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Draft regulations on exploitation of mineral resources in the Area

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

Prepared by the Facilitator, Ms. Raijeli Taga (Fiji), of the Informal Working Group on the protection and preservation of the marine environment

Explanatory note

1. I have prepared this third revised text ("the Facilitator's third revised text") in the enclosure to assist discussions of 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 on exploitation of mineral resources in the Area.

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](#)). This third revised text has been amended in accordance with the comments made by participants during the meeting in March 2023 and based on written proposals received by participants since the meeting. I have received 223 written proposals. All these proposals have been considered in the preparation of this text and new amendments are reflected in mark-up text.

3. It is noted, that during our last meeting in March 2023, several participants agreed to undertake intersessional work on different aspects related to the text. I appreciate the hard work that has been put into these intersessional working groups and it has been a great help in advancing the work on the text. I would like to inform the participants of the following points related to the work of the intersessional working groups:

(a) Concrete examples received from intersessional working groups have been reflected directly in the text or I have sought to implement concepts. Furthermore, I have attempted to accompany the insertions with explanations in the comment boxes to the relevant regulations to the extent it seemed necessary.

(b) The intersessional working group on a Standardized approach for Stakeholder consultation has submitted a report entailing the outcome of the groups work. This includes an overview of group discussion on key topics, a horizontal overview,

identified areas of general agreement and proposed ways forward, and outstanding issues recommended as areas for further consideration. I thank the IWG for its work and propose that all participants familiarize themselves with the outcome report, when possible, and I will invite the group to present its work when we commence our work in July, so that we may consider this when reading through the regulations.

(c) The intersessional working group on Underwater Cultural Heritage (UCH) submitted a report, which inter alia established where the UCH term is used in our draft regulations and how it should be understood/defined in accordance with e.g., the Convention and the precedent of UNESCO's 2001 "Convention on the Protection of Underwater Cultural Heritage". The group further noted that in light of the feedback received from participants, as well as expressed desires for the IWG to reach consensus on its outputs, the group determined that it would not be able to submit textual proposals to the ISA in a timely manner. I thank the group and I will invite the group to present its outcome during the meeting in July, so that we may consider this when reading through the regulations.

(d) In respect of the intersessional working groups for restructuring and streamlining the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report and the Environmental Impact Statement, i.e. relating to (previous) regulations "46 bis", "46 bis Alt" "47", "annex IV" and "annex iv bis"; the IWG submission did not entail actual textual proposals for new regulations, but a structured outlined of how the group envisioned certain elements from different regulations and annexes could be put together to achieve better structure in new regulations under a new "Section 2 on the Environmental Impact Assessment Process". I have gone through the regulations and annex which the IWG referred to in an attempt to follow the structure set out in the proposal. This has led to a new "Section 2". I also noted that it was suggested that remaining elements, for example in annex IV, should be placed in a relevant Standard. However, considering that proposals were received very late and after the extended deadline, time has not permitted further considerations in this respect. I therefore propose that participants during the meeting, when discussing these regulations and the annexes (in particular Annex IV), will state which text remaining in Annex IV should be either "kept" or "moved" or "placed" in a Standard.

4. The Informal Working Group will meet from 12 to 13 July 2023. I propose that the group focus on the conceptual discussions and the work of the intersessional working groups. I will, during the reading of the text, attempt to highlight where more discussions might be needed. I encourage participants to keep the interventions short and concrete.

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, ~~S~~sponsoring States, the Enterprise, Contractors and [flag] States shall each within their plan, adopt, implement and [modify] [update all] measures necessary for ensuring effective protection of the Marine Environment, including [but not limited to] rare or fragile ecosystems [all forms of marine life] as well as the habitat of depleted, threatened or endangered species from harmful effects directly or indirectly resulting from Exploitation in the Area, [including from shipboard dewatering immediately above a mine site of minerals derived from that mine site processing, which may include inland processing] 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 ecosystem-based [management] 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) Integrate Best Available Scientific [Evidence 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 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) Include Underwater Cultural Heritage in the definition of marine environment. Thus, references to the environment include references to these objects which hereinafter are referred to as underwater cultural heritage (UCH) which has been more precisely defined in the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage.]~~

(vi) Ensure to minimize the direct or indirect ~~[act so as not to transfer]~~ 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, ~~[at a minimum]~~, 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]~~ ~~[structure, function and resilience]~~ 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 ~~[timely]~~ ~~[prompt]~~ public release of environmental data and information on their respective activities at regular intervals and in an accessible format. In so doing, the Enterprise and Contractors shall apply a priority order to avoid, minimize, ~~M~~mitigate, ~~[and]~~ remediate, ~~[and restore]~~ ~~[shall Mitigate]~~ harm to the Marine environment ~~[and as a last resort, offset]~~ 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 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 ~~(iv)~~I above.

~~2-bis.~~ The parties ~~[mentioned in paragraph 1]~~ shall:

(a) Apply the precautionary approach, and the 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;

I Integrate Best Available Scientific ~~[information Evidence]~~ 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.

I Take into account the approach 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 ~~S~~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.

Explanation / comment

- During our last meeting, I noted that some participants suggested including a reference to “*traditional and indigenous knowledge*” in paragraph 1 (a) (iii). I believe there is merit to this idea, and it also aligns with the principles of the BBNJ, which has several references to using “*traditional and indigenous knowledge*”, see for example, draft articles 18(c)(iii) and 21 (5) of the BBNJ Agreement.
- One participant suggested using the term “*precautionary principle*” instead of “*precautionary approach*” in paragraph 2 (a). However, I propose to keep the term “*precautionary principle*” as

this is the term mostly used, e.g., see the 2011-Advisory Opinion from ITLOS on “Responsibilities and Obligations of States Sponsoring persons and entities with respect to activities in the Area”. See, in particular, paras 125-135 in the section entitled “*precautionary principle*” in the Opinion.

