



IASS · Berliner Str. 130 · 14467 Potsdam · Germany

International Seabed Authority  
14-20 Port Royal Street  
Kingston  
Jamaica

Potsdam, 20 October 2020

To: [ola@isa.org.jm](mailto:ola@isa.org.jm)

**IASS Comments on the standards and guidelines associated with the Draft regulations on exploitation of mineral resources in the Area**

Dear Madam/Sir,

The Institute for Advanced Sustainability Studies (IASS), which has had observer status at the Authority since 2017, is pleased to provide the following comments on the following three draft standards and guidelines published on the ISA website for stakeholder comments:

1. Draft guideline on the preparation and assessment of an application for the approval of a Plan of Work for exploitation (<http://bit.ly/sg-pow>)
2. Draft standard and guidelines on the development and application of environmental management systems (<http://bit.ly/ems-sgfin>)
3. Draft standard and guidelines on the form and calculation of an environmental performance guarantee (<http://bit.ly/sg-epg>)

We provide express consent for this document to be uploaded to the Authority's website and for wider dissemination. The following staff members at IASS have contributed to this document: Sabine Christiansen, Pradeep Singh, Torsten Thiele, Aline Jaeckel, and Sebastian Unger.

By way of some general remarks on the three sets of draft standards and guidelines, we would like to note that the standards and guidelines may need to be updated in light of revisions of the draft exploitation regulations. The present draft standards and guidelines do not appear to reflect some of the changes to the regulations suggested by member States. For example, if additions on test mining and/or environmental impact assessments which are currently being discussed will be included in the draft exploitation, the relevant standards and guidelines will need to be updated accordingly.

Board of Directors:

Prof. Dr Patrizia Nanz, Scientific Director  
Prof. Dr Mark G. Lawrence, Scientific Director  
Jakob Meyer, Administrative Director  
Prof. Dr Ortwin Renn, Managing Scientific Director  
The minimum number of directors jointly authorised to represent the Institute at any one time is two.  
Court at which the Institute is registered: Amtsgericht Potsdam, VR-Nr.: 7365

Institute for Advanced Sustainability Studies e.V. (IASS)  
Berliner Str. 130  
14467 Potsdam  
Germany  
Tel.: +49 331-28822-300  
Fax: +49 331-28822-310  
Mail: [info@iass-potsdam.de](mailto:info@iass-potsdam.de)  
Web: [www.iass-potsdam.de](http://www.iass-potsdam.de)



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We also wish to note that the three sets of standards and guidelines are rather general in their wording and high-level in their focus. We would welcome if future iterations of the documents provided more detail and specific guidance to ensure a degree of certainty for applicants, sponsoring States, and humankind at large.

If you have any questions, kindly contact us through the contact point ([sabine.christiansen@iass-potsdam.de](mailto:sabine.christiansen@iass-potsdam.de)). We thank you for your kind attention.

Yours sincerely,

A handwritten signature in black ink that reads "Sebastian Unger". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sebastian Unger

Lead, Ocean Governance Research Group

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Institute for Advanced Sustainability Studies e.V. (IASS)

Berliner Str. 130

14467 Potsdam

Germany

Tel.: +49 331-28822-300

Fax: +49 331-28822-310

Mail: [info@iass-potsdam.de](mailto:info@iass-potsdam.de)

Web: [www.iass-potsdam.de](http://www.iass-potsdam.de)

## Application for a Plan of Works

<i>Document reviewed</i>	
<b>Title of the draft being reviewed:</b>	Draft guideline on the preparation and assessment of an application for the approval of a Plan of Work for exploitation
<i>Contact information</i>	
<b>Surname:</b>	Christiansen
<b>Given Name:</b>	Sabine
<b>Government (if applicable):</b>	n/a
<b>Organization (if applicable):</b>	IASS Potsdam
<b>Country:</b>	Germany
<b>E-mail:</b>	Sabine.Christiansen@iass-potsdam.de
<i>General Comments</i>	
<ul style="list-style-type: none"> <li>• Annex I of the draft guidelines seems to merely repeat the formal requirements set out in the Draft Exploitation Regulations. Instead, it should arguably add detailed information regarding the documents and information the applicant needs to supply in order to meet the requirements set out in the regulations.</li> <li>• Apart from the formal assessment criteria mentioned in the document and the draft regulations, it will be important to agree on the criteria which the LTC will be required to report on when reviewing the applications. Some suggestions include: <ul style="list-style-type: none"> <li>○ How does the applicant demonstrate that it is a national, or under the effective control of nationals, of the sponsoring state?</li> <li>○ Has the sponsoring State, or the member State in the case of a State applicant, enacted domestic legislation pertaining to activities in the Area? If yes, does the said legislation provide recourse to national courts?</li> <li>○ Is the mining area in conflict with other uses or conservation priorities?</li> <li>○ Is the mining area inside the contractor's prior exploration area?</li> <li>○ Is the claim area in question large enough to accommodate a Preservation Reference Zone of sufficient size?</li> <li>○ Which best available technology is being employed (demonstrate minimal environmental impact)?</li> <li>○ Which best environmental practice is being proposed (demonstrate minimal environmental impact)?</li> <li>○ Is the environmental baseline information sufficient for studying impacts from mining?</li> </ul> </li> </ul>	

