

# **Seventh Report of the CODE PROJECT**

**Analysis of the International Seabed  
Authority Environmental Impact Assessment  
Regime during Exploration**

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The Code Project is a cooperative enterprise of over 19 scientists and legal scholars from 10 nations. Its mission is to provide analyses of the regulatory framework for deep sea mining under development at the ISA with a view to developing precautionary and environmentally sound regulations that would ensure the protection of the marine environment from the effects of mining.

# **Analysis of the International Seabed Authority Environmental Impact Assessments Regime during Exploration**

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## **EXECUTIVE SUMMARY:**

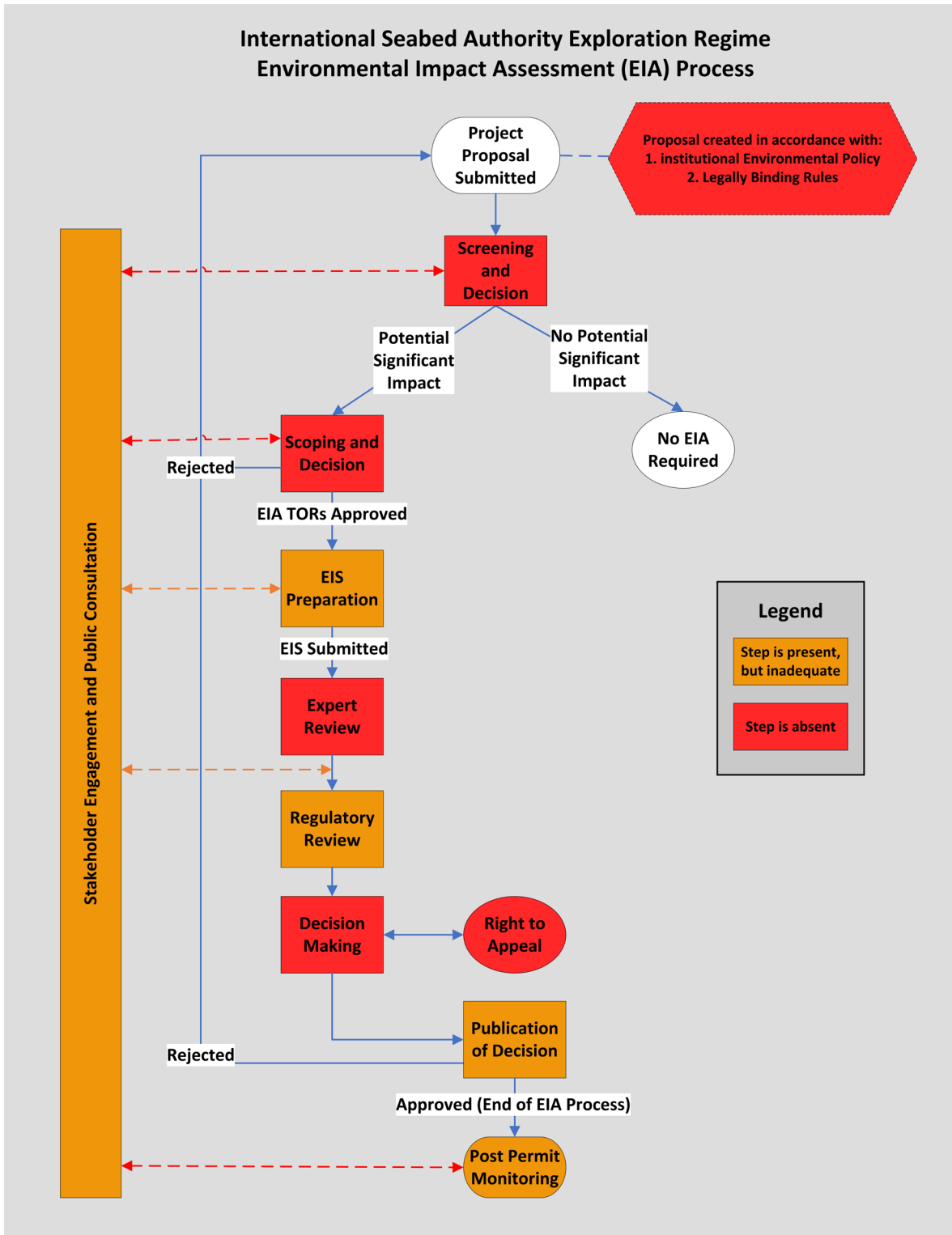
This paper draws on decades of environmental impact assessment (EIA) practice, to identify essential features of an effective EIA regime, and measures the current set-up for mineral exploration activities at the International Seabed Authority (ISA) against that framework. While the ISA is currently focused on negotiating regulations for exploitation, some aspects of the existing exploration regime require revisiting.

The paper finds significant inadequacies in the ISA's current EIA regime for exploration. Recommendations for necessary improvement include:

1. The adoption of an overarching **ISA environmental policy**, with **objective assessment criteria** and **thresholds** to apply when reviewing and making decisions upon an environmental impact statement (EIS).
2. Establishment of **legally binding rules** covering EIAs, enforceable against contractors.
3. An **iterative** process enabling effective communication between the regulator and applicant within the ISA's institutional structure throughout the EIA.
4. Incorporation of a **screening** process and 'significance' test for triggering an EIA.
5. A process and ISA decision to determine the **scope** of an EIA before it commences.
6. **EIS content and data quality requirements**, and guidance on how to account for scientific uncertainty.
7. Clear and binding requirements for **expert peer review** of an EIS.
8. A mandatory requirement, and/or minimum standards, for **stakeholder consultation**, including a clear and robust process for the ISA to conduct its own public consultation or hearing upon an EIS.
9. Expansion of the Legal and Technical Commission's (LTC) review of an EIS beyond 'completeness' **criteria**, to include levels of environmental harm and greater **procedural transparency and accountability**.
10. A **regulatory decision point** for the **Council to approve or reject an EIS**, and power for the ISA to prevent the proposed activity taking place. Council **oversight** of the LTC's review.
11. A requirement to **publish the final EIS** and monitoring programme, and the LTC review and rationale, and a process for **administrative review** or appeal of an LTC recommendation.
12. Monitoring requirements and clear instructions for contractor and ISA use and publication of **monitoring data and reports** produced during and after the activity.