- It is important that the definition of the Marine Environment encompasses all elements to be preserved and protected. Indeed, Underwater Cultural Heritage is, in my opinion, one of the elements. However, I suggest moving the definition to the Schedule and to include it in the definition of “Marine Environment”
- The term “Mitigation” is used in several places in the draft regulations, in particular in this text, and is a defined term in the Schedule. Therefore, it is suggested to agree on a standard way of referring to mitigation. One group has proposed the following three options:
 - Use the word “Mitigation”, which is capitalised indicating it is a defined term
 - Expand the reference to “Mitigation as defined in the Schedule
 - Full elaboration by stating “Mitigation, that is, avoid, minimize, rectify, reduce, and as a last resort, offset, where agreed”
- During the negotiations of the President’s text on regulation 31 (on “Reasonable regard for other activities in the Marine Environment”) it was proposed to have a reference in the present text to ensure that exploitation under an exploitation contract is carried out with reasonable regard for climate mitigation and ecosystems in the area, explicitly referring to “carbon burial”, “sequestration” and “nutrients recycling” and that it should be included somewhere in our regulations instead of in regulation 31. Some participants noted on the other hand, that they preferred to have this addition completely deleted. I propose that it could be inserted as a new *littera* “g” in paragraph 2. I invite for views on this.

Regulation 44bis

Regional Environmental Management Plans

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

Regulation 45

Development of environmental Standards and Guidelines

1. [Environmental Standards and Guidelines developed under this regulation shall have the aim to ensure 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 94, 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 dispersion and dilution, resettlement, temperature, toxicity and composition;

(iii) water chemistry and temperature;

(iv) light emissions;

(v) noise and vibrations emissions and

(vi) habitat removal.

(d) Monitoring procedures

(e) Mitigation measures;

(f) Technical requirements for environment protection with regard to the equipment used for the Exploitation activities and

(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 have been adopted.

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

5. Environmental Standards and Guidelines shall be regularly reviewed and updated in response to advancements in scientific knowledge and experience.]

[Regulation 45 Alt.]

1. [The Authority shall not approve any Exploitation activities unless the Environmental Standards and Guidelines have been adopted.] [Such Standards and approved Guidelines shall be] [developed] [adopted by] the Council [in accordance with Regulations 94 and 95] [shall], based on the recommendations of the Commission, [develop] [Environmental Standards and Guidelines in accordance with regulations 94 and 95 and [must] [shall include], inter alia, [include] the following subject matters [aimed at ensuring a Contractor does not cause Serious Harm to the Marine Environment]:

(a) Environmental quality objectives, indicators and thresholds, including but not limited to ecosystem, structures, functions and services, biodiversity status, [water chemistry and] plume [characteristics (in particular, composition and characteristics of dissolved and suspended matter, plume) dispersion [and dilution] toxicity, composition, [water chemistry,] [as well as] sedimentation rates) [and] light [and noise]-emissions [and noise radiation]. This also includes baseline data collection, as well as all available data on the marine ecosystems and biodiversity.

(b) Environmental management, reporting and monitoring procedures to assess the impacts [and effects] on the Marine Environment, including interpretation of results,

(c) Mitigation measures of harmful effects to the marine environment, and where possible, remediation, [restoration and rehabilitation] or, [if restoration and rehabilitation are impossible,] compensation of environmental harm, thereby following the mitigation hierarchy of avoid, minimize, remediate.

[(c) alt. Mitigation measures as defined in the Schedule, including priority order and descriptions of each step in the mitigation hierarchy and clarifications on their use, process and approvals as necessary.]

(d) Technical requirements with regard to the equipment used for the Exploitation activities and

(f) Quantitative assessment of Environmental Effects.

(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 required by these regulations, including but not limited to: Plans of Work, Environmental Management Systems, Environmental Impact Assessments, Environmental Impact Statements, [and] Environmental Management and Monitoring Plans, [Closure Plans, Emergency Response and Contingency Plans, Health and Safety Plans, and Maritime Security Plans.]

(i) Safe management and operation of mining vessels and installations.

~~[2.—[The Authority shall not approve any Exploitation activities unless the environmental Standard have been adopted. Standards shall be regularly revised in response to advancements in scientific knowledge and experience.]]~~

Explanation / comment

- I have received a draft from an intersessional working group on regulation 45 for re-structuring this provision. I thank the group for their hard work. I propose to follow the submitted proposal going forward as the new regulation 45.
- I note however that several participants have submitted proposals for amending regulation 45. To publicise these suggestions, I have made a “Reg. 45 Alt.” where these are incorporated. My comments below refer to these. However, I underline that I support the work of the intersessional working group and propose to use their suggested wording of regulation 45 going forward. I invite for comments on this.

To the other incoming proposals incorporated into “Alt. Reg. 45”:

- I noted support for streamlining this provision as interchangeable refers to “Standards” and “Standards and Guidelines”. I would therefore propose to insert the principle of paragraph 2 at the

beginning of paragraph 1 to lay out the purpose of the regulation and delete paragraph 2.

- Several proposals suggested deleting the last part of paragraph 1 referring to “ensuring that the contractor does not cause serious harm to the Marine Environment.” I propose to follow this suggestion as it makes the paragraph easier to read, streamlines better with other provisions and the scope of the entire regulation is not limited to potential “serious harm”.
- One submission suggested to include a reference to “Marine Communities” in paragraph *litra* 1. I propose not to include this as this would otherwise introduce a new, undefined term (marine community).
- Following suggested amendments to paragraph 1, *litra* a, there seemed to be a double reference to “water chemistry”, wherefore I removed one of them. Furthermore, I have specified that underwater noise is “radiated” following the specification on this matter at the International Maritime Organization.
- One proposal suggested in paragraph 1 *litra* c to include a reference to “*restoration and rehabilitation*”, also when this is impossible. Another proposal suggested to change *litra* c to refer to “Mitigation Measures” as defined in the Schedule. I suggest using the first approach as it aligns with the principles established by the International Law Commission in their “Articles on State Responsibility” (article 34) regarding definition of “Reparation”, including restitution and compensation. An article to which ITLOS directly refers in its 2011 Advisory Opinion (para 197 of the Opinion). Also, there is currently no clear definition of “Mitigation Measures” in the Schedule, while “Restoration” and “Rehabilitation” are defined therein. I have kept the alternative suggestion for paragraph 1 c as “Alt c” and invite for further discussion on this matter.
- Some proposals suggested deleting paragraph 2. To accommodate for opponents' view, I have suggested merging paragraph 2 with 1. I invite for further discussion on this.

