Code Project Review and Analysis:

2018 Draft ISA Exploitation Regulations

Review of the revised draft exploitation regulations in light of the Council commentary provided in March 2018 (ISBA/24/C/8).

5 July 2018

From 5 to 9 March 2018, the International Seabed Authority (ISA) Council reviewed a set of draft exploitation regulations for the international seabed, issued in August 2017 (ISBA/23/LTC/CRP3Rev). Soon thereafter, the Council President provided the Legal and Technical Commission (Commission) with a series of issues to consider in revising the draft regulations, grouped into six "issue notes" in the President's statement on the work of the Council (ISBA/24/C/8). The Commission then discussed the draft regulations in light of the Council commentary. The Secretariat subsequently issued a revised set of draft exploitation regulations (ISBA/24/LTC/WP.1) on 29 May 2018. This report reviews that revised draft and the extent to which it addresses the Council's comments. It references the draft regulations, the Secretariat cover note (ISBA/24/LTC/6) and the report of the March 2018 Commission meeting (ISBA/24/C/9).

CONTENTS

The Code Project

The Code Project is a global working group of scientists and legal scholars who contribute to a collective review of each draft of regulations designed to govern mineral exploitation of the ocean floor beyond national jurisdictions. The drafts are issued by the International Seabed Authority (ISA), the treaty organization established under the United Nations Convention on the Law of the Sea. When a final version of the regulations is approved, it will constitute the first rulebook written to govern an extractive industry before it begins.

The pace of ISA draft-writing has accelerated over the past year. The Authority's governing bodies meet more frequently, the Secretariat produces new drafts in record time, and the number of interested stakeholders rises steadily. Requests for comments on proposed regulatory changes prompt unprecedented levels of response.

The Code Project workload and pace have both increased in consequence. Our collection of 15 professionals from 10 countries has been asked to respond to a revised draft of ISA exploitation regulations published by ISA Secretary-General Michael Lodge on 29 May (ISBA/24/LTC/WP.1). That the Code Project contributors have provided close readings and informed recommendations on less than five weeks of part-time attention constitutes a signal accomplishment. Delegates to the ISA Annual Session later this month will, we hope, be able to take advantage of their diligence and thoughtfulness.

The Pew Charitable Trusts has had the opportunity to support this collective endeavor, and we feel privileged to do so.

Conn Nugent

Director, Pew Seabed Mining Project

Members of the Code Project

- David Billett, Deep Sea Environmental Solutions, UK
- Duncan Currie, Globelaw, New Zealand
- Andrew Friedman, The Pew Charitable Trusts, US
- Andrey Gebruk, Shirshov Institute of Oceanography, Russia
- Leonardus Gerber, University of Pretoria, South Africa
- Kristina Gjerde, IUCN Global Marine and Polar Programme, US
- Renee Grogan, World Ocean Council, Australia
- Aline Jaeckel, Macquarie University, Australia
- Daniel Jones, National Oceanographic Centre, UK
- Laleta Davis Mattis, University of West Indies, Jamaica
- Nele Matz-Lück, Walther-Schuecking Institute, Germany
- Telmo Morato, Instituto do Mar, Universidade dos Acores, Portugal
- Stephen Roady, Duke University School of Law, US
- Torsten Thiele, Global Ocean Trust, Germany
- Philip Weaver, Seascape Consultants, UK

Executive Summary

Introduction: Code-Writing and Priorities

This Third Report of the Code Project covers an institutional process that has taken place over the past 18 months: the drafting of the ISA regulations to govern exploitation contracts in the international seabed (the Area).

The characteristics of an ideal ISA exploitation code have been discussed and debated for decades. January 2017–June 2018 is distinctive in that: a) the drafting of the code became an explicit institutional priority; and b) credible drafts were written, critiqued and rewritten. This report summarizes and discusses the most recent draft–an "unedited advance text" released 29 May and entitled "Draft Regulations on Exploitation of Mineral Resources in the Area. Note by the Secretariat" (ISBA/24/LTC/WP.1). It does so within the analytic frame of a document released only seven weeks earlier: the "Statement by the President of the Council on the work of the Council during the first part of the twenty-fourth session" (ISBA/24/C/8), which laid out its commentary in six broad issue notes: 1) the pathway to exploitation and beyond; 2) the payment mechanism; 3) the role of sponsoring States; 4) the role and legal status of standards, recommendations and guidelines; 5) broader environmental policy; and 6) roles of the Council, Secretary-General and Commission in implementation of the regulations.

This Code Project report compares the two documents side by side. What did the Council say about an ISA exploitation code? How did the Secretariat reply in the form of a new draft of that code? The Code Project records and evaluates that documentary conversation and offers suggestions for future iterations.

It would be challenging for the Council to complete a regulation-by-regulation analysis during its next sessions (16-20 July). Notwithstanding, the members of the Code Project believe in the value of such vetting, and–whether matters are discussed this July, next March or in between–they have attempted in this report to describe and evaluate each element of ISA exploitation regulations raised by the Council and Secretariat and offer their views thereon.

