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Draft regulations for exploitation of mineral resources in the Area

Implementing the precautionary approach to activities in the Area

Note by the secretariat

I. Background

1. The draft regulations on exploitation of mineral resources in the area ([ISBA/24/LTC/WP.1/Rev.1](#)) make reference to the application of the precautionary approach in three regulatory provisions: in draft regulation 2 (5) (b), as one of a number of fundamental principles; in draft regulation 14 (2), in connection with the consideration of environmental plans; and in draft regulation 46 (a), as a requirement for the Authority, sponsoring States and contractors to apply such an approach to the assessment and management of risk of harm to the marine environment.

2. The precautionary approach is also recognized, at a strategic level, as a guiding principle of the Authority's strategic plan for the period 2019–2023 (see [ISBA/24/A/10](#), annex, para. 4 (i)) and will be put into effect through the implementation of many of the Authority's strategic directions and the application of the Authority's risk-based approach to regulation. In addition, the regional environmental management plans developed under the Authority's environmental policy framework give effect to the precautionary approach.¹

3. Consistent with the three sets of regulations on prospecting and exploration, the content of the precautionary approach in the draft regulations on exploitation is reflected in principle 15 of the Rio Declaration on Environment and Development, which reads: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious and or irreversible damage, lack of full scientific certainty shall not be

* [ISBA/25/C/L.1](#).

¹ See [ISBA/18/C/22](#), para. 1, in connection with the approval of the environmental management plan for the Clarion-Clipperton Fracture Zone.



used as a reason for postponing cost-effective measures to prevent environmental degradation.” According to the Seabed Disputes Chamber, the provisions of the Authority’s regulations on prospecting and exploration have transformed, for the purposes of the regime established under part XI of the United Nations Convention on the Law of the Sea, this non-binding statement of the precautionary approach into a binding obligation. The implementation of the precautionary approach, as defined in the Authority’s regulations, was recognized by the Seabed Disputes Chamber as an element of the general obligation of sponsoring States to exercise due diligence.²

4. The present note is intended to assist the Council in further understanding the practical implementation of the precautionary approach under the Authority’s mining code, with a view to enabling the Council to provide guidance and direction to the Legal and Technical Commission on developing recommendations to the Council for improving the implementation of such an approach.³ As noted in the past, the fundamental question to be addressed by the Authority is how the precautionary approach is to be implemented and applied by the Authority, sponsoring States and contractors to activities in the Area.⁴ The present note highlights, in particular, certain procedural measures to implement the approach that have been used or are under consideration by the Authority.

II. Putting the precautionary approach into context

5. The wide applicability of the precautionary approach is recognized in many international, regional and national environmental protection instruments, although the specific content of the approach varies and is often undefined. Nevertheless, the approach is not to be understood in isolation. Under the draft regulations on exploitation, the precautionary approach is considered alongside, and is complementary to, other environmental principles, approaches and obligations, including the application of an ecosystem approach (draft regulation 2 (5) (c)), the obligation to apply best environmental practice (draft regulation 46 (b)) and the requirement to integrate best available scientific evidence (draft regulation 46 (c)).

6. The approach established under principle 15 of the Rio Declaration that the Authority has adopted does not prevent activities with effects unknown to science from proceeding, but rather requires that such activities only proceed with appropriate checks and risk-reduction measures in place,⁵ including robust science-based decision-making processes throughout the mining life cycle.⁶

7. Fundamentally, the precautionary approach promotes improved and informed decision-making. While such decision-making is to be based on the best available

² Seabed Disputes Chamber, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area*, case No. 17, Advisory Opinion, 1 February 2011, paras. 131 and 132.

³ It is the responsibility of the Legal and Technical Commission to make recommendations to the Council on the implementation of a precautionary approach in the context of activities in the Area. See regulation 31, paras. (2) and (3), of the regulations on prospecting and exploration for polymetallic nodules in the Area (ISBA/19/C/17, annex).

⁴ See International Seabed Authority, “Developing a regulatory framework for mineral exploitation in the Area: a discussion paper on the development and drafting of regulations on exploitation for mineral resources in the Area (environmental matters)”, Kingston, January 2017.

⁵ International Seabed Authority, *Environmental Management Needs for Exploration and Exploitation of Deep Sea Minerals*, ISA Technical Study No. 10 (Kingston, 2012), p. 32.

⁶ The application of the precautionary approach throughout all the stages of deep-sea mining operations is acknowledged in the Code for Environmental Management of Marine Mining. See p. 3 of the revised version of the Code, as adopted on 16 September 2011.

scientific evidence, it is recognized in this approach that the scientific evidence is incomplete and that, therefore, the implementation of techniques and measures to deal with scientific uncertainty and associated risk is required. Principle 15 was adopted in the context of sustainable development, and its application requires that the cost-effectiveness and proportionality of any precautionary measures be considered, that is, in introducing cost-effective measures, a degree of proportionality must be observed when assessing the benefits to be achieved from any resulting risk reduction.