Regulation 46 **Environmental management system**

1. ~~[A Contractor shall develop, implement and maintain an environmental management system, in compliance with the Standards and taking account of the relevant Guidelines and internationally recognized standards, and in accordance with Good Industry Practice and Best Available Scientific Evidence]~~

1. ~~1.bis~~Alt. [A Contractor shall develop, implement and maintain an environmental management system, in compliance with the Standards and taking account of the relevant Guidelines and in accordance with Best Available Science and Scientific Information, Good Industry Practice and internationally recognized standards.]

2. An environmental management system shall ~~[inter alia]~~:

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

(b) Be ~~[reviewed and undergo]~~ ~~[audited]~~ periodically ~~[audits]~~ by an independent recognized and accredited international or national organization, in accordance with applicable Standards and Guidelines, ~~[at an interval to be agreed to by the Legal and Technical Commission and the Contractor]~~; and

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

~~[(ed) Undergo periodic review and 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.]~~

~~[(e) Be in accordance with Best Available Scientific Evidence, Best Environmental Practices and Best Available Techniques [and Good Industry Practice.] and Internationally Recognized Standards]~~

~~[3. All changes made to a Contractor's Environmental Management System, for example resulting from reviews and audits, 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

- I have inserted a reference to "*Best Available Science and Scientific Information*" to align the text with the BBNJ wording, see for example articles 5 (h), 17 (3), 21 (5) and 30 in the BBNJ. I invite for discussion on this.
- I have attempted to amend paragraphs 2 and 3 in accordance with incoming proposals while also focusing on streamlining the provisions to ensure consistency and avoid overlaps. I invite for discussion on this.

Regulation 46 ~~[ter]~~ ~~[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 ~~[Good Industry Practice,]~~ Best Available Scientific ~~[information]~~ ~~Evidence]~~, Best Environmental Practices, and Best Available Techniques, the environmental ~~[metrics relative to]~~ thresholds contained in the Standards, and risks to Environmental Effects ~~on~~ the Marine Environment arising from Exploitation ~~[the following the approval of the Plan of~~

~~Work. It shall keep under~~ sSurveillance, ~~[shall be conducted]~~ during all stages of the mining ~~[life-cycle]~~ ~~[operation]~~,~~[the effects of the mining operation]~~ to determine whether it is having or likely to have harmful effects on the Marine Environment until ~~[post-closure monitoring is concluded]~~ [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 and in accordance with the Standard on Monitoring Programmes and cooperate with,] ~~[after approval by]~~ the Authority and the Sponsoring State or States ~~[in the establishment and implementation of the Contractor's environmental monitoring programmes]~~ as well as share findings and results of such programmes with the Authority for wider dissemination.

[2.Alt: A Contractor shall establish and implement an environmental monitoring programme, after approval by the Authority and the sponsoring State or States of the Contractor's environmental management and monitoring plan.]

[3. In addition to the Monitoring conducted by the Contractor pursuant to Paragraph 2,] t 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 ~~[seven]~~ [five] years of the mining project Exploitation, to be conducted by independent experts and in compliance with the applicable Standards [and taking account of the relevant guidelines].

[3.Alt The Environmental Management and Monitoring Plan shall contain a monitoring programme for Exploitation, to be conducted in compliance with the applicable Standards.]

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).

[4.bis.] The Secretary-General shall release publicly [environmental data and information in the required standardized format], ~~[in an accessible format,]~~ [in] real time or at monthly intervals, 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. ~~Other monitoring data, [pertaining for example to monitored variations in geochemistry or fauna] shall be released annually in the form of a written report.~~ 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

- Following the intersessional working group's proposal to amend and streamline the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, and the Environmental Impact Statement (laid out in the following

regulations), I propose to change the numbering of this regulation from “46 ter” to “46 bis”.

- One participant proposed the insertion of a new paragraph 2 which has been inserted as “Paragraph 2 Alt” while “Paragraph 2” entails all incoming proposals to this provision. I invite for a discussion on which should be used going forward.
- Two participants proposed insertions of new paragraph 3’s relating to the Environmental Management and Monitoring Plan. I believe one of these proposals could be merged into the existing paragraph 3 provision while the other proposal for a new paragraph 3 has been inserted as “Paragraph 3 Alt.”. I believe that it will be prudent to use the original “Paragraph 3” (with another proposal merged into it) as a basis for this provision going forward but invite for views on this.
- Regarding para, 4, there seems to be two different objectives being discussed, one being the annual report and the other being public release of data. Therefore, I suggest splitting para 4 into two paras with a 4.bis. to make this clear distinction.
- Finally, I noted during the meeting that some participants stated that I was unnecessary to have monitoring programme for at least the first seven years of mining. Following the meeting, one submission from a participant suggests changing it to a “five years” period. I invite for a discussion on this.