Of these myriad issues raised by the Council and Secretariat, some of the leading questions lend themselves to topical subdivisions:

Procedural Issues

Decision Makers and Stakeholders. The latest draft from the Secretariat goes far in clarifying the Authority's decision-making process and increasing its transparency. The term "Interested

Persons" has been usefully replaced with the broader category of "Stakeholders." Draft Regulation (DR) 14(1) says that the ISA Legal and Technical Commission (Commission), as part of its review of an application, should "examine the environmental plans in light of the comments made by members of the Authority and Stakeholders". This requirement to consider should be expanded to a requirement to consider and address in writing any substantive comments received. The Commission should provide evidence that stakeholder comments are given due consideration and that the Commission takes the broadest possible range of views into account.

Regulations should also clarify the process through which the Commission or the Authority will seek, receive and utilize advice or reports from experts or other independent competent persons. DR 12(5)(b) contemplates that the Commission should take such advice into account without further explanation as to how such advice might be solicited or integrated into the Commission's decision-making. Independent advice should serve as a supplement to address any limitations on the Commission's capacity, but it is critical that this advice be sourced through a systematic and transparent process subject to public review. Such a process could usefully be outlined in the regulations or supplementary ISA rules.

Fundamental Principles. Draft Regulation (DR) 2 lists worthy "fundamental principles". Those principles should be made operative by assigning their enforcement to specific ISA entities. It is good that the Authority, sponsoring States and Contractors should "each, as appropriate, plan implement, and modify measures necessary for ensuring the effective protection of the marine environment from Harmful Effects", but it would be even better if that requirement were particularized to become specific responsibilities of each ISA organ.

Flexibility and Certainty. The ISA must strike a balance between regulatory predictability and a capacity to adjust standards and guidelines. As a deep-sea mining industry develops, new information will prompt new technologies, management strategies and environmental-protection systems. In other industries where flexibility is desired, regulators may either approve relatively short contracts that are easy to renew, or relatively long contracts that are easy to amend. The current draft regulations appear to provide for a relatively long contract term and a streamlined contract process without a parallel system to recommend, let alone require, contract amendments.

Contract Renewal. The process described in Draft Regulation (DR) 21 may be overly angled toward renewal in that it makes no requirement for the contractor to submit a review of overall performance under the initial contract period and no obvious opportunity for the contractor, Commission or Secretary-General to recommend amendments. There is also no explicit requirement for the contractor to submit a new Plan of Work or for the Commission to review the renewal application to ensure the contractor's continued compliance with the conditions set forth in DRs 12–14 and to ensure that the conditions established under the original Plan of Work have been sufficient to ensure the effective protection of the marine environment. Particularly in light of the relatively long length that the ISA is considering for initial exploitation

contracts, periodic reviews of contract performance should become explicitly required at specified intervals, and the adequacy of contractor performance as revealed by those reviews should be factored into any decision on renewal.

Change of Control. The draft exploitation regulations place significant responsibilities on sponsoring states and contracting entities. It is, therefore, vital for the ISA to have clear definitions of "control" and rules and procedures around any "change of control" that may occur during the course of a contract. Currently, DR 25 defines change in control as a change in ownership of 50 percent or more. This definition should be reconsidered. A much smaller percent change in ownership can lead to dramatic changes in control. In addition to clarifying the definition of change of control, the regulations should also consider how a change of control might affect sponsorship status. If a change of control leads to a change in the nationality of the contractor, this may mean that the sponsoring State is no longer the State of nationality or "effective control". Who has responsibility of notifying the sponsoring State of this change and for determining which State should be the sponsoring State following such a change? What happens if the new State of nationality doesn't want to sponsor the contract? The exploitation regulations need to provide additional clarity around the definition of effective control and the procedures that must be followed for any changes, or potential changes, to effective control.

Environmental Issues

Regional Environmental Management Plans (REMPs). The Council has described the adoption of a REMP for the Clarion-Clipperton Zone as one of the measures deemed "appropriate and necessary" for the effective protection of the marine environment. Yet the current draft of regulations only references REMPs in DR 2 ("Fundamental Principles") and in several proposed Annexes. It would be much preferred if observation of the rules, regulations and protected areas established by REMPs were explicitly regarded as a condition of any exploitation contract, and no exploitation contracts were awarded in regions without an approved REMP.

Standards and Guidelines. Under the current draft regulations, a wide array of contractor obligations will be elaborated through standards and guidelines slated for later development and elaboration. This approach is beneficial in giving the Authority the ability to elaborate the regulatory framework in a step-wise fashion and make updates as needed. It is vital to understand how such standards and guidelines will be developed; which will be binding on contractors and how such determinations will be made; and who will have the ability to initiate a review of existing standards and guidelines. The regulations should address each of these questions explicitly. In general, to ensure a level playing field for contractors and a strong regulatory regime, we recommend that all standards and guidelines be legally binding, with any departures to be approved on a case-by-case basis by the Authority. It should also be clarified that no exploitation contracts will be approved until the basic standards have been adopted.

