards recovery*”. I invite for a discussion on this.
- One participant suggested to broaden the scope of establishing PRZ’s outside the contract area. I do not believe that the Authority has the mandate to regulate outside contract areas.

~~[Annex~~

~~1. Contractors must establish impact reference zones (IRZs) and preservation reference zones (PRZs) in order to monitor the~~

~~environmental impacts of their activities. The following parameters shall be followed in the designation of IRZs and PRZs.~~

~~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 zones are required).IRZs must be sites where direct impacts from mining are likely to occur.~~

~~For each type of impact identified in the environmental impact statement, there must be at least one corresponding IRZ which will enable the Contractor to monitor that impact. This is likely to require multiple IRZs (or a very large IRZ).~~

~~PRZs will be important in identifying natural variations in environmental conditions against which impacts will be assessed. Their species composition, habitat types, and occurrence of mineral resource, must be comparable to that of the impacted areas.~~

~~PRZs must be areas that will not be impacted by mining activities, including impacts from operational and discharge plumes.~~

~~If 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.~~

~~Use of multiple PRZs should be considered for increase in statistical rigour, and chance of detecting effects and adding redundancy in case of unexpected variation/plan changes.~~

~~The area of the PRZ needs to be sufficiently large to contain (and buffer) sufficiently large populations to guarantee long-term survival.~~

~~In theory, all species within the IRZ and PRZ will need to be monitored to quantify impacts. In practice, some representative set might suffice. To establish an adequate baseline and find suitable indicator species (e.g. the sensitive species that will suffer most from an impact) it will be necessary to catalogue as many species as reasonably possible in the IRZ and PRZ in question. This will require an extensive sampling effort to collect **sample** numbers and volumes that allow for a meaningful comparison (i.e., with high statistical power)~~

~~The longevity of PRZs is important. The duration of post-mining monitoring should until no measurable difference between IRZ and PRZ can be detected anymore~~

~~Isolation of PRZs is important: any PRZ will by definition have to remain unimpacted throughout the post-mining monitoring period.~~

~~To designate representative IRZs/PRZs requires characterisation of pelagic and benthic communities within all sub-habitats that may be impacted by mining operations, and determination of regional distributions and patterns of connectivity. Temporal variation must also be evaluated annually over multiple years (for at least one test-mining site, and the PRZ site).~~

~~A Contractor will need to be able to demonstrate a general knowledge of ecosystem functioning and of the ecology of the present species; an average population density alone will not suffice.~~]

Annex [~~**Alt.**~~]

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 [~~ecological~~][environmentally]similar before the commencement of mining.
3. [To designate representative IRZs/PRZs requires characterisation of the pelagic and benthic environment including all sub-habitats that may be impacted by 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] [~~For each type~~] of impact identified in the Environmental Impact Statement, [~~there~~] must [~~be at least one~~] correspond[~~ing~~] [with] IRZ[/IRZs] which will enable the Contractor to monitor [~~that~~]-[these] impacts. [Designation of] [~~This is likely to require~~]-multiple IRZs [~~(or a very large IRZ)~~]-[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 mining activities, in accordance with the relevant Standards, taking into 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 relevant Standards [and], taking into 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 mining activities from any contractor, including impacts from operational and discharge plumes and including during the post-closure period. PRZs must also be free [~~as far as possible~~] from impacts of other industrial activities[. PRZs must have to 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-monitoring] [~~is~~] [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 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 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.

Schedule

Use of terms and scope [not covered in the President's text]

Explanation / comment

- To ensure that duplications are avoided, the terms listed below has been removed from the Revised President's Text and will be handled solely by our group. Best Archaeological Practices Intangible Cultural Heritage
- Definitions of "Closure", "Decommissioning" and "Final Closure Plan" have been inserted based on the proposal from the intersessional working group on "Closure Plans", i.e. regulations 59-61. I propose that the intersessional working group presents these definitions and I afterwards invite for a discussion on this.
- As I stated previously, I propose to follow all recommendations from the intersessional working group on "Underwater Cultural Heritage", both in respect to suggested insertions and deletions, for example here in The Schedule regarding deleting definitions of "Best Archaeological Practices", "Intangible Cultural Heritage" and "Underwater Cultural Heritage".

"Best Available Techniques" means the [latest stage of development, and state-of-the-art [the most appropriate] processes], [within reasonable technical and economic constraints,] [~~of~~] facilities or [~~of~~] methods of operation that indicate the practical suitability of a particular measure for the [avoidance~~prevention~~], reduction and control of pollution and the protection of the Marine Environment from the harmful effects of Exploitation activities, taking into account the guidance set out in the applicable [Standards and] Guidelines.]

Alt. 1 [**"Best Available Techniques"** means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

(a) 'techniques' includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;

(b) 'available techniques' means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator.