Regulation [48] [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 eEnvironmental 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 [~~in the form and deliver the contents~~] 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, [~~including any thresholds set out herein~~]
 - (c) Be prepared in accordance and consistent with the applicable Standards [~~and thresholds of the Authority~~] 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~~ Evidence],

Best Environmental Practices and Best Available Techniques, ~~[taking account of the applicable Guidelines;]~~

(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, ~~[internal]~~ thresholds ~~[of the Authority defined in the applicable Standards]~~ and reflect its methodology to determine whether the environmental objectives are being met and that the operation is compliant with applicable environmental Standards and other Rules of the Authority,

(g) ~~[Reflect any conditions recommended]~~ ~~[Incorporate any recommendations made]~~ by the Commission, and approved by the Council, in its consideration of the Environmental Impact Statement, including ~~[will set out]~~ commitments and procedures on;

- (i) how the environmental ~~[and archaeological]~~ impacts of the mining operation will be monitored in accordance with Regulation 46~~[bister,]~~ ~~[the EMMP Standard]~~ and the ~~[Environmental Management Plan]~~ 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 ~~[respected]~~ ~~[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 performed by the Contractor, the Environmental Management and Monitoring Plan shall contain a supplementary monitoring programme for at least the first seven years of ~~[Exploitation]~~ ~~[mining operations.]~~ to be conducted by independent experts and in compliance with the applicable Standards. The Contractor shall conduct monitoring for the entire duration of ~~[exploitation]~~ ~~[the mining operation]~~ and comply with any post-closure monitoring requirements ~~[according to Regulations 59-61 and the applicable Standard.]~~

4. The Contractor shall provide information ~~[in its annual report]~~ on the implementation of the Environmental Management and Monitoring Plan ~~[in its annual report]~~ in accordance with regulations 38, paragraph 2(g), and 46~~bister,~~ 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 ~~[to be determined in each project]~~ ~~[(real-time or on a monthly basis)].~~ ~~[Other monitoring data, for example pertaining to monitored variations in geochemistry or fauna, shall be released annually in the form of a written report.]~~

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

- Following the intersessional working group's proposal to amend and streamline the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report, and the Environmental Impact Statement (laid out in the following regulations), I propose to change the numbering of this regulation from "48" to "46 ter".
- Two alternative proposals were submitted for "paragraph 3 bis". I have tried to merge elements from both alternative proposals into the existing paragraph 3 bis which I believe, also following the discussions at our last meetings, should continue from this basis going forward.

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 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, 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 assessment.
- (b) An assessment 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 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 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.
- (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 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.]

Explanation / comment

The Facilitator's general comments to new Section 2:

- I have received a submission from an intersessional working group on re-structuring and streamlining the regulations on Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report and the Environmental Impact Statement, i.e., previous regulations "46 bis", "46 bis Alt" "47", "annex IV" and "annex iv bis". I thank the group for their hard work.
- I noted that the submission from the group did not entail actual textual proposals for new regulations, but a structured outlined of how the group envisioned certain elements from different regulations and annexes could be put together to achieve better structure in new regulations under a new "Section 2" on the "Environmental Impact Assessment Process". I have gone through these above-mentioned regulations and annexes and sought to follow the structure set of in the proposal.
- The outcome of my work is a new "Section 2" entailing new:
- Regulation 47 on the "Environmental Impact Assessment Process"
 - Regulation 47bis on the "Environmental Impact Assessment"
 - Regulation 47ter on the "Environmental Impact Assessment Scoping Report"
 - Regulation 48 on the "Environmental Impact Statement", and
 - Regulation 48bis on "New Environmental Impact Assessment and Revised Environmental Impact Statement"
- Regarding the numbering of the new regulations, I am open to other suggestions. The above-mentioned merely represents an attempt to

develop the requested new regulations in a new Section 2, while still trying to keep the numbering of the other regulations to the extent possible.

- I note that the group suggested that remaining elements, for example in annex IV, should be placed in a relevant Standard. I therefore propose that participants during the meeting, when discussing these regulations and the annexes (in particular Annex IV), will state which text remaining in Annex IV should be either “*kept*” or “*moved*” or “*placed in a Standard*”.

The Facilitator’s comments specifically related to regulation 47:

- Paragraph 1 is based on Paragraph 1 from the previous regulation 46 bis.
- Paragraph 2 is based on Paragraph 4 from the previous regulation 46 bis.
- Paragraph 3 is based on Paragraph 2 from the previous regulation 46 bis.
- Paragraph 3 (i) (point i-v) is based on Paragraph 2 c bis and para 8 of the previous regulation 46 bis.

Regulation 47 bis

Environmental Impact Assessment

1. An applicant or Contractor shall carry out an Environmental Impact Assessment.

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 Evidence[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.

Explanation / comment

For the Facilitator's "*general comments*" to the new Section 2 (reasoning, structure, numbering, developing a Standard etc.), following the submission from an intersessional working group, please see those under regulation 47.

Facilitator's comments specifically related to regulation 47bis:

- Paragraph 1 is based on paragraph 1 and paragraph 1ter from the previous regulation 46 bis.
- Paragraph 2 is based on paragraph 1bis and paragraph 7 from the previous regulation 46 bis.
 - I note to paragraph 2, *litra e* that during our last meeting, one participant suggested to include a reference to "international law and the Convention". I have tried to include this and invite for any comments.
 - Furthermore, several submissions suggested changes to the previous paragraph 1bis, while others proposed a rewording of the entire provision. I tried to merge all incoming suggestions, using the existing paragraph 1bis, which now forms the basis for paragraph 2.
- Paragraph 3 is based on paragraph 5 from the previous regulation 46 bis.
- Paragraph 3 (i) (point i-v) is based on paragraph 2 c bis and paragraph 8 of the previous regulation 46 bis.

[Regulation 47 ter
Environmental Impact Assessment 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 application 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,

(e)I 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).
 - (iii) A description of the cumulative 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 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 to not to publish 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.
- (~~a~~)(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.
- (~~b~~)(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).
- (~~e~~)(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 [~~for a period of at least 60 days~~], 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] ~~a specified timeframe~~ 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 take into account the Commission's recommendations under this regulation, before proceeding with an environmental impact assessment process. Furthermore, the applicant or Contractor shall agree the final contents of the Scoping Report with the Commission.]