The above 12 points are further elaborated in section D and summarized graphically in Figure 1.

On the basis of the paper's findings, it is recommended that the ISA's Council direct the LTC, working with relevant external experts and with public consultation, to develop the package of instruments and amendments, as well as resource and capacitation proposals, necessary to ensure a fit-for-purpose EIA process for exploration at the ISA, and provides recommendations to the Council for review and adoption.



**Figure 1.** The flow chart displays environmental impact assessment (EIA) best practices with color coding distinguishing where the International Seabed Authority (ISA) exploration EIA process deviates from those best practices (see legend). Not reflected in the flow chart is the need for a formal mechanism that allows for an iterative dialogue between the applicant and regulator throughout the EIA process, which is currently absent at the ISA. Other Abbreviations: Environmental Impact Statement (EIS), Terms of Reference (TOR).

## A. Introduction

### 1. *What is an EIA?*

The purpose of an Environmental Impact Assessment (**EIA**) is to inform a decision whether or not to permit a project, having taken into account the risks and uncertainties associated with its environmental impacts. To fulfil this function, the EIA must identify potential environmental impacts of a proposed project, as well as possible mitigation measures and alternatives to the project, and propose an impact monitoring programme. An EIA is informed by stakeholder consultation.

The EIA process involves a proponent for the project (called '**applicant**' in this note), and a decision-maker (called '**regulator**' in this note). The resulting report of an EIA is called the 'Environmental Impact Statement' (**EIS**).

### 2. *Why is an EIA an essential component of the ISA regime?*

The International Seabed Authority (**ISA**) has a mandate to receive and review, and either approve or disapprove, deep-sea mining activities in the seabed beyond national jurisdiction ('**the Area**'). Where deep-sea mining activities have potential to harm the marine environment, an EIA will be an essential component for the ISA to inform its decision-making and to discharge its obligations of due diligence under UNCLOS Part XI to ensure the effective protection of the marine environment.<sup>1</sup>

States, individually have a legal duty to conduct environmental impact assessment for activities under their control or jurisdiction.<sup>2</sup> This applies to States who hold or sponsor ISA contracts. An EIA may also be a requirement of a project's financing agreements. An EIA properly performed can reduce the likelihood of unexpected adverse outcomes, and of social opposition or legal challenge to a project.

These factors all underpin the importance of an effective EIA regime at the ISA.

## B. Focus of this paper

The frequency of EIAs in the Area has escalated recently. This trend is likely to continue, as the ISA's existing 30 exploration contracts progress, and mining equipment is developed and tested.

Currently under consideration at the ISA is a proposal to require large-scale test-mining prior to, and in order to inform, an exploitation contract application.<sup>3</sup> If that proposal is adopted, then the EIA regime for exploration stands to be used by every exploration contractor who wishes to move to exploitation, and for activities of higher risk and impact, thus highlighting the importance of the efficacy of the ISA's regime for EIA during exploration.

This paper therefore considers the regime currently in place at the ISA for EIA during exploration. The paper draws on decades of EIA practice, to identify essential features of an effective EIA regime, and measures the current set-up at the ISA against that framework, making recommendations for improvement.<sup>4</sup>

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<sup>1</sup> UNCLOS Article 165(2)(d) also contains a requirement for the LTC itself to prepare EIA, and not only to review them, but it is also unclear in what circumstance this may arise. To date, the LTC has not conducted any EIA, though it has facilitated regional-level environmental management planning (REMP) processes, including some assessment of environmental conditions and vulnerabilities.

<sup>2</sup> UNCLOS Part XII. EIA is also a relevant tool for States to meet customary law duties, respectively, to apply the precautionary approach and to prevent transboundary harm, or harm to a shared resources (Pulp Mills on the River Uruguay, Argentina v Uruguay [2006] ICJ Rep 113; and 'Responsibilities and obligations of States with respect to activities in the Area', Advisory Opinion, 1 February 2011, ITLOS.

<sup>3</sup> Germany's proposal to introduce draft Regulation 48bis.

[https://isa.org.jm/files/documents/GER\\_revision\\_DR\\_48bis\\_on\\_Test\\_Mining.pdf](https://isa.org.jm/files/documents/GER_revision_DR_48bis_on_Test_Mining.pdf)

<sup>4</sup> The 'best practice' elements of an EIA identified in this paper would also apply to the design of the ISA's regime for exploitation.

## C. EIA under an ISA exploration contract

### 1. What is 'exploration'?

The ISA is mandated to issue contracts to permit, and give exclusive rights, for 'activities in the Area' i.e. 'exploration' and 'exploitation' of seabed minerals. Exploration is the scientific and feasibility stage of investigation that precedes an exploitation (or mining) project. The purpose of exploration is to gather enough information to inform a subsequent application for exploitation. An ISA exploration contract includes a Plan of Work agreed with the ISA, setting out the contractor's planned activities. This can involve large-scale sampling or test mining (equipment components and/or systems), which may have similar environmental impacts to a mining operation, albeit on a smaller-scale. Four EIAs have been conducted by ISA contractors between 2018-2022 for the purposes of testing prototype nodule mining equipment.

### 2. EIAs at the ISA: special characteristics?

An EIA focuses on the management of risk and uncertainty about environmental impacts. Both aspects are particularly heightened for the ISA, at the current time, as scientific knowledge of the sites targeted for seabed mining remains extremely limited.<sup>5</sup>

The following are other factors relevant to the design of an EIA at the ISA specifically<sup>6</sup>:

- The minerals of the Area are 'the common heritage of [hu]mankind'. This captures the interests of all States and stakeholders, indeed of all humankind, in decision-making.
- The ISA is a multilateral organisation established by treaty. Its supranational governance structure brings institutional complexity to decision-making. Rule-making requires political consensus.
- UNCLOS strictly limits the circumstances in which the ISA can revoke a contract.<sup>7</sup> EIA, permitting conditions and monitoring, therefore provide crucial compliance tools in that context.
- The ISA is an evolving institution, with limited resources, and which operates principally via periodic meetings, giving rise to in-house capacity and expertise constraints.