(c) 'best' means most effective in achieving a high general level of protection of the environment as a whole;]

Alt 2. [**"Best Available Techniques"** means the most appropriate processes, within reasonable technical and economic constraints, facilities or methods of operation that indicate the practical suitability of a particular measure for the prevention, reduction and control of pollution and the protection of the Marine

Environment from the harmful effects of Exploitation activities, taking into account the guidance set out in the applicable Guidelines.]

"Best Environmental Practices" means the application of the most appropriate combination of environmental control measures and strategies, [based on the Best Available Scientific Information and Best Available Technology which] [that] will change with time in the light of improved knowledge, understanding or technology, [as well as the incorporation of the relevant traditional knowledge of Indigenous Peoples and local communities] taking into account the [guidance set out in the] applicable [Standards and] Guidelines [including traditional knowledge and international best practices].

[~~"**Best Archaeological Practices**" means (as defined by the 2001 UNESCO Convention) those practices designed to: encourage responsible and non-intrusive public access to underwater cultural heritage in accordance with Articles 2.5 and 2.10 of the Convention; increase public awareness, recognition and protection of heritage; promote the Convention and the establishment of national legal frameworks for protection; support scientific research in accordance with the Convention and the Rules concerning activities directed at underwater cultural heritage annexed to it, and capacity building in this regard; and promote the appropriate conservation of heritage~~.]

"Cumulative Environmental Effect" [means any consequences in the Marine Environment arising over time from the conduct of Exploitation activities or in combination with other stressors and activities in the same area, including those not regulated by the Authority.]

[["Damage to the Marine Environment" means […]

["Depleted, Threatened or Endangered Species" means […]

[["Ecological Balance of the Marine Environment" means the equilibrium between, and harmonious coexistence of, organisms and their environment.]

["Ecosystem Approach" means a comprehensive, integrated approach to the management of human activities based on the Best Available Scientific [Information ~~Evidence~~]—that accounts for marine ecosystems and their dynamics, in order to achieve ecosystems' conservation and sustainable use of, and the avoidance of interference with, the ecological balance of the marine environment.]

[**"Effective Protection"** means [~~…~~…]

"Environmental Effect" means any [material] consequences in the Marine Environment, [~~including baseline studies for Underwater Cultural Heritage~~,] arising from the conduct of Exploitation activities, [whether][being] positive, [negative], direct, indirect, temporary or permanent, or [c]Cumulative environmental effect arising over time or in combination with other effects or impacts stressors and activities in the same area, including those not regulated by the Authority.

[**Alt 1. "Environmental Effect"** means any material consequences in the Marine Environment arising from the conduct of Exploitation activities, whether positive, negative, direct, indirect, cumulative, temporary or permanent.]

["Environmental Impact" means […][changes (physical and or chemical) to the environment resulting from Exploitation activities.]

"**Environmental Management System**" means the part of the overall management system implemented by a Contractor that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining environmental policy, [~~including a survey of the seabed to~~

~~identify objects of an archaeological and historical nature~~] objectives and environmental performance.

[**Alt. 1 "Environmental Management System"** means that part of the overall management system applied by a Contractor that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining environmental policy, goals and environmental performance.]

[Alt. 2 means the part of the overall management system applied by a Contractor that includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining environmental policy, goals, objectives and environmental performance.]

[Alt. 3 "Environmental Management System" means part of the management system used to manage environmental aspects, fulfil compliance obligations, and address risks and opportunities.]

["Environmental Objectives" means a specific statement of desired environmental outcomes that represent the achievement of a Goal.]

["Environmental Risk" means the potential of an event happening that will have an adverse effect measured in terms of the severity of the environmental consequences and the likelihood of those particular consequences occurring.]

["Environmental Risk Assessment" means the process for identifying and evaluating Environmental Risk using a generally accepted risk assessment methodology.]

"Environmental Plans" means the Environmental Impact Statement, the Environmental Management and Monitoring Plan and the Closure Plan.

["Facilities-maritime infrastructure-floating platforms" means […]

["Final Closure Plan" means the version of a Contractor's Closure Plan that has been approved by the Council pursuant to Regulation [60(8)]

"Good Industry Practice"" ["Best Industry Practice"] means the exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected to be applied by a skilled and experienced person engaged in the marine mining industry and other related extractive industries worldwide and includes meeting the performance requirements under any Rules of the Authority, and relevant Standards. [based on Best Environmental Practice, which is based on Best Available Scientific Information and Best Available Technology]. [Employment of the latest widely accepted stage of development (state of the art) of processes, of facilities or of methods of operation, consistent with the Fundamental Principles, including using skill, diligence, prudence and foresight which is an would reasonably be expected to be applied by a skilled and experienced person engaged in the marine mining industry]

Alt 1. the exercise of the degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected to be applied by a skilled and experienced person engaged in the marine mining industry and other related extractive industries worldwide.