- Is the technical information sufficient to support conclusions on impacts and BAT and BEP?
  - Are the indicators proposed acceptable?
  - Are the thresholds for indicator values reasonable?
  - Is the modelling sufficiently robust and reliable with regards to long-term impacts?
  - Does the modelling include ecological processes?
  - Are the expected environmental impacts within precautionary thresholds?
  - Which concerns were raised within the LTC regarding this application? How were concerns addressed by the applicant?
  - What benefit for humankind does the LTC believe will be generated by the Plan of Work?
- It remains unclear how the ISA can ensure a uniform treatment of all applicants if it does not perform its own, scientifically approved model to assess the environmental impacts created by all contractors (UNCLOS, Art 165(2)(d) requires the LTC to ‘prepare assessments of the environmental implications of activities in the Area’.)
  - It is suggested that the LTC also be asked to make a preliminary assessment as to whether the sponsoring State is able to supervise the activities of the applicant. This is particularly important in order to ensure that the possibility of there being “sponsoring States of convenience”, as cautioned by the Advisory Opinion of 2011, is minimized. Thus, the sponsoring State should be required to provide information on how it plans to supervise the activities of the applicant either in the certificate of sponsorship or via separate documentation.

***Specific Comments***

Page	Line	Comment
Annex I	Row 5	<p>The material accompanying the application should include information on:</p> <ul style="list-style-type: none"> <li>● Whether the mine site and expected mining impacts are limited to the exploitation claim area?</li> <li>● Whether the exploitation claim area is in conflict with existing conservation initiatives in the Area by intergovernmental organisations, such as CBD or OSPAR?</li> <li>● Whether the designated PRZ and IRZ meet the size and quality requirements needed to allow assessing environmental impacts?</li> </ul>
Annex I	Row 6	<p>The assumption in the final point should be reversed. Thus, it should read as follows: “If the Plan of Work proposes two or more Mining Areas that are non-contiguous, has the applicant submitted individual EISs, EMMPs and Closure Plans for the respective Mining Areas, or if not, does the application demonstrate that a single set of them is appropriate?”</p>

<p>Annex II</p>	<p>Several points can be made regarding the process summarised in the flowchart:</p> <ul style="list-style-type: none"> <li>• It does not indicate an appropriate response strategy to comments received from stakeholders, the public and the LTC. Does the applicant have to respond to the comments and revise the Plan of Works?</li> <li>• The requirement to submit revised plans within 30 days after the consultation period prevents substantial changes to the plans. Neither can more field data be acquired if the environmental baseline is found to be insufficient, nor can modelling be substantially improved in that time.</li> <li>• The process relies on the applicant deciding which effects to investigate (see DR Annex IV, EIS: <i>"to assess the likely Environmental Effects of the proposed activities. Such effects shall be discussed in proportion to their significance. Where an applicant considers an 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."</i> In EIAs carried out by national regulators, the scoping is normally performed in a public process and with guidance of the regulator. The ISA could establish a list of environmental effects which all contractors are obliged to investigate and monitor.</li> <li>• The flowchart appears to assume that an application will be approved by Council, whereas it should also provide for the option of Council rejecting the application.</li> <li>• Is the Guideline supposed to cover matters that occur "after approval of a plan of work", as appears in the bottom half of Annex II? If so, this should also be covered in the Guideline and Annex I. For example, the Guideline does not address what happens if there is a change to the Plan of Work after approval.</li> <li>• In any case, it is to be debated whether the Secretary-General should be the one who determines whether a material change needs to be made to the plans prior to production (Draft Regulation 25)</li> </ul>
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## **Environmental Management Systems**