### 3. ISA's rules for EIA during Exploration

#### (i) Regulations

The ISA has adopted Exploration Regulations for the exploration of different types of mineral deposits. These regulations contain high-level requirements for ISA exploration contractors. These include a requirement to submit to the ISA some kind of preliminary assessment of environmental impacts prior to the commencement of exploration activities. Also to gather environmental baseline studies and to establish an impact monitoring and reporting programme, with a view to future mining.<sup>8</sup> Application of the

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<sup>5</sup> Amon et al. 2022. Assessment of scientific gaps related to the effective environmental management of deep-seabed mining. *Marine Policy* 138:105006.

<sup>6</sup> As noted in Menini et al (2022) 'Public participation in seabed mining in areas beyond national jurisdiction: Lessons learned from national regulators in the terrestrial mining sector' <https://www.sciencedirect.com/science/article/abs/pii/S0308597X22003554> and Craik and Gu (2021) 'Implementing Environmental Impact Assessment for Deep Sea Mining: Lessons to Be Drawn from International and Domestic EIA Processes' <https://www.pewtrusts.org/-/media/assets/2021/06/craik--gu--implementing-environmental-impact-assessment-for-deep-sea-mining.pdf>, Pew

<sup>7</sup> UNCLOS Annex III, Article 18 provides that a contractor's rights may be suspended or terminated by the ISA only in the event of serious, persistent and wilful violations, or failure by the contractor to comply with a decision of a dispute settlement body.

<sup>8</sup> The Exploration Regulations require an applicant to supply "a preliminary assessment of the possible impact of the proposed exploration activities on the marine environment for the first 5 years of the plan of work" prior to contract award (e.g. Regulation 18, Nodules Regulations). And "Prior to the commencement of exploration activities, the Contractor shall submit to the Authority an impact assessment of the potential effects on the marine environment of the proposed activities" (e.g. Standard Clause 5, Nodules Regulations). There are no ISA rules pertaining to the content of those preliminary assessments. Given the paucity of information likely to be available to the applicant at that time *before* it has commenced exploration, it seems these were not intended to be an

precautionary approach and use of ‘best environmental practices’ is also required.<sup>9</sup> The Regulations require Contractors to ‘take into account’ recommendations made by the ISA’s advisory body, the LTC, on developing environmental baselines, and should ‘observe, as far as reasonably practicable’ other LTC recommendations, such as the EIA Recommendations (see below).<sup>10</sup>

#### *(ii) Recommendations*

The LTC has issued recommendations relating to EIAs, which have been subsequently updated or amended several times since their first version in 2002. The most recent version (at the time of writing) is the “Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area” [[ISBA/25/LTC/6/Rev.2](#)], dated July 2022 (**‘the EIA Recommendations’**).<sup>11</sup> The EIA Recommendations specify certain activities that are permitted without an EIA, and certain exploration activities that will require a prior EIA (based on potential to cause ‘serious harm’ to the marine environment). The activities that require an EIA include: use of sediment disturbance systems, large-scale dredging or sample collections, testing of mining components or discharge systems, and test-mining.

The EIA Recommendations provide some detail as to baseline data requirements, with explanatory comments, and ask for environmental monitoring information to be provided to the ISA by a contractor before, during and after any exploration activity. Where a prior EIA is required, a template comprising 14 ‘headings’ is provided for the contractor to use for the EIS (‘as appropriate to the activity’). Though not included in the EIS template, the EIA Recommendations also ask the contractor to provide information to the ISA about stakeholder consultations undertaken.

The EIA Recommendations require submission of an EIS to the ISA’s Secretary-General at least 12 months prior to the planned start-date of the activity. The Secretary-General will perform an initial ‘completeness’ check of the EIS against the template, and the LTC will then review the EIS for “completeness, accuracy and statistical reliability”. The LTC may request the views of recognised external experts in conducting its review, and may also ask the contractor to provide more information. The LTC “will provide recommendations to the Secretary-General as to whether the EIS should be incorporated into the programme of activities under the contract”. The Secretary-General will inform the contractor accordingly, and the LTC Chair will report the outcome to the Council of the ISA at its next session. If the LTC does not recommend incorporation, the contractor may re-submit the EIS.

#### **D. Analysis of the ISA Regime for EIA during Exploration**

There is a wealth of scholarly literature that maps and defines different stages of an EIA process, drawing from existing legal regimes and five decades of learned practice within national jurisdictions. This section of the paper, in the table below, works through the various aspects that literature suggests are the hallmarks of ‘best practice’ for an EIA [column 1], and against this, assess the ISA’s regime for EIA during exploration [column 2].

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EIA, as the term is commonly understood and used in this paper. In practice, these obligations seem to be supplemented by the EIA Recommendations, for EIAs that occur after contract award and commencement – which is the focus of this paper. Though a separate study into those preliminary requirements for assessment of impacts before exploration commences, and how those are currently being delivered by applicants, and reviewed by the LTC, may also be useful.

<sup>9</sup> ISBA/19/C/17, Regulation 31. The drafting of paragraph (5) could be interpreted that a contractor’s obligations in this regard extend only ‘as far as reasonably possible’.