"**Impact reference zone**" (or "IRZ") means a zone designated within the Contract Area [in accordance with Annex XX to these regulations] that is representative of the environmental characteristics of the Contract Area, is predicted to be impacted by mining activities, and will be used to assess the effects of the Exploitation on the marine environment, including by way of comparison with the Preservation reference zones.

~~[“**Intangible Cultural Heritage**” means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artifacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage (as defined by the UNESCO 2003 Convention for the safeguarding of the Intangible Cultural Heritage).]~~

[“**Interference with the Ecological Balance of the Marine Environment**” means […]

“Marine Environment” includes the physical, chemical,[oceanographic] geological, genetic, and biological components, conditions and factors which interact and determine the productivity, state, condition and quality and connectivity of the marine ecosystem(s), ~~[the underwater cultural heritage]~~, the waters of the seas and oceans and the airspace above those waters, [species, biodiversity, ecosystems,] as well as the seabed and ocean floor and subsoil thereof.

[“Preservation” means [the maintenance of the environment, lands and natural resources in a pristine form, without anthropogenic use beyond access.]

“**Preservation reference zone**” (or “PRZ”) means a zone designated within the Contract Area in accordance with Annex [XX] to these regulations that has been identified as having similar ecological characteristics to an Impact reference zone, and within which no mining impacts are predicted to occur, which will be used to show a representative and stable ecosystem from the sea surface to the benthic subsurface layers, and can be used to form a comparison with an Impact reference zone.

["Proponent” means […]

[“Protection” means any action or activity designed to reduce or prevent pollution, negative environmental impacts or other damage to environment, land, ecosystems or natural resources by human activities, including to mitigate climate change, to reduce the risk of such damage, to protect and restore biodiversity or to lead to more efficient use of natural resources, including energy-saving measures and the use of renewable sources of energy and other techniques to reduce greenhouse gas emissions and other pollutants, as well as to shift to circular economy models to reduce the use of primary materials and increase efficiencies. It also covers actions that reinforce adaptive capacity and minimise vulnerability to climate impacts.]

[“Rare and Fragile Ecosystems” means […]

“Rehabilitation” [occurs when an ecosystem recovers certain characteristics of, or resemblance to, its natural state, such as the presence of certain species, functions or services, without necessarily aiming at exhaustiveness.]

[“Regional environmental management plan” means] […]

“Resources” means all solid, liquid or gaseous mineral resources, [mineral-bearing ore, associated minerals, or mixture thereof] in situ in the Area at or beneath the seabed, including: (a) polymetallic nodules, defined as any deposit or accretion of nodules, on or below the surface of the deep seabed, which contain metals such as manganese, nickel, cobalt and copper; (b) polymetallic sulphides, defined as hydrothermally formed deposits of sulphides and accompanying mineral resources in the Area which contain concentrations of metals such as copper, lead, zinc, gold and silver; and (c) cobalt crusts, defined as cobalt-rich ferromanganese hydroxide/oxide deposits formed from direct precipitation of Minerals from seawater onto hard substrates containing concentrations of metals such as cobalt, titanium, nickel, platinum, molybdenum, tellurium, cerium and other metallic and rare earth elements.

[**"Resource Category"** means […]

[**"Restoration"** means] [a return to pre-disturbance conditions, implying complete re-creation of a system]

"Serious Harm" means any effect from activities in the Area on the Marine Environment which represents a[n [unlawful]] significant adverse change in the Marine Environment determined according to the rules, regulations and procedures adopted by the Authority on the basis of internationally recognized standards and practices informed by Best Available Scientific [~~Evidence~~] [Information].

[**Alt. "Serious Harm to the Marine Environment**" means an Environmental Effect that, individually in combination or cumulatively meets any of the following criteria:

(a) it is not likely to be redressed through natural recovery within a reasonable period;

(b) it impairs the ability of affected populations to replace themselves;

(c) it degrades the long-term natural productivity of habitats or ecosystems;

(d) causes, on a more than temporary basis, a significant loss of species richness or biological diversity, including community structure, genetic connectivity among populations, ecosystem functioning and ecosystem services on the seabed, at the sea surface, and in midwater and in the benthic boundary layer, or habitat; or

(e) criteria for significance contained in the relevant Regional Environmental Management Plan, or Standards.]

[**"Synergistic Impacts"** means joint effects caused for the interaction of two or more simultaneous activities that result in a combined effect that is greater than the sum of individual and isolated effects]

[~~"**Underwater Cultural Heritage**" means all traces of human existence having a cultural, historical or archaeological character (as defined by the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage) including, but not limited to all objects of an archaeological and historical nature found in the Area (which must be treated in accordance with Article 149 of the Convention), and Intangible Cultural as well as paleontological objects (fossils~~).]