Explanation / comment

For the Facilitator's "*general comments*" to the new Section 2 (reasoning, structure, numbering, developing a Standard etc.), following the submission from the Intersessional Working Group, please see those under draft regulation 47.

Facilitators comments specifically related to draft regulation 47ter:

- Paragraph 1 is based on paragraph 3 from the previous regulation 46 quart.
- Paragraph 2 is based on paragraph 1 from the previous regulation 46 quart.
- Paragraph 3 is based on paragraph 2 from the previous regulation 46 quart.
- Paragraph 4 is based on the previous Annex IV bis on the "Scoping Report".
- Paragraph 5 is based on paragraph 4 from the previous regulation 46 quart.
 - It is noted to this paragraph that two proposals suggested changing the references in the previous paragraph 4 of regulation 46 quart to a specific "60 days" availability of the Environmental Impact Statement on the Authority's webpage (litra a of paragraph 5 above) and inserting a 90-day period for submitting written comments (litra b of paragraph 5 above). I have placed these in square brackets and invite for views on this.
- Paragraph 6 is based on paragraph 5 from the previous regulation 46 quart.

- Paragraph 7 is based on paragraph 6 from the previous regulation 46 quart.
- Paragraph 8 is based on paragraph 7 and paragraph 7Alt. from the previous regulation 46 quart.

Regulation 48

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 purpose of the Environmental Impact Statement is to document and report the results of the environmental impact assessment carried out in accordance with Regulation 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 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 description 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]:

- 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,
- c) An outline of applicable national and international legislation, procedures and policies, 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) Methodologies for assessing the 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 biological properties and communities 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,
- i) An assessment of impacts on the physical, chemical and geological environment and proposed Mitigation, including description of potential impact categories and pathways, as well as receptors and impacts,
- j) An assessment of impacts and Environmental Effects on the biological environment and proposed Mitigation, including description of key impact source, potential impact categories and pathways, receptors and impacts and cumulative operation effects,

- 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), gender impact and residual impacts.
- l) 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, handling waste and blast water.
- m) A summary of key issues in the Environmental Management, and Monitoring 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 consultation and stakeholder engagement and methods.
- p) A summary 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, including any revisions, should be available [for at least 60 days on the official website of the International Seabed Authority in the interests of transparency of the whole process.]

Explanation / comment

For the Facilitator's "*general comments*" to the new Section 2 (reasoning, structure, numbering, developing a Standard etc.), following the submission from an intersessional working group, please see those under regulation 47.

Facilitator's comments specifically related to regulation 48:

- The first part of paragraph 1 is based on paragraph 1 and 3 from the previous regulation 47. It is noted that one proposal suggested to amend the first paragraph of the previous regulation 47 to merely refer to "*An applicant or Contractor, as the case may be, shall prepare an Environmental Impact Statement in accordance with this regulation.*" I believe there is merit in this to streamline and clarify the meaning, also using this provision going forward here in draft regulation 48.
- The last part of paragraph 1 is based on paragraph 6 from the previous regulation 46bis.
- The first part of paragraph 2 is based on paragraph 2 from the previous regulation 47.

- The last part of paragraph 2 is based on paragraph 3 of the previous regulation 47 and point 2 (*template for EIS*) in Annex IV as these overlapped.
- Paragraph 3 introduction and litra a are based on paragraph 3 from the previous regulation 47.
- Paragraphs 3 litra b-d are based on paragraph 9 from the previous regulation 46bis and paragraph 3 from the previous regulation 47 as these overlapped.
- Paragraph 3 litra e is based on point 1 (a) (*preparation of an EIS*) in Annex IV.
- Paragraph 3 litra f is based on point 1 (c) (*preparation of an EIS*) in Annex IV.
- Paragraph 3 litra g is based on point 1 (d) (*preparation of an EIS*) in Annex IV.
- Paragraph 4 entails overview references to many of the subject matters dealt with in annex IV. According to the intersessional working group, much of Annex IV should be placed in a Standard. If so, the core elements in the Standard (currently found in Annex IV) should be repeated here in the regulation.
- Paragraph 5 is based on paragraph 5 from the previous regulation 47. It is noted to this paragraph, that one proposal suggested deleting the references in the previous paragraph 5 of regulation 47 to a specific “60 days” availability of the Environmental Impact Statement on the Authority’s webpage. I invite for comments on this.
- It is noted that several proposals suggested deleting paragraph 6 to the previous regulation 47 on the use of predictive models. I concur that the content of the paragraph was unclear. I have attempted to update the provision to reflect this.

[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 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 and this activity and predicted impact has not already been addressed by an Environmental Impact Statement, or**

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 requests an applicant to change its proposed Plan of Work during the application stage under Regulation 14.]

Explanation / comment

For the Facilitator's "*general comments*" to the new Section 2 (reasoning, structure, numbering, developing a Standard etc.), following the submission from an intersessional working group, please see those under draft regulation 47.

The Facilitator's comments specifically related to draft regulation 48bis:

- Paragraph 1 is based on paragraph 3 from the previous regulation 46 quart.

[ALT-]Regulation 48[bis ter]

Test mining

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

2. ~~[The purpose of-]~~ [t] ["T]est mining" [means an *in situ* testing of the integrated system of all relevant equipment (e.g. collector, raiser and release techniques) and process steps for an exploitation activities under such technical, spatial and temporal conditions which allows] ~~[shall be]~~ to provide evidence ~~[by information gathered through test mining projects-]~~ to ensure that the proposed mining equipment is technically appropriate, ~~and~~ that the Marine Environment is effectively protected from harmful effects, [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.]