<b><i>Document reviewed</i></b>	
<b>Title of the draft being reviewed:</b>	Draft standard and guidelines on the development and application of environmental management systems
<b><i>Contact information</i></b>	
<b>Surname:</b>	Christiansen
<b>Given Name:</b>	Sabine
<b>Government (if applicable):</b>	n/a
<b>Organization (if applicable):</b>	IASS Potsdam
<b>Country:</b>	Germany
<b>E-mail:</b>	Sabine.Christiansen@iass-potsdam.de
<b><i>General Comments</i></b>	
<ul style="list-style-type: none"> <li>• The environmental management system (EMS) standard is essential to establish a uniform implementation of the regulations, to achieve comparable conditions for all (potential) contractors, and to enable inspection and compliance control. However, this draft standard arguably fail to sets out "<i>the benchmark standard, objectives and principles, and other equivalent standards</i>" as recommended in ISBA/25/C/3. Arguably, the standard should detail the elements and deliverables of an EMS (the 'what') while the guidelines should set out the 'how'.  Specifically, the standard should define the desired outcomes of the EMS, such as the data and process information necessary for ISA operations (regional assessments, development of best environmental practice, best available technology, best available techniques etc). It should define the performance evaluation criteria and process, including inspection and auditing, to harmonize the system across contractors.</li> <li>• It is recommended to design Annex I in such a way that a standard framework for an EMS will be compulsory for all contractors, e.g. building on the outline in Annex II. This will benefit both contractors and financiers (by reducing uncertainty in planning, application, undertaking of exploitation activities, and the collection and reporting of environmental information) and the regulator (by reducing the disparity in management and reporting from each contractor). See Durden et al., 'A Procedural Framework for Robust Environmental Management of Deep-Sea Mining Projects Using a Conceptual Model' (2017) 84 <i>Marine Policy</i> 193, at page 194. <a href="https://doi.org/10.1016/j.marpol.2017.07.002">https://doi.org/10.1016/j.marpol.2017.07.002</a>.</li> <li>• The draft standard charges the contractor with determining their own environmental objectives (no reference is made to overarching ISA environmental goals/objectives), performance criteria, and auditing scheme. This will prevent uniform standards incl. on assessing environmental harm.</li> </ul>	

<ul style="list-style-type: none"> <li>In terms of timing, applicants should be required to present the performance of their EMS in the application phase for exploitation, given that this EMS has to produce all necessary environmental data to support the application.</li> </ul>		
<i>Specific Comments</i>		
Page	Line	Comment
2	9-10	The specific draft regulations could be referenced here.
2	12-26	The only impact that the contractor appears to have to manage is the prevention and control of pollution. This impact may be an important one, but certainly only a small part of the likely range of impacts. The other sub-points (a, c, and d) as well as para. 4 appear to provide only methodology.
2	12-26	<p>Suggested additions in red.</p> <p><i>"The Contractor shall ensure the development of an Environmental Management System that":</i></p> <ul style="list-style-type: none"> <li>Reflects the incremental nature of the development of the project. In facilitating formal quantitative synthesis and review at project intervals, the EMS operationalizes the precautionary approach at all stages of the project and supports ecosystem-based management, including the assessment and management of cumulative impacts, and interactions among components.</li> <li>para 3 (a)<i>bis</i>: facilitates integrated ecosystem assessment by ensuring that all data are formally synthesized and related to the management objectives and regulations to inform decision-making as the project progresses. (Relevant data include all current and previous environmental data, up-to-date information on the project scope and plan, and the best available technology (BAT) for both mining and environmental monitoring).</li> <li>para 3 (a)<i>bis bis</i>: delivers the timely development and adoption of appropriate environmental management measures in parallel and integrated with project decision-making.</li> <li>replace 3 (b) with: identifies and operationalizes mitigation measures with a priority on the prevention or avoidance of environmental impacts, including the prevention and control of pollution of the marine environment from mining operations.</li> <li>para 3 (b) <i>bis</i>: enables the adaptation of environmental measures during the course of operations and as a consequence of altered ISA requirements, including from REMPs.</li> <li>para 3 (d)<i>bis</i>: assists the ISA <ul style="list-style-type: none"> <li>in operationalizing its obligation to protect the marine environment from impacts of mining, both with respect to managing impacts from an individual project, and the</li> </ul> </li> </ul>