8. At the current stage of regulatory development, it is of paramount importance to focus on the processes (i.e. procedural mechanisms) by which informed decisions are made, supported by appropriate assessment frameworks, and on the adaptability of such processes to improved knowledge on the one hand and ongoing scientific uncertainty on the other hand. That is, it is important to focus on the way in which scientific uncertainty is given due consideration and is balanced with other considerations in the decision-making process, as opposed to focusing on the outcome itself. This approach accords with the rationale used by the Seabed Disputes Chamber to define an obligation of conduct and an obligation of due diligence,⁷ of which the precautionary approach forms an integral part.⁸

9. It is this procedural application and its importance within a risk assessment and management framework that effectively puts the precautionary approach into effect to facilitate the achievement of the primary goal under article 145 of the Convention, namely, to ensure effective protection for the marine environment.

10. It is important to note that, as a procedural tool, the precautionary approach promotes the consideration of cost-effective measures in the face of scientific uncertainty; its application is a means to challenge and improve the existing environmental decision-making process. Nonetheless, such an application must be consistent with part XI of the Convention and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, in particular as regards the decision-making authority of the Authority's principal organs, and with the criteria against which an application for a plan of work will be evaluated.

11. A handful of stakeholders have advocated the adoption by the Authority of a precautionary principle rather than a precautionary approach. This is arguably a question of semantics rather than having any meaningful difference in content and intent when applied in the context of principle 15. However, it potentially highlights regional and national differences that may arise in the content and application of a precautionary approach. In principle 15, it is also recognized that capabilities may vary from State to State, depending on technical and financial capabilities with regard to risk management.⁹ Consequently, and in order to ensure both a level

⁷ Seabed Disputes Chamber, *Responsibilities and obligations of States sponsoring persons and entities*, para. 110.

⁸ *Ibid.*, para. 131.

⁹ This point was also recognized by the Seabed Disputes Chamber in its advisory opinion on the responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area, in which it pointed out that, on the basis of its interpretation of principle 15, "it follows that the requirements for complying with the obligation to apply the precautionary approach may be stricter for the developed than for the developing sponsoring States" (para. 161). That said, the Chamber found the reference to the term "capabilities" in principle 15 to be "a broad and imprecise reference to the differences in developed and developing States" and that "what counts in a specific situation is the level of scientific knowledge and technical capability available to a given State in the relevant scientific and technical fields" (para. 162). Training (i.e. capacity-building) should be provided (see para. 163) and data and information should be shared to bridge knowledge and technical gaps.

playing field among the Authority's contractor base and the highest standards of environmental protection, the Authority should, through the Commission's recommendations to the Council on the implementation of the provisions of principle 15, strive for a consistent application of the precautionary approach to activities in the Area.

III. Implementation of the precautionary approach by the Authority

12. In March 2017, the secretariat published a discussion paper in which the implementation of the precautionary approach by the Authority was critically assessed.¹⁰ Three dimensions in which the precautionary approach could be implemented, namely, protective, institutional (in relation to capacity) and procedural, were also outlined in the paper. The measures defined under these dimensions are not conducted in isolation and are integral to the regulatory package under development, in particular in relation to the framing of "necessary measures" under article 145 of the Convention.

13. The procedural dimension, which incorporates the Authority's decision-making processes, is the main area of focus of the present note. Under this dimension, the importance of the precautionary approach as a tool to promote the discharge of the due diligence (i.e. procedural) obligations inherent under article 145 of the Convention is recognized. The dimension encompasses the assessment of the risk and acceptability of any harmful effects that may arise from exploration or mining activities, including the examination of scientific evidence and of uncertainty in scientific information. In that regard, granting access to non-confidential data and information and advancing transparent and accountable decision-making through stakeholder participation¹¹ will promote informed decision-making by the Authority (see paras. 6 and 7 above).

14. The annex to the present note sets out a non-exhaustive list of existing and potential procedural measures that will strengthen the practical implementation of the precautionary approach. It is through a combination of the measures that have been identified that an overall precautionary assessment and decision-making framework will be put into effect and strengthened.