3. ["Test mining"] ~~[projects]~~ require[s] a ~~[n]~~ [prior] approval by the Authority and shall be carried out in accordance with the ~~[rules, regulations and procedures for exploration and the recommendations for the guidance of contractors]~~ [relevant Standard and taking into account the relevant Guideline], in particular ~~[the assessment of possible environmental]~~ [to ensure that the Marine Environment is effectively protected from harmful effects, including the cumulative effects, in accordance with Article 145 of the Convention] ~~[impacts arising from the exploration for marine minerals in the Area.]~~

4. ~~[A new t]~~ ["Test mining"] ~~[project-]~~ does not have to be undertaken if the evidence pursuant to Paragraph 1 has been provided through other ["test-mining"] ~~[projects-]~~ by the applicant or in the context of another approved Plan of Work for [Ee]xploitation. In such a case, the applicant shall compile in its

~~["test-mining"]~~ report the information already available ~~[and explain;]~~ ~~[explaining]~~ 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.]

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"]~~ ~~[project]~~ has to be undertaken in order to provide sufficient information pursuant to paragraph (2). In this case, paragraphs (1) and (3) apply.

Explanation / comment

- Firstly, it is noted that, as part of the work following the intersessional working groups proposal to amend and streamline the regulations on the Environmental Impact Assessment Process, the Environmental Impact Assessment, the Environmental Impact Assessment Scoping Report, and the Environmental Impact Statement (laid out in the previous regulations), I propose to change the numbering of this draft regulation from "48bis" to "48ter".
- Secondly, I wish to point out that during our meeting in March 2023 we looked at two proposed regulations on test mining (previously "48bis" and "Alt.48bis"). I noted that there was support for using previous Alt.48 bis as the basis going forward wherefore the previous regulation "48 bis" has now been deleted.
- Thirdly, at our last meeting, several participants called for streamlining this, and other, regulations. An intersessional working group was created to rework and submit a revised/streamlined version of the regulation, using "Alt.48 bis" as a basis. I received the group's suggestions and have, after reviewing these, included them in the regulation as I see great merit in the proposed changes and the reasoning behind it. I thank the intersessional working group for its hard work.
- Finally, it is noted that one participant has submitted several proposed changes to the regulation (previous Alt.48.bis). However, apart from one minor editorial change in paragraph 4, which I can see the merit in, I propose to use the version submitted by the intersessional working group to ensure that the provision remains clear and keep the current scope.

Section 3

Pollution control and management of waste

Regulation 49

Pollution control

A Contractor shall take all the necessary ~~[and appropriate]~~ measures to protect and preserve the Marine Environment ~~[and the coastlines]~~ ~~[from harmful effects]~~, ~~[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 all relevant Rules of the Authority, ~~[the relevant applicable Regional Environmental Management Plan]~~, ~~[and]~~ taking account of the applicable 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]~~.

Explanation / comment

- 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.
- 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 been inserted. I invite for a discussion on this matter.
- One participant submitted a proposal to include a reference to “coastline”. I note that this is not defined in the Schedule and invite for a discussion on whether this should be included and, if so, whether it needs defining.
- 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 applicable rules and 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 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. This Regulation shall be, where applicable, interpreted and applied in a manner that is consistent with the obligations of the Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters, 1972 and the 1996 Protocol thereto., where applicable, in particular Articles IV4 and X+0.]

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

Explanation / comment

- One participant has submitted an alternative to paragraph 2. This is inserted as paragraph “2.Alt.”. I invite for comments on this.
- One participant has submitted a request to keep paragraph 4 relating to the explicit reference to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matters, 1972 and the 1996 Protocol (also known as the “London Convention”). I invite for a discussion on this.
- If the reference is kept, I propose to change the reference to articles 4 and 10 in paragraph 4 to Roman numerals (i.e., “IV” and “X”) as this is how it is used in the London Convention.

Section 4

Compliance with Environmental Management and Monitoring Plans and performance assessments

Regulation 51

Compliance with the Environmental Management and Monitoring Plan

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 ~~environmental~~ monitoring data publicly, in accordance with regulation 46ter, paragraph 4 in an accessible format consistent with best scientific practice, ~~in real time 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 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~~ ~~m~~ ~~M~~itigation 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.

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 plan;
- (b) The continued appropriateness and adequacy of the plan, including the management conditions and actions attaching thereto;
- (c) ~~The conformity of~~ ~~That~~ the plan ~~takes 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.

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 [or the [[Compliance body]]] following:

(a) An Incident or Notifiable Event;

(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 [Ss]ponsoring State or States of any action taken pursuant to this regulation.

Explanation/comment

- One participant suggested removing the square brackets around the reference to "twenty-four months" in paragraph 2. I believe there was support for this following our last meeting.
- 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 invite for comments by all participants 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 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 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] [EP] 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

- 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 proposal suggested deleting litras a and b in paragraph 2. However, I have not noted any such objections 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. Learning from incidents are 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 a[n] exploitation contract 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

- 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.
- 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

The purpose of the Fund is to finance the implementation of any necessary measures designed to mitigate or compensate for [any] 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 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.]

[Regulation 55.Alt 1

Purpose of the Environmental Compensation Fund

1. Based on the polluter pays principle the Contractor shall pay for any necessary measure to limit, remedy and compensate any damage to the Area arising from the mining activities.

2. 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.

3. The purpose of the Fund is to finance the implementation of any necessary measures designed to mitigate or compensate for any loss or damage to the marine environment of the Area or coastal states, arising from ~~exploration~~ exploitation activities in the Area. This includes the restoration and rehabilitation of the Area when 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 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.]

Regulation 55.Alt 2
Purpose of the Environmental Compensation Fund

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; and
- (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

- 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.
- 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.
- 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 invite the proponents of this proposal to present their views and all participants to have a discussion on this.
- Furthermore, it should be noted that besides the incoming proposals to this draft regulation, several participant have submitted alternative proposals for rewording/restructuring the draft regulation. This is inserted as “regulation 55.Alt 1” and “regulation 55.Alt 2”. I believe that there is merit to these proposals. In respect of 55.Alt 1 I note paragraph 2 (as the submitting participant also noted) of this alternative regulation has been worded to align with the wording in the 2011-Advisory Opinion from ITLOS on “Responsibilities and Obligations of States sponsoring persons and entities with respect to activities in the Area”. (See para 206 of the Advisory Opinion). I invite for a discussion on this. In respect of 55.Alt 2, it is suggested that the

details listed in the original wording would be best placed in the Rules and Procedures of the Fund and Standards and Guidelines where necessary.