		<p style="color: red;">cumulative impacts of multiple projects;</p> <ul style="list-style-type: none"> <li>■ and to ensure fairness and uniformity in the application of environmental standards, in conformity with the principle of the common heritage of mankind [6, Article 136] and taking into account the responsibility and liability of contractors and sponsoring states.</li> </ul>
2	28-40	More detail is needed regarding how these four steps are to be carried out, especially in light of the ecosystem approach and precautionary approach.
5	135-139	It seems that the contractors can identify their own environmental objectives, only "taking into account" an REMP and without consultation with the ISA. Environmental policy and objectives should be identified in consultation with the ISA and with input from stakeholders prior to the commencement of activities. The main point of reference should be the applicable REMP for the region. A mechanism of consultation between contractor and ISA, including a process to obtain stakeholder input, needs to be established.
5	148-150	Objectives need to be time-bound, but 3-5 years is too short for "long-term" given the slow processes in the deep sea and 30 year project duration.
7	215-218	Requires environmental impacts to be ' <i>as low as reasonably practicable (ALARP principle).</i> ' ALARP is not in line with the draft regulations and UNCLOS Art. 145, which unequivocally requires measures to ensure effective environmental protection.
8	274-296	There appears to be a statement missing which ensures contractors to take responsibility for their sub-contractors' activities (including environmental damage caused).
9	324-331	<p>"<i>The results from the monitoring activities <u>should</u> be evaluated according to the criteria, method and frequency <u>as defined by the Contractor</u> ..."</i></p> <p>This is a circular argument with no room for adaptation to REMPs or eventually developing environmental standards as defined by ISA.</p> <p>Furthermore, the requirements of draft regulation 44, incl. best scientific knowledge and best available techniques are missing in the list of evaluation criteria.</p>
10	339-340	This section would need to set out what action the ISA will take if the contractor's performance criteria are not met.
11	375	Will the results of the audits be reported to the ISA? This would help to ensure that contractors are following the guidelines.
13	495-496	" <i>The Contractor should retain documented information as evidence of its communications, <u>as appropriate.</u></i> " Documentation should be available for inspection and review during the entire project life time and several years after closure of the mine.

## **Environmental Performance Guarantee**

<i>Document reviewed</i>		
<b>Title of the draft being reviewed:</b>	Draft standard and guidelines on the form and calculation of an environmental performance guarantee	
<i>Contact information</i>		
<b>Surname:</b>	Christiansen	
<b>Given Name:</b>	Sabine	
<b>Government (if applicable):</b>	n/a	
<b>Organization (if applicable):</b>	IASS Potsdam	
<b>Country:</b>	Germany	
<b>E-mail:</b>	Sabine.Christiansen@iass-potsdam.de	
<i>General Comments</i>		
<p>The draft notes the need for a “balanced approach” and a “flexible approach” (Background section, paras 3 &amp; 4) inter alia to ensure that “the forms and amount of the environmental performance guarantee do not hinder the ability of contractors to participate in activities in the Area”. This seems inappropriate for designing a guarantee as its very nature needs to be that it provides a firm security in case of being required to meet “likely costs, expenses and liabilities” as set out under draft regulation 26 (ISBA/25/C/WP.1).</p> <p>In the background section, the draft states the need in “ensuring that the form and amount of the environmental performance guarantee do not hinder the ability of contractors to participate in activities in the Area”. The rationale behind this statement is questioned; it appears to suggest that the form and amount of the guarantee should be set at a level that does not discourage contractors from conducting mining activities and that the need to ensure the effective protection of the marine environment is a subsidiary matter. In fact, it is suggested that the form and amount of the guarantee be set at a higher threshold for the first few contracts that are awarded, given the grave uncertainties that exist and the real possibility for things to go wrong (or not according to plan) due to a lack of knowledge and experience.</p>		
<i>Specific Comments</i>		
Page	Line	Comment
3	31-38	The Guarantee covers only the following three costs: (a) of the premature closure of exploitation activities; (b) of the decommissioning and final closure of exploitation activities, including the removal of any Installations and equipment; and (c) of the post-closure monitoring and management of residual environmental effects. That means that the environmental consequences of any (catastrophic) accident will only be covered as residuals, if the mine is closed (e.g., as a consequence of the accident). The