15. The institutional measures relate principally to the Authority's capacity and competencies in respect of assessment, monitoring and enforcement and will require an ongoing assessment of the expert resourcing needs of the secretariat and of the composition of the Commission as the needs of the Authority evolve. This is acknowledged under the Authority's strategic plan¹² and remains under continuous review. Equally, continuous capacity-building for developing States,¹³ the establishment and strengthening of strategic alliances and partnerships with other organizations and expert bodies¹⁴ and the Authority's commitment to realizing the

¹⁰ International Seabed Authority, "The implementation of the precautionary approach by the International Seabed Authority", Discussion Paper No. 5, March 2017. Available at <https://rand.s3.amazonaws.com/isa.org/jm/s3fs-public/documents/EN/Pubs/DPs/DP5.pdf>.

¹¹ See strategic direction 9, relating to the commitment to transparency, of the strategic plan of the International Seabed Authority for the period 2019–2023 (ISBA/24/A/10).

¹² See strategic direction 8, to improve the organizational performance of the Authority, including through the allocation of sufficient resources and expertise.

¹³ See strategic direction 5, to build capacity for developing States, and strategic direction 6, to ensure fully integrated participation by developing States.

¹⁴ See strategic direction 1.2.

Sustainable Development Goals relevant to its mandate¹⁵ all serve to build and enhance knowledge through cooperation and collaboration and consequently improve informed decision-making.

16. With regard to protective measures, the Authority is advancing its strategy for the development of regional environmental management plans for the Area (see [ISBA/24/C/3](#) and [ISBA/25/C/4](#)). In addition, the Commission will reflect on the content of an overarching environmental policy framework at its meetings in 2019. Such a policy will benefit the development of environmental performance standards and guidelines (see [ISBA/25/C/3](#)) in the setting of goals and objectives consistent with article 145 of the Convention.

17. The implementation of the data management strategy of the Authority and assessment of current baseline data, together with the implementation of measures to promote and encourage marine scientific research in the Area,¹⁶ will strengthen informed decision-making in the Area and allow the Authority to target areas of scientific uncertainty in conjunction with its contractor base and the wider scientific community. Protective measures and techniques will also evolve as the full suite of standards and guidelines is developed. The procedural mechanism for the development and adoption, and subsequent update, of standards and guidelines is an important consideration for the implementation of the precautionary approach through an inclusive and transparent process.

IV. Concluding remarks

18. It is evident from the discussion above and the content in the annex that the Authority's regulatory development agenda and processes give due regard to the approach established under principle 15 of the Rio Declaration, in particular when it comes to advancing the knowledge, work and role of the Authority through outreach programmes and observer participation (e.g. through the holding of informal meetings by the Council). Additional measures will evolve over time through meaningful stakeholder dialogue.

19. Stakeholders will have different perceptions as to the content and meaning of the precautionary approach in the context of activities in the Area. While debate as to its content and application will continue, there is a danger in over-engineering the approach established under principle 15. For the Authority, establishing a framework that promotes participation and discussion in the decision-making processes is the primary goal for the successful implementation of the precautionary approach, and due consideration should be given to the cost-effectiveness of any measures under such framework.

20. Further efforts should be made to advance the application of the approach established under principle 15, in particular in connection with well-defined procedural (i.e. decision-making) mechanisms, with the Authority's strategic plan and strategic directions providing the overarching framework. While the Council and Commission may wish to reflect on additional content (e.g. procedural measures) that would enhance the implementation of the approach under the draft regulations, consideration should also be given to the guidelines proposed for development in the annex to document [ISBA/25/C/3](#) and associated development processes; many guidelines will enhance and improve the practical application of the precautionary approach.

¹⁵ See strategic direction 1.1.

¹⁶ See strategic direction 4, to promote and encourage marine scientific research in the Area.

V. Suggested items for consideration and discussion

21. The Council is invited to take note of the present document, including its annex, and to offer any guidance or direction to the Commission on how to strengthen further the practical implementation of the approach set out in principle 15 of the Rio Declaration in the draft regulations and the regulatory framework in general.

Annex

Existing and potential procedural measures to strengthen the implementation of the precautionary approach

The following procedural measures have been identified as relevant to establish a more informed, transparent and inclusive decision-making process at the level of the Authority in respect of environmental matters. Many of these measures serve to promote timely access to data and information and transparency and accountability in environmental decision-making, even though the specifics of the mechanisms to implement certain measures need to be further elaborated through relevant guidelines.