<sup>10</sup> Ibid, Regulation 32 and Annex IV Section 13.2(e)

<sup>11</sup> ISA Legal and Technical Commission’s “Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area” revised July 2022 [https://isa.org.jm/files/files/documents/ISBA\\_25\\_LTC\\_6\\_Rev.2-2211076E\\_0.pdf](https://isa.org.jm/files/files/documents/ISBA_25_LTC_6_Rev.2-2211076E_0.pdf)



1. Policy context	
<p><b>Best practice:</b> An EIA process should follow and implement pre-existing overarching organisational policies, which set out environmental objectives for the regulator and reflect what level of harm is deemed politically acceptable. The policy should be informed by strategic environmental assessments conducted by the regulator, which includes consideration of cumulative, synchronistic or longer-term impacts that may occur as a result of multiple projects. It should identify environmental priorities and focal areas as well as any cross-jurisdictional issues that may arise from an activity. The environmental objectives should be translated into specific environmental thresholds and prescribed by the regulator for activities in the relevant sector or region, before an EIS is prepared and submitted, as the EIS will need to show how the applicant will stay within those boundaries.</p>	<p><b>ISA:</b> The ISA does not have a published institutional environmental policy, nor any clear and comprehensive evaluation criteria or thresholds to determine objectively what levels of environmental harm from activities in the Area would be considered acceptable, or prohibited, including how to account objectively for scientific uncertainty in decision-making. In terms of ISA policy, an ISA Strategic Plan, and a Regional Environmental Management Plan (‘REMP’) for the Clarion-Clipperton Zone in the Pacific Ocean have been adopted, though largely after the exploration regime was established. Neither of these policy documents are premised on a comprehensive regional environmental assessment (including consideration of cumulative harm and/or other marine users) against which EIAs could be evaluated, nor are contractors required to have regard to either document in conducting their EIA.</p>
2. Legally binding rules	
<p><b>Best practice:</b> An EIA should be guided by legally binding requirements for applicants and regulators, which prescribe the requisite content and procedure of an EIA, the criteria and process for decision-making, and the repercussions for non-compliance. The rules for an EIA process should provide predictability and fairness across all applicants.</p>	<p><b>ISA:</b> The ISA’s regime for EIA during an exploration contract is contained in the EIA Recommendations (which ISA contractors must ‘observe as far as reasonably practicable’ only), and is therefore not legally binding.<sup>12</sup> As such, there are no clear consequences for non-compliant EIAs. Indeed, the EIA Recommendations anticipate and permit non-compliance ‘<i>where [compliance] may not be feasible</i>’. It is not clear how the ISA could identify instances in ‘breach’ of a duty to observe the EIA Recommendations ‘reasonably practicably’, nor what the sanctions for any such non-observance would be. LTC recommendations also have no binding force upon ISA organs. The subjectivity and non-binding nature of these rules gives the applicant a large degree of discretion, and puts the regulator in a difficult position to ensure decisions are made in a non-discriminatory manner. Continual revisions of the EIA Recommendations also make for a shifting and insecure regime, difficult for contractors and stakeholders to navigate with confidence.</p>
3. Iterative process	

<sup>12</sup> ISBA/19/C/17 Annex IV Section 13.2(e)

<p><b>Best practice:</b> An EIS will be refined during development, by regular conversations with the regulator, who can clarify their requirements. The relationship between the applicant and regulator should be sufficiently transparent and arms-length to ensure an impartial decision, whilst also sufficiently communicative to ensure appropriate and timely information flow in both directions.</p>	<p><b>ISA:</b> The organs of the ISA with technical capabilities, and decision-making powers (the LTC and the Council, respectively) meet only periodically (between once and three times a year) and carry an extensive workload. The LTC is not currently populated by EIA or environmental regulatory experts, and conflicts of interest may arise. There is no formal mechanism in place that allows for close and regular communication between contractors and the LTC or Council. It is therefore difficult for an applicant to receive a speedy response to questions about an ongoing EIA, from an appropriately authorised and expert organ of the ISA. This could put pressure on the Secretariat to act outside its mandate.</p>
<p><b>4. Screening (and screening decision)</b></p>	
<p><b>Best practice:</b> Screening is the process for deciding which activities ought to be subject to EIAs (and in some jurisdictions, which type of EIA). A need for screening may occur prior to a new project, or during an existing project where new information comes to light, or a modification of the activity is proposed. Screening usually involves an initial assessment of risk and harm, with a threshold of significance acting as a trigger for an EIA process. The screening process should lead to a decision by the regulator whether or not an EIA is required. In some jurisdictions and sectors, specific activities are categorised and presumed to require (or not require) an EIA, without case-by-case examination of the individual project’s risk and harm.</p>	<p><b>ISA:</b> While the EIA Recommendations do attempt to apply screening criteria, a comprehensive screening process is not achieved. Certain activities are stated as requiring a prior EIA, but a lack of specificity in terminology (e.g. ‘testing of mining components’, ‘taking of large samples’) may risk subjective interpretation, enabling a contractor to circumvent the EIA process. The non-binding nature of the EIA Recommendations gives the ISA little or no recourse in the event of a self-determination by a contractor that a particular activity did not require an EIA. There is also no catch-all requirement for an EIA to be conducted for any other activity planned by a contractor which falls outside the listed activities, but is likely to have significant environmental impact. There is no process provided whereby the contractor can apply for a screening decision by the ISA, to ascertain whether or not an EIA is required.</p>
<p><b>5. Scoping (and scoping decision)</b></p>	
<p><b>Best practice:</b> Scoping determines what an individual EIA will cover. The result of scoping will be a scoping report containing terms of reference for the EIA. The scoping process should include an initial environmental risk assessment: determining prioritisation of issues for the subsequent EIA, and identifying what data exists and what new data needs to be collected to provide a robust and evidence-based EIS. At the</p>	<p><b>ISA:</b> There is no scoping phase specified in the EIA process under exploration.<sup>13</sup> This means that the first input into an EIA by stakeholders or interaction with the regulator may be only after the EIA studies are completed, and the EIS has been prepared (or even, submitted to the ISA). It would be extremely difficult to remedy omissions or inadequacies in the EIA design at that point. The lack of scoping requirements at the ISA, including iterations with the regulator and</p>

<sup>13</sup> Guilhon et al (2022) ‘Revisiting procedural requirements for the assessment of environmental impacts arising from the different stages of deep seabed mining: Current practices at the International Seabed Authority and recommendations for improvement. Environmental Impact Assessment Review <https://www.sciencedirect.com/science/article/abs/pii/S0195925522001123>.