Scoping. The requirement for a scoping report preceding an application for exploitation was widely supported by Member States and observers but has been dropped from the current draft regulations. The Secretariat's cover note suggests that this requirement will be

incorporated into the exploration framework instead. A scoping report is in the interest of both the Authority and the contractors and should be mandatory and subject to public review. If this requirement is to be moved to the exploration framework, will this involve amendment of the exploration regulations? If so, are there other changes to the explorations regulations that should be considered, including increased clarity around the process for submitting and reviewing Environmental Impact Assessments (EIA) for equipment and component testing under an exploration contract? If not, what mechanism does the Authority propose using to establish scoping reports as a mandatory requirement under the exploration framework?

Impact Areas. The current draft regulations no longer include the term "impact area". We are left with "contract area", "mining area" and "project area". It is important for contractors to identify their predicted impact area as it will allow the Commission to assess whether environmental harm is fully contained within the contract area. Such a determination will also inform the Commission's review of the Environmental Impact Assessment (EIA), Environmental Monitoring and Management Plan (EMMP) and the site's Closure Plan as well as the effectiveness of the REMP.

Reporting. Regular reporting is a vital element of any regulatory framework. In keeping with the Authority's commitment to transparency and in support of the Council's oversight role, contractors' annual reports should be made public, with any confidential information redacted. The Authority should also be specifically empowered to request more frequent reports as required. That the new DR 50 would require contractors to provide environmental reports annually rather than every two years is a welcome development that will enhance and inform the every-third-year trend reports.

Environmental Liability Trust Fund. Such a fund was recommended by the Seabed Disputes Chamber, and its incorporation into the latest draft regulations is a welcome development. Yet its proposed structure needs further consideration. Most notably, several of the activities proposed to be supported through this fund (e.g., research and training) are not appropriate uses of a liability fund. Such activities should be financed through other means. We recommend that the liability trust fund be designed specifically to address the liability gap identified by the Seabed Disputes Chamber. Separate consideration should be given to the potential establishment of a fund to support environmental research, training and related activities.

Financial Issues

Common Heritage of Mankind. UNCLOS establishes that the Area and its resources are the common heritage of mankind and that activities in the Area must be carried out for the benefit of all mankind. The common heritage of mankind (CHM) is referenced as a Fundamental Principle in the new DR 2, but it is not operationalized anywhere in the proposed regulations. It is widely assumed that CHM carries financial and other implications in addition to wider stewardship and trusteeship responsibilities. Consideration should be given to referencing CHM within the exploitation regulations explicitly. Under the new DR 13, for example, the

Commission could be asked to determine whether a given Plan of Work provides for the benefit of mankind as required under the Convention.

Payment Regime. The draft regulations do not yet contain sufficient information to judge the adequacy of various proposed models for an ISA payment regime. The most recent Commission report (26 April 2018, ISBA/24/C/9) notes that a team from the Massachusetts Institute of Technology has been requested to return to Kingston in July 2018 to address questions raised by Members of the Council and the Commission at their sessions in March 2018, and that the MIT team is scheduled to report back to the Council in July. But no mention is made of considering financial regulations that incorporate profit-sharing arrangements, a payment regime model that various Council Members have endorsed. Full discussions on the competing equities of simple-royalty regimes, profit-sharing regimes and various mixed models should be fully explored.

CHRONOLOGY

2017

January ISA Secretariat issues "Discussion Paper" on exploitation regulations.

March Berlin workshop: "Towards an ISA Environmental Management Strategy for the Area".

August Secretariat issues first draft of exploitation regulations. Secretary-General invites stakeholders to propose answers to key questions raised by the draft.

ISA Council and Assembly approve "road map" for finalizing exploitation regulations by 2019. Council and Assembly agree to meet twice a year in 2018 and 2019.

2018

January ISA secretariat receives 55 comments from Member States, contractors, Observers and independent scholars regarding the first draft of exploitation regulations. Most raise issues beyond those framed by the Secretary-General's list of questions.

February Second Report of the Code Project: *Summaries of Stakeholder Submissions on the ISA Draft Exploitation Regulations*.

London workshop on the draft regulations co-sponsored by the Government of the United Kingdom and the Royal Society.

March In the first of its two meetings in 2018, the ISA Council goes "off the record" and devotes four days to close analysis of the first draft of exploitation regulations.

Council President Olav Myklebust produces a summary report of decisions and deliberations. The bulk of his report–approved by the Council–consists of a list of "requests" to the Commission on "six common themes arising from the responses to the draft regulations".

April Chair Michelle Walker reports that the Commission "considered a number of key issues relating to the draft regulations" including the requests made by the Council. The Commission requests the Secretariat to "produce a further revised version".

May On 29 May, the ISA Secretariat publishes an "advance unedited text" of new draft exploitation regulations.

June Council President Myklebust is "delighted to see progress being made in the delivery of a revised text", looks to the Commission for continued involvement.

Code Project prepares report comparing the Council President's March list of "requests" with the 29 May draft from the ISA Secretariat.

Code Project Review and Analysis:
2018 Draft ISA Exploitation Regulations

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(a) Strengthen the principle of the Common Heritage of Mankind (CHM) in operative provisions of the draft regulations.
Addressed in