- I note that if there is consensus on using the alternative submitted version of draft regulation 55, some/all of the proposed changes to the original regulation can be implemented in the alternative version, to the extent that participants agree to this.
- If the participants favour the original regulation 55 (or this is to merge with “regulation 55 alt.”) I would highlight that during our last meeting one participant suggested to merge paragraph 3 with paragraph 1 while another participant has 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.

Regulation 56

Funding of the Environmental Compensation Fund

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 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 contributions paid by Ssponsoring States to the Fund.

Explanation / comment

- One participant 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 the discussions during our last meetings regarding 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 last meeting that the reference to “prescribed contributions” in litra g needs to be clarified in terms of what the scope is. I invite for a discussion 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.bisThe objectives of a Closure Plan are to ensure that:

- (a) The marine environment 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 risks relating to remaining Environmental Effects 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 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
- a)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).]

Explanation / comment

- At our last 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 7, 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.
- I also note that several references are made to the need for consolidation or rewording or formal drafting of the regulation. I invite for concrete suggestions in this respect.

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 days]] and invite members of the Authority and Stakeholders to submit comments in writing [[within 90 days].]

[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 comments 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] Days in advance of the meeting. The Commission should, where necessary and appropriate to ensure sufficient technical expertise, consult external 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] 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

- At our last 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 or 60 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.

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 yearly] 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 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 yearly 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 [such period] [X years] after the cessation of activities, as set out in the final 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 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, 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 paragraphs (3) and (3bis), the Council decides that a Contractor has failed to meet the conditions of, or deadlines related to, 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 Closure Plan.]

Explanation / comment

- At our last 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 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." and a "paragraph 3" and "Paragraph 3 Alt." to this regulation.
- I also note that several references are made to the need for consolidation or rewording or formal drafting of the regulation. However, given the short deadlines to work on incoming proposals

and compiling these into a new set of Draft Regulations before sending these out to participants, this work on consolidation and rewording will have to be done during our next meeting in July.

- 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.
- 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:

- As an overall comment, I would like to highlight 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 urge participants to keep this in mind through the reading of this annex and other annexes. Furthermore, I urge for participants attempting to simplify the annexes and try to identify areas that could be more suitable for the Standards and Guidelines.
- Some parts of this annex have been moved 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. (For an overview of these new regulations see my comments to the new regulation 47 or in my introductory remarks.)
- The group suggested to include the remaining parts of the annex in relevant Standard and Guidelines. While I think there is merit to this, I believe that it would be best, for the work ahead, to keep the remaining parts of the annex (which is the majority) here. This to continue to have a better overview going forward i.e. having other documents to go back and forth in reading. Also, 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.
- I note/recall that paragraph 4 of the new regulation 47 entails an overview of references to many of the subject matters dealt with in this annex, as I believe it would be prudent to reference these in the actual regulation, also considering if these are moved to a Standard.

Specific comments by the Facilitator to the changes in this annex:

- Point 1 a in the section on “*Preparation of an Environmental Impact Statement*” has been moved to paragraph 3, litra e of the new regulation 48.
- Point 1 c in the section on “*Preparation of an Environmental Impact Statement*” has been moved to paragraph 3, litra f of the new regulation 48.

- Point 1 d in the section on “*Preparation of an Environmental Impact Statement*” has been moved to paragraph 3, litra g of the new regulation 48.
- The first part of point 2 in the section on “*Template for Environmental Impact Statement*” has been moved to last part of Paragraph 2 of the new regulation 48.
- It is recalled from my comments to regulation 44 that the President, in respect of the negotiations on the President’s revised text (working on regulation 31 on “Reasonable regard for other activities in the Marine Environment”), has reached out to our informal working group to have a reference to ensure that exploitation under an exploitation contract is carried out with reasonable regard for climate mitigation and ecosystems in the area, explicitly referring to “carbon burial”, “sequestration” and “nutrients recycling” be included somewhere in our regulations instead of in regulation 31. I proposed to have this included in regulation 44 as a new litra “g” in paragraph 2. I also noted that an almost similar reference is proposed to be inserted by a participant in point 4.11 of this Annex on “Greenhouse gas emissions and climate change”. I believe that both references have their merit. If not, I propose to remove the one in this annex (in point 4.11). I invite for views on 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, ~~[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.]~~

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.

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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, impacts of the activity, as assessed by experts, (including, but not limited to, oceanographic, geological, biological, socioeconomic and sociocultural) including the expected 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 ~~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

~~Alt (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 voluntary stakeholder consultation process 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 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 ~~Ss~~ponsoring 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 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 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.

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 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 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, 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. ,

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, and any methods related to the trans-shipment of the mineral-bearing ore, including transfers at sea. 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, 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. 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. 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. 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 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 3bis Methodology for Description of the Marine Environment and Assessment of Impacts and Environmental Effects

3bis.1 Studies completed

Describe any prior research/Exploration that could provide relevant information for this Environmental Impact Statement and future activities. These 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 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.

Raw baseline data and computer code 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 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 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) a description and justification of transformations performed to the data and analyses used to summarize the data;
- (b) a list of program(s) used to analyze results; and,
- (c) 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.

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 or 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 the site and impact area, which should include information from a thorough literature review as well as from on-site studies. The Guidelines on baseline 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 account will provide the baseline description of the oceanographic conditions, including physical, chemical and geological oceanographic conditions, against which impacts will be measured and assessed. The detail in this section is based on the prior environmental risk assessment that will have identified the main impacts, and thus the elements that need to be measured 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 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 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 of the local meteorology (e.g., wind directions and speeds, seasonal patterns and variability). Provide description of air quality, including chemical characteristics. This section may be most relevant to surface operations.