<p>scoping phase, a description of the proposed project should be set out in detail, along with a range of alternatives that will also be considered in the EIA. The applicant should conduct stakeholder mapping, and commence consultation with stakeholders, during the scoping phase. Scoping involves ongoing dialogue between the applicant and the regulator, and should lead to a decision by the regulator. Only where the regulator approves the scoping report and EIA terms of reference, can the applicant commence the conduct of the EIA. The regulator's approval may contain specific binding conditions, to ensure the EIA covers prioritised matters accordingly. In some jurisdictions a proposed activity can be rejected outright by the regulator at the scoping decision stage.</p>	<p>effective stakeholder consultation at scoping stage, is likely to lead to inadequate EIAs.<sup>14</sup></p>
<p><b>6. EIS preparation</b></p>	
<p><b>Best practice:</b> The applicant should conduct an assessment and report the results in the form of an EIS, in accordance with the terms of reference agreed upon in the scoping decision. To fulfil its function, an EIA will need to include: (a) an accurate description of the proposed project, (b) an accurate description of the existing environmental conditions, (c) an informed and evidence-based prediction as to how the existing environmental conditions may be affected by the proposed project, (d) assessment of data gaps and uncertainties, (e) evaluation of possible alternatives to the proposed activities (some jurisdictions require a 'no-action alternative' to be included as a comparator), (f) identification of impact management and mitigation options, (g) an evidence-based justification that the effects and their implications are deemed acceptable (i.e. without significant adverse impacts) after mitigation options have been applied, and (h) plans for monitoring impacts during and after the activity to verify impacts are consistent with predictions.<sup>15</sup> Lack of data robustness severely undermines the usefulness of an EIA as a decision-</p>	<p><b>ISA:</b> The EIA Recommendations request an applicant (only) to provide 'some or all' of: (a) a description of the proposed activity, including a map and (b) 'the status of regional and local environmental baseline data'. There is also a half-page template of headings in an Annex suggested to be used by applicants 'as appropriate' for the EIS. There are otherwise no minimum requirements for what must be covered by an EIA under an exploration contract. The EIA Recommendations provide a list of baseline data that should be collected but do not provide clear and enforceable rules on what constitutes adequate baseline data to reflect sufficient understanding of pre-activity environmental conditions.<sup>17</sup> The language used is vague and subjective e.g. 'obtain <i>sufficient</i> information', use '<i>robust</i>' or '<i>sound</i>' statistical method, 'acquire <i>as long as possible</i> a history', with equipment and methods that are '<i>scientifically acceptable</i>'. There is no requirement to describe (and reject with explanation) alternative projects or methodologies. There is no requirement, or guidance how, to assess data gaps or uncertainties in current knowledge and to examine how</p>

<sup>14</sup> Durden et al (2018) 'Environmental Impact Assessment process for deep-sea mining in the Area'. Marine Policy: <https://www.sciencedirect.com/science/article/pii/S0308597X17305316?via%3Dihub>

<sup>15</sup> Craik, N 'The International Law of Environmental Impact Assessment: Process, Substance and Integration' (Cambridge Studies in International and Comparative Law, Series Number 58, 2008)

<sup>17</sup> Christiansen, Bräger, Jaekel (2022) 'Evaluating the quality of environmental baselines for deep seabed mining'. Frontiers in Marine Science, vol.9, [www.frontiersin.org/articles/10.3389/fmars.2022.898711](http://www.frontiersin.org/articles/10.3389/fmars.2022.898711)

<p>making tool. As such, the regulator should specify rules for adequacy of EIA data quantity and quality. In some jurisdictions assessment of likely natural capital impacts (and associated environmental costs) is also included in EIA processes.<sup>16</sup></p>	<p>these affect the EIA.<sup>18</sup> There is no consideration of natural capital impacts or accounting.<sup>19</sup> The EIA Recommendations require monitoring of impacts, but do not provide a template or specify minimum requirements or timeframes for a monitoring plan.</p>
<p><b>7. Expert review</b></p>	
<p><b>Best practice:</b> Expert peer review of an EIS can supplement regulatory expertise (particularly relevant where the regulator may have limited capacity or expertise). The review should be conducted by a panel of independent technical experts - who may be selected by the regulator to ensure impartiality. The applicant should document, publish, and consider all comments received from the peer review, and revise the EIS accordingly, giving details in the EIS of the peer review process, and the relevant experts engaged.</p>	<p><b>ISA:</b> There is no requirement for independent peer review of the EIS by the contractor. UNCLOS stipulates that the LTC should “tak[e] into account the views of recognized experts in that field” when making its recommendations to the Council on the protection of the marine environment (UNCLOS Article 165(2)(e)). The LTC membership does not include expertise to span all disciplines relevant to an EIS, without bringing in external personnel.<sup>20</sup> The EIA Recommendations allow for, but do not mandate or provide standardised procedures for, the LTC to request views of external experts. In none of the four EIS reviews conducted by the LTC to date, has external expertise been sought (at least, insofar as is publicly disclosed). It can be argued that use of external expertise should be a mandatory feature of EIS review, as failure to do so falls short of the Exploration Regulations’ requirement that decisions are taken on the basis of the ‘best available scientific and technical information’.<sup>21</sup></p>
<p><b>8. Stakeholder engagement and public consultation</b></p>	
<p><b>Best practice:</b> Stakeholders (e.g. persons or entities identified as specifically interested or potentially affected by the proposed project) may be consulted at earlier and varied stages of the EIA, to inform its development throughout the process. The applicant should take a proactive approach to identification of, and outreach to, potentially interested or affected third parties, including consultation with other</p>	<p><b>ISA:</b> The EIA Recommendations presuppose that the contractor will have engaged with stakeholders before submitting the EIS to the Secretary-General and LTC: the contractor is asked to report on “stakeholder engagement activities that took place during the process, including the consultation timelines, consultation methods and publication milestones”. But there are no rules expressly <i>requiring</i> stakeholder consultation, nor specifying when this should</p>

<sup>16</sup> See, for example: <https://www.gov.uk/government/publications/enabling-a-natural-capital-approach-enca-guidance/enabling-a-natural-capital-approach-guidance>

<sup>18</sup> Ginzky et al (2020) ‘Strengthening the ISA’s knowledge-base: Addressing uncertainties to enhance decision-making’ Mar. Pol. 114, <https://doi.org/10.1016/j.marpol.2020.103823>.

<sup>19</sup> There are indications in other ISA workstreams that such an environmental evaluation approach may be a valuable means to assist ISA decision-making e.g. <https://isa.org.jm/files/files/documents/2225708E.pdf>

<sup>20</sup> Durden et al (2018) see footnote. 14.

<sup>21</sup> Lallier and Maes (2016) ‘Environmental impact assessment procedure for deep sea mining in the Area: independent expert review and public participation’. Marine Policy <https://doi.org/10.1016/J.MARPOL.2016.03.007>

public bodies and agencies. Once a draft EIS has been prepared it should be opened to public consultation by the applicant. In some jurisdictions particular attention may be paid to the obligation to consult Indigenous groups.<sup>22</sup> The consultation materials should provide sufficient information to inform stakeholders fully, in accessible format (including non-technical summaries) and outlets. Access should also be provided to the datasets on which the EIS' findings are based. Adequate time should be provided for consultation, taking into account the volume and complexity of the information. Public meetings may be held. The applicant should document, publish, and consider all comments received, and revise the EIS accordingly, providing rationale for why public comments have or have not been incorporated. Where an EIS changes substantially after the public review, it should be published again for further comment and review (possibly repeatedly) before final submission.

take place, who should be consulted, what type of consultation methods or reach would be deemed satisfactory, or any other minimum or standardised requirements for consultations.<sup>23</sup> As such, a report stating that minimal or even 'no stakeholder engagement activities took place' would appear to satisfy the EIA Recommendations. Lack of guidance or rules regarding how to identify and reach 'stakeholders' for a project in the Area, could also lead to vastly different interpretations by different contractors.<sup>24</sup> The EIA Recommendations provide no contingency or repercussion if a contractor has conducted no, or inadequate, consultation.<sup>25</sup> An 'explanatory commentary' Annex to the EIA Recommendations does suggest that the contractor should describe in the EIS "the comments and concerns of the stakeholders and how they have been addressed by the contractor in the EIS" (again presupposing but not requiring, that consultations have taken place). But contractors are not specifically required to respond to, or publish, all stakeholder comments received. The EIA Recommendations also allow a contractor to re-submit an EIS in a revised form after an initial submission, without requiring consultation on those revisions, which could serve to undermine the principle and purpose of stakeholder consultation.<sup>26</sup>

The ISA should consider conducting its own consultation (or hearing) on an EIS<sup>27</sup>, taking into account the LTC's duty to conduct EIA itself (UNCLOS Article 165(2)(d)), the ISA's role to consult other relevant organisations (UNCLOS Article 163(11), and the ISA's responsibility to represent the interests of humankind overall. But in the current system, there is no public consultation

<sup>22</sup> Craik and Gu 2021 see footnote 6

<sup>23</sup> This appears contrary to the ISA's adoption in other policy instruments of the principles of the 1998 Aarhus Convention ('UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters').

<sup>24</sup> An informal working group submission led by the UK has recently been made to the ISA Council for standardisation of stakeholder consultation, [https://isa.org.jm/files/files/documents/Final\\_Submission.pdf](https://isa.org.jm/files/files/documents/Final_Submission.pdf). But this relates to the Exploitation Regulations only, and does not address EIAs under the exploration regime.

<sup>25</sup> Singh and Guilhon (2022) Opinion Piece, DSM Observer: <https://dsmobserver.com/2022/12/a-reflection-of-the-eia-process-for-exploration-activities-at-the-international-seabed-authority-in-light-of-the-recent-nori-eis/>

<sup>26</sup> In one recent real-life example, this loophole in the EIA Recommendations enabled a contractor to hold consultation on a significantly incomplete EIS and then to submit a 'final' EIS that had undergone three substantial revisions since the stakeholder consultation. Stakeholders had no opportunity to comment on the new material, and those who did raise concerns were left with no information about whether or how these had been taken into account. See commentary from ISA observer organisations DOSI: [https://www.dosi-project.org/wp-content/uploads/LetterDOSI\\_NORI\\_EIS\\_LTCrecommendation.pdf](https://www.dosi-project.org/wp-content/uploads/LetterDOSI_NORI_EIS_LTCrecommendation.pdf), IUCN: [https://isa.org.jm/files/files/documents/IUCN10Nov2022\\_Agenda\\_Item14\\_NORI\\_EI\\_S.pdf](https://isa.org.jm/files/files/documents/IUCN10Nov2022_Agenda_Item14_NORI_EI_S.pdf), and The Pew Charitable Trusts: [https://www.pewtrusts.org/-/media/assets/2021/12/pew-charitable-trusts\\_review-of-nori-eis.pdf](https://www.pewtrusts.org/-/media/assets/2021/12/pew-charitable-trusts_review-of-nori-eis.pdf)

<sup>27</sup> Singh and Guilhon (2022) See footnote 25.

	<p>process by which any organ of the ISA can obtain its own stakeholder feedback, after an EIS has been submitted for review. Indeed stakeholder comments submitted proactively to the LTC on past EISs, have received no follow-up action.<sup>28</sup></p>
<p><b>9. Regulatory review of an EIS</b></p>	
<p><b>Best practice:</b> The regulator must take a decision whether or not to allow the proposed activities, on the basis of the submitted EIS, within the prescribed decision-making framework and criteria. The EIS is usually submitted together with an environmental management and monitoring plan which sets out how the project will be managed throughout its life to meet requisite environmental rules and thresholds, based on the monitoring, management and mitigation steps identified in the EIS. The regulator should conduct its own expert review of the EIS and may also hold its own stakeholder consultation at this stage. Modern norms of international law guide regulators to facilitate public participation in environmental decision-making processes. The regulatory review should involve assessment of the EIS’ findings against published and objective criteria, setting ‘acceptable’ levels of environmental harm.</p>	<p><b>ISA:</b> With no objective thresholds for determining harm, against which an EIS can be assessed, the LTC lacks a Council-approved decision-making framework. In fact, the EIA Recommendations do not even task the LTC to consider questions of environmental harm. Instead, they require the LTC only to review the EIS for “completeness, accuracy and statistical reliability”, without further explanation on what those criteria entail nor any reference to a substantive evaluation of the findings from the EIA. The LTC is not required by the EIA Recommendations to evaluate the EIS in accordance with UNCLOS, ISA rules, or policy documents such as REMPs. There is no requirement for the LTC to assess the seriousness of the predicted environmental impacts, nor to evaluate whether the risks are considered acceptable, and compatible with the ISA’s duties of effective protection of the marine environment and prevention of serious harm. There is no evaluation criterion examining whether the proposed activity would be ‘in the best interests of [hu]mankind’ overall. Nor is the LTC tasked to assess whether other legal obligations would be met if the activity proceeds e.g., with regards managing impacts on other marine users or coastal states, or the employment of best environmental practices.</p> <p>In terms of decision-making procedures, the LTC operates according to <a href="#">Rules of Procedure, dating from 2000</a>, which do not contain any specific requirements for EIA review. It came to light in 2022 that the silence procedure, usually reserved by public bodies for exceptional circumstances and/or simple administrative matters, was used by the Chair of the LTC to obtain, within a short timeframe, other LTC members’ agreement to an activity proposed in an EIS, via email.<sup>29</sup></p>

<sup>28</sup> Menini et al (2022) see footnote 6. A recent example is from ISA observer DOSI: ‘The Purpose and Requirements of Environmental Impact Statements. A Case Study of the NORI Prototype Collector Test’ (2022) [https://www.dosi-project.org/wp-content/uploads/NORI\\_EIS\\_Case\\_Study.pdf](https://www.dosi-project.org/wp-content/uploads/NORI_EIS_Case_Study.pdf)

<sup>29</sup> As reported in DOSI’s letter to the ISA ‘The LTC recommendation on NORI’s EIS’ (2022): [https://www.dosi-project.org/wp-content/uploads/LetterDOSI\\_NORI\\_EIS\\_LTCrecommendation.pdf](https://www.dosi-project.org/wp-content/uploads/LetterDOSI_NORI_EIS_LTCrecommendation.pdf), and the IUCN’s intervention on the same issue in November 2022: [https://isa.org.jm/files/files/documents/IUCN10Nov2022\\_Agenda\\_Item14\\_NORI\\_EIS.pdf](https://isa.org.jm/files/files/documents/IUCN10Nov2022_Agenda_Item14_NORI_EIS.pdf)

	<p>Such a process is not prescribed under to the LTC’s Rules of Procedure, nor does it ensure participation by the LTC’s whole membership or enable full and open discussions. No LTC discussions of EISs have been opened to the public despite repeated instructions from the ISA’s Council and Assembly for the LTC to hold open meetings.<sup>30</sup> UNCLOS Article 163(9)-(10) specifies that the LTC must exercise its functions in accordance with guidelines or directives adopted by the Council, or rules and regulations approved by the Council. But the EIA Recommendations, which include procedural steps for the LTC to take, have not been approved by Council.</p>
<p><b>10. Project permitting decision</b></p>	
<p><b>Best practice:</b> An EIS should inform a decision by the regulator to permit or to reject the proposed project. Where the EIS shows that there will be adverse effects or (more likely) that there are significant uncertainties, the regulator should justify the decision in light of the risk, in a transparent fashion. An approval decision would usually also be accompanied by an approved monitoring plan, and various conditions aimed to ensure compliance with the requisite rules and thresholds.</p>	<p><b>ISA:</b> At no point during the EIA process does the ISA make a regulatory decision to approve or reject an EIS during the exploration phase, rendering the entire EIA process questionable.</p> <p>The lack of any regulatory decision may be because the EIA process is run only by the (advisory) LTC and the (administrative) Secretary-General, neither with legal power to issue a permitting decision. The executive body of the ISA, the Council, is merely informed about an EIS review by the LTC some time after the event. EIS review thus appears to be treated as a purely administrative function. There is no express power or requirement for the LTC to reject an EIS either for a lack of “completeness, accuracy and statistical reliability” (procedural issues) or based on the potential level of harm (substantive issues). The LTC’s only power is to “not recommend [to the Secretary-General] incorporation of the EIS into the programme of activities under the contract”.<sup>31</sup> The meaning and legal implication of this inaction is ambiguous, but it is not expressed as a power to reject an EIS. According to the EIA Recommendations, if the LTC does not ‘recommend incorporation of the EIS’, the contractor “may opt to resubmit” the EIS. It is unclear what happens if the contractor does not take this option – there does not appear to be any block, for example, if the contractor were simply to continue with the proposed activity regardless of the LTC’s response to the EIS,</p>

<sup>30</sup> E.g. Assembly in 2017: [https://isa.org.jm/files/files/documents/isba-23a-13\\_1.pdf](https://isa.org.jm/files/files/documents/isba-23a-13_1.pdf), and Council in 2022 <https://isa.org.jm/files/files/documents/2225711E.pdf>

<sup>31</sup> The chain of reporting is especially odd, as UNCLOS does not provide a framework for the LTC to recommend and report to the Secretary-General (the administrative support to the LTC and Council). Rather, UNCLOS mandates the LTC to recommend and report to the Council.