<i>Procedural measures</i>	<i>Draft regulation on exploitation of mineral resources in the Area or document reference (where applicable)</i>	<i>Commentary</i>
1. Development of generic and specific assessment frameworks for identifiable environmental impacts	Annex to ISBA/25/C/3	Guidelines (generic) for a risk-based approach to the development and assessment of environmental thresholds and indicators are proposed for development under an inclusive and transparent process.
2. Establishment of procedural safeguards to ensure that sufficient environmental baseline and monitoring data are supplied to the Authority	Annex to ISBA/25/C/3	Guidelines on the expected scope and standard of baseline data collection are proposed. Guidelines for the monitoring and evaluation of and reporting of results on the environmental effects of activities in the Area are also proposed. Implementation of the Authority's data management strategy is also a key measure, together with ensuring public access to data and information.
3. Identification by an applicant of the uncertainties in an application for the approval of a plan of work, including uncertainties and inadequacies in the data and information presented, together with guidance from the Authority on the requirements for and content of environmental impact assessments	Annex IV to the draft regulations and annex to ISBA/25/C/3	Guidelines on risk assessment and impact assessment are proposed, including guidance on how to describe uncertainties adequately and on how those may be addressed through procedural and protective measures, including adaptive management techniques.

<i>Procedural measures</i>	<i>Draft regulation on exploitation of mineral resources in the Area or document reference (where applicable)</i>	<i>Commentary</i>
4. Continuous review and improvement of public participation measures	Draft regulation 2 (5) (d)	<p>The Authority has been commended for the manner in which it has facilitated stakeholder participation with regard to regulatory development. This has included conducting several stakeholder surveys and consultation exercises since 2014 as part of the development of the regulatory framework, facilitating non-member State observer participation in meetings of the Council and the Assembly and the holding of informal meetings by the Council in connection with the development of the regulations. Additional activities have included the organization, in conjunction with key stakeholders, of numerous expert and multi-stakeholder workshops and working groups with support provided for the participation of representatives from developing States.</p> <p>What is lacking is a clear mechanism for identifying when and how stakeholders may participate in the decision-making process for future mining activities in the Area. Guidance for this will be provided through the proposed guidelines for procedures for stakeholder participation in activities in the Area (see ISBA/25/C/3, annex).</p>
5. Publication and review of the environmental plans by members of the Authority and stakeholders	Draft regulation 11	<p>Guidelines for procedures for stakeholder participation in activities in the Area are proposed (see ISBA/25/C/3, annex).</p>
6. Consideration of the environmental plans by the Commission and a determination that the plans provide for the effective protection of the marine environment, in accordance with article 145 of the Convention	Draft regulation 14 (2)	<p>The criteria and matters to be taken into account by the Commission will need to be established. The criteria should be developed by the Commission in conjunction with the secretariat and other stakeholders and recommended to the Council for review and adoption.</p>

<i>Procedural measures</i>	<i>Draft regulation on exploitation of mineral resources in the Area or document reference (where applicable)</i>	<i>Commentary</i>
7. Review of a plan of work prior to production	Draft regulation 26	The development of a procedural mechanism is proposed for the review and approval of material changes, including a public review of the environmental plans.
8. Provision of an environmental performance guarantee	Draft regulation 27	The provision of such a guarantee is precautionary in nature.
9. Provision of guidance on how data and information can be accessed	Draft regulation 46 (d)	Guidelines for access to environmental data and information are proposed (see ISBA/25/C/3 , annex).
10. Making contractor performance assessment reports and the Commission's findings and recommendations on such reports public	Draft regulation 50 (4)	–
11. Establishment of an environmental liability trust fund	Draft regulation 52	This is a precautionary measure in that the fund is established in anticipation of the emergence of an environmental liability gap.
12. Modification of a plan of work by a contractor	Draft regulation 55	This is a precautionary measure.
13. Review of activities under a plan of work	Draft regulation 56	This is a precautionary measure and should also include the publication of findings and recommendations following a review.
14. Requirement for closure plans and post-closure monitoring	Draft regulations 57 and 59	The objective to incorporate, at the start of the process, the closure of mining activities into the mining life cycle is precautionary in nature, together with continued post-closure monitoring for residual environmental effects.
15. Development of a list of confidential information for approval by the Council	Draft regulation 87 (2) (c)	The presumption that any data and information regarding a plan of work, the exploitation contract, its schedules and annexes or the activities conducted under the exploitation contract are public, other than confidential information (draft regulation 87 (1)), will be strengthened by these measures.
16. Development of policy guidance and outlining of a mechanism to designate information as confidential	Draft regulation 87, paras. (2) (d) and (5)	The presumption that any data and information regarding a plan of work, the exploitation contract, its schedules and annexes or the activities conducted under the exploitation contract are public, other than confidential information (draft regulation 87 (1)), will be strengthened by these measures.

<i>Procedural measures</i>	<i>Draft regulation on exploitation of mineral resources in the Area or document reference (where applicable)</i>	<i>Commentary</i>
17. Setting up of a seabed mining register	Draft regulation 90	This will facilitate public access to information through an open register.
18. Continuous review of the adequacy of the regulatory framework (regulations, standards and guidelines) through inclusive and transparent mechanisms	Draft regulations 93 (3) and 105	–