		<p>proposal by Australia in relation to draft regulation 26, which sought to introduce a new sub-paragraph to cover “responding to, and remediating, a significant environmental incident”, is supported (see <a href="https://ran-s3.s3.amazonaws.com/isa.org.im/s3fs-public/files/documents/australia-a.pdf">https://ran-s3.s3.amazonaws.com/isa.org.im/s3fs-public/files/documents/australia-a.pdf</a>).</p> <p>The clean-up costs of any accident leading to the loss of gear or emission of pollutants (e.g., a leakage of hydraulic fluid) does not seem to be covered. See also para. 12. Furthermore, any environmental impact leading to the loss of income or livelihoods in other industries such as fishing or tourism, for example, are not covered, although the release of sediment plumes (and possibly heavy metals among them) may reach ocean-basin-wide scales if it is not restricted in volume or water depth.</p>
3	39-47	By putting the burden on the contractor, this obligation supports self-regulation.
3	54-62	There needs to be a guarantee that the funds will still be available when a contractor ceases to exist, e.g. by becoming bankrupt, and that the funds cannot be retracted to satisfy aggrieved investors. Furthermore, it remains legally and financially unclear what ' <i>fully responsible and liable under the Exploitation Regulations ... regardless of any Guarantee provided to the Authority</i> ' means.
4	67-79	<p>Unclear how „<i>to calculate the greatest reasonably credible costs, expenses and liabilities</i>". It is also unclear why this is left to the contractor who has a vested interest to keep this calculation low.</p> <p>Since the costs have to be calculated for a third party (para. 4), it would be advisable to require the contractor to obtain three guaranteed estimates of third parties who are then willing and obliged to perform the described work for that price (plus inflation offset) when needed.</p>
4	89-90	Refers to “unexpected” costs, expenses and liabilities that a Contractor is “unable” to meet. This conflates two concepts. The fact that costs are unexpected does not imply that a Contractor is unable to meet them as a Contractor may well have sufficient reserves and other resources to cover unexpected costs.
4	91-93	Which guarantee covers ' <i>liability for environmental damage</i> '?
5	132-137	<p>„The "<i>greatest reasonably credible costs</i>" is an objective standard by which the Authority and Contractors can determine the extent of the guarantee required. The Applicant or Contractor shall estimate the greatest reasonably credible costs on a "<i>worst case scenario</i>" basis. This provision should specify a methodology for the calculations.</p> <p>The wording is problematic because a worst-case scenario can - by definition- hardly provide reasonably credible cost estimates. Even if that was possible, the costs (e.g. of a major disaster) would likely be prohibitively high for any mining project.</p> <p>Leaving aside accidents, the costs of post-closure monitoring and</p>

		management of residual environmental effects cannot be reasonably estimated at this point, if the duration of such residual environmental effects is not yet known. If residual environmental effects are present and thus need to be monitored for decades after closure of the mine, it will be extremely difficult to prepare for a worst-case scenario.
6	138-153	Environmental Performance Guarantees should be given for each mine site, rendering the distinction of non-contiguous mining areas obsolete.
6	155-158	Refers to “independent validator(s)” but under paragraph 27 their “independence” and “experience” seem to rely only on their own statement.
6	167-168	Suggests that the calculation method needs to be “ <i>sensitive to the economics, geological, environmental and geographic features of the project</i> ” without explaining what “sensitive” means in the context.
7	176-180	Perhaps only a technicality, but the contractor should remain liable not only for the duration of the exploitation contract (which may end with the lifetime of the mine), but rather until the end of all measurable environmental impacts.
9	251-267	Includes wide-ranging options for a release of the obligations, including a transfer and a change of control. There should be no release of such obligations until the project is fully completed.
10	272-285	If the extent of monitoring of residual environmental effects is not known and may require monitoring for decades after the closure of the mine, it appears unwise to release any part of the bond in advance.
12	361-363	Allows the Applicant discretion to determine the form of the Guarantee. Paragraph 13 even allows for partial payments into a Sinking Fund. This is inconsistent with a solid guarantee and introduces multiple potential and unnecessary loopholes.
15	440-444	Only allows the Commission to seek additional information whereas it should allow the Commission to halt an application for a Plan of Work until a complete and irrevocable Guarantee is in place.