	or while the LTC is still deliberating. <sup>32</sup> The lack of an accountable decision-maker, for decisions that may involve such significant risk, seems to contravene the ISA's obligations under Article 145 UNCLOS.
<b>11. Publication and appeal of decision</b>	
<b>Best practice:</b> The decision by the regulator to permit or to reject the proposed project should be made publicly available, with detailed rationale. An applicant receiving a refusal decision from a regulator would usually be able to institute an administrative or judicial appeal against that decision. Equally, access to environmental justice for all implies a public right for any interested person to challenge a regulator's decision, if there are grounds to allege that the decision has been unlawfully made. Appeal procedures should be made known to the public, and should be: accessible, transparent, timely, and not prohibitively expensive.	<b>ISA:</b> The EIA Recommendations state that an EIS "will be made available on the website of the contractor and through the website of the ISA". No timeframe is provided for such publication, and the passive drafting fails to assign specific responsibility for ensuring the publication occurs, or repercussion for failure to do so. <sup>33</sup> In practice, only half of EISs received and approved by the LTC to date appear to be available through the ISA website. <sup>34</sup> No rationale has ever been published for LTC recommendations on an EIS, nor any summary of the nature of the discussions including any dissenting views. <sup>35</sup> The ISA regime provides no avenue for review or appeal of the ISA's consideration of an EIA/EIS submitted by an exploration contractor (perhaps unsurprising, given the lack of any actual decision - see above).
<b>12. Post-permit monitoring</b>	
<b>Best practice:</b> A regulator's decision to approve an activity on the basis of the EIS, should include an agreed management and monitoring plan, and commitments for the applicant to monitor its performance and the environmental impacts of the activity, and to report back to the regulator. The regulator is responsible for independently verifying (and where necessary, enforcing) the applicant's compliance with the conditions placed upon the project e.g. via on-site inspections. The applicant should be required to bring to the regulator's attention any divergence between	<b>ISA:</b> The EIA Recommendations require the contractor to provide the Secretary-General with data gathered from monitoring during and after the activity. Other than this, there are no stipulations about how monitoring data must be reported, reviewed, used or published by the contractor or the ISA. There is no process to verify that the activities and their impacts proved consistent with the forecasts in the approved EIS. The ISA has no independent inspectorate function currently, nor process to receive reports from whistle-blowers or any other watchdog. <sup>36</sup>

<sup>32</sup> Lily and Roady (2020) 'Regulating the Common Heritage of Mankind: Challenges in Developing a Mining Code for the Area', Springer [https://link.springer.com/chapter/10.1007/978-3-030-42671-2\\_18](https://link.springer.com/chapter/10.1007/978-3-030-42671-2_18).

<sup>33</sup> In one recent example, the ISA membership and wider public only became aware that their EIS for mining equipment testing had been approved by the LTC, due to a press release, as the activity commenced: <https://www.globenewswire.com/en/news-release/2022/09/07/2511459/0/en/The-Metals-Company-Subsidiary-NORI-Receives-ISA-Recommendation-to-Commence-Pilot-Nodule-Collection-Trials-in-the-Clarion-Clipperton-Zone-of-the-Pacific-Ocean.html>

<sup>34</sup> [www.isa.org.jm/index.php/minerals/environmental-impact-assessments](http://www.isa.org.jm/index.php/minerals/environmental-impact-assessments) (accessed February 2023).

<sup>35</sup> An EIA at the international level may include a duty to give reasons, as part of the broader duty to cooperate. This duty may be owed to other States - but Principle 10 of the Rio Declaration, and the emerging international law around process rights, supports the existence of a broader right to reasons.

<sup>36</sup> Video leaked from an EIA cruise, amplified by NGOs and media (<https://www.theguardian.com/environment/2023/feb/06/leaked-video-footage-of-ocean-pollution-shines-light-on-deep-sea-mining>), suggest the ISA would benefit from better procedures enabling direct receipt of such material, as regulator.



predictions in the EIS and actual results observed when performing the activities, and also any plans the applicant makes to change the activity from the description provided in the EIS. The regulator should be empowered to require alteration (or cessation) of the activity, or to require a further EIA, if needed to address unexpected adverse environmental impacts. A regulator should also aim to use post-EIA activities and results as evidence and experience to inform its own regulatory regime and practice. Stakeholders and the general public should be kept informed as the activity progresses. Monitoring data, and the regulator's evaluations of the data, should be made publicly accessible.

## E. Discussion

EIA procedures at the national level have been developed, implemented and improved globally for decades, presenting a body of practice from which the ISA can learn. The ISA's particular context intensifies the importance of a robust 'best practice' EIA process, including: the high-levels of uncertainty about deep-sea activities, the common heritage status of the sites in question, and the ISA's legal mandate to ensure effective environmental protection, and to act on behalf of and for the benefit of [hu]mankind as a whole. Any rules that the ISA's adopts for EIA also set a precedent for national deep-sea mining regimes.<sup>37</sup>

Yet the above analysis shows that current EIA requirements at the ISA for exploration contractors are severely deficient, both in procedure and in substance.

The absence of clear, binding and detailed rules for EIAs exposes the ISA to inadequate assessment of risk and inconsistent decision-making between projects, both of which could result in legal challenges. Current flaws in the ISA's EIA process for exploration appear to fall below the requirements of Article 145 UNCLOS, and put the marine environment at risk. The issues identified above should therefore be remedied as a matter of urgency. This should be done by:

- the establishment of an ISA Environmental Policy with overarching strategic goals;
- the development of a series of environmental threshold standards for specific environmental quality indicators and/or impacts;
- the development of comprehensive REMPs, informed by regional environmental assessments;
- revision to the Rules of Procedure of the LTC;
- revision of the EIA Recommendations;
- development of standardised and minimum requirements for stakeholder consultations; and
- amendment to the Exploration Regulations.

These regulatory reforms should take account of the evolving draft EIA provisions for exploitation, as well as the new EIA rules being negotiated for the treaty on Biodiversity Beyond National Jurisdiction, with a view to ensure coherence and consistency.

The ISA's institutional capacity and expertise to perform its decision-making, and ongoing management, monitoring, and enforcement roles properly, would also need attention, to ensure the effectiveness of EIA procedures in practice. At the same time, the ISA may further wish to build its State membership's capacity with regards to reviewing and evaluating EISs for deep-sea mineral activities.<sup>38</sup>

**On the basis of this paper's findings, we suggest that the Council directs the LTC, working with relevant external experts and with public consultation, to develop the package of instruments and amendments, as well as resource and capacitation proposals, necessary to ensure a fit-for-purpose EIA process for exploration at the ISA, and provides recommendations to the Council for review and adoption.**

<sup>37</sup> UNCLOS Articles 208 and 209 require that national laws regarding pollution from deep-sea mineral activities are no less effective than international rules.

<sup>38</sup> As requested by the African Group of countries at the ISA in 2019: [https://isa.org.jm/files/files/documents/isba25\\_a8-e.pdf](https://isa.org.jm/files/files/documents/isba25_a8-e.pdf). A similar recommendation was also made in Guilhon et al (2022) see footnote 13.