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 site, 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] [ø#] 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, currents regime, tides, waves, turbulence, and oceanographic fronts, eddies and climate change projections, including spatial variation at and above the site. Seasonal variability is an important element. Detail is required on the regional setting, as well as the specific mining site and impact area, 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 site and above the site 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 site 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, 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), 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, 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 should be described to a depth below the seafloor prescribed in the relevant Standard [as indicated in the] [ø#] Regional Environmental Management Plan.

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 variability etc. and how these may 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 the water column and at the surface, including, but not limited to, light intensity, backscatter, and attenuation, 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 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).]

4.12 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 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 site and impact area, 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 and benthic, 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 Guidelines on baseline 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 area, 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 map. A more detailed site 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 properties in the 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.

The description of the fauna is structured by depth range, as this enables a direct linkage to the source and location of an impact. For each depth zone, (at least surface, midwater and benthic as below) there should be a of the taxonomic/ecological groups (e.g., plankton, fish, marine mammals, marine turtles, benthic microbial invertebrates, demersal scavengers) the Authority's Guidelines.

The description should include the size distributions of the fauna and their life history stages (such as larval and juvenile stages, which differ from the adult stage). Discussions of species 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.

5.4.1 Surface

Describe the biological communities from the surface to a depth of 200 metres, including microbes plankton (phytoplankton and zooplankton), 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.

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:

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.

5.4.2 Midwater

Describe the pelagic fauna and their habitat in the open water from a depth of 200 metres down to 50 metres above the sea floor, and include 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 benthic microbial, invertebrate and fish communities, including infauna, epifauna and demersal fish, up to an altitude of 50 metres above the sea floor. This should include considerations of species richness, biodiversity, faunal densities, community structures and connectivity, etc. Ecosystem functions, such as Bioturbation, habitat 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.

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. 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.

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

This section should describe the socioeconomic and sociocultural environment aspects and impacts of the project based on the 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 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 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 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).

6.2.6 Other

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

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 showing known archaeological and historical sites in relation to proposed operations and note any areas of interaction or cumulative impact. 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). 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 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
- (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.

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.)

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 Impact Area. 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\(h\)\]](#). The description 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 [as identified in the 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 under a State's national jurisdiction.

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.

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 proposed mining operation and alternatives considered. This should introduce the major types of impacts and their effects, 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 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 (d) Descriptions of the methods applied to describe and quantify impact pathways and assessment.

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

(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

8.6.2 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.

8.7.1 Proposed operations effects

Cumulative effects within the scope of the mining proposed herein.

8.7.2 Regional operation effects

Cumulative effects between activities, 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.

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 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 Existing 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.

9.2.1.5bis Sociocultural 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 Ecosystem Services

A description of potential impacts of the operation on any ecosystem services, for example, carbon burial and sequestration.

9.2.1.6 Other

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

9.2.1bis 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).

9.2.2 Area-based management tools

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

9.3 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 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.

13.1

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.

13.3bis 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.]

13.3 ter 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.

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. 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.
- 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:~~

- ~~(d) 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.~~
- ~~(e) A description and overview of tentative timelines and deadlines for the proposed Exploration and any associated activities.~~
- ~~(e) A description of what is known about the environmental setting, including Underwater Cultural Heritage, for the project (Contract Area and regional setting);~~
- ~~(e 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 socio-cultural aspects of the project, including socio-cultural 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

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. 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;

(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) 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;

(e) 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;

(e)bis A description of uncertainties identified from the environmental impact assessment and the plan to reduce or manage these;

(f) 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 consistent with the environmental impact assessment and the Environmental Impact Statement;

(g) 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).

(h) 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;

(i) 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;

(i)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;

(i)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;

(j) 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;

(k) 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;

(l) 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;

(m) A description of the monitoring technology and system to be 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 Ssponsoring 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;

(n) Details of the training programme for all persons engaged or to be engaged in activities in the project area;

(o) Details of discharges, including those defined and regulated by relevant rules and regulations issued by the International Maritime Organization, within the project area;

(p) Details of ongoing consultation with other users of the Marine Environment;

(p)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.

(q) Details of any practicable restoration and rehabilitation of the project area;

(r) A plan for further research and studies;

(r)bis Detail of the process and measures to be taken in case of non - compliance with the Environmental Monitoring and Management Plan.

(r)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;

(r)ter A description of the document control system that will be used for environmental management documentation;

(s) Details of reporting requirements and timing 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

(t) 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;

(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;

(h) Details of monitoring to be undertaken during and after closure 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 [mitigate, 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)]~~ Details of any anticipated residual impacts that may remain even after Mitigation measures;

~~[(l)]~~ Information on reporting and management of data and information postclosure- including information on how data will be archived and made available post-closure, and how the formatting of submitted datasets and reports will be consistent with best scientific practices;

~~[(m)]~~ 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, project management plan and the protocols for reporting to the Authority under the Closure Plan or Final Closure Plan;

~~[(n)]~~ Details of the amount of the Environmental Performance Guarantee provided under these regulations; and

~~[(o)]~~ 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

~~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.~~

- ~~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 zones are required).~~
- ~~2. IRZs must be sites where direct impacts from mining are likely to occur.~~
- ~~3. 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).~~
- ~~4. 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.~~
- ~~5. PRZs must be areas that will not be impacted by mining activities, including impacts from operational and discharge plumes.~~
- ~~6. 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.~~
- ~~7. 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.~~
- ~~8. The area of the PRZ needs to be sufficiently large to contain (and buffer) sufficiently large populations to guarantee long-term survival.~~
- ~~9. 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)~~
- ~~10. 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~~
- ~~11. Isolation of PRZs is important: any PRZ will by definition have to remain unimpacted throughout the post-mining monitoring period.~~
- ~~12. 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).~~
- ~~13. 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.
- 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.

"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 [avoidanceprevention], 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.]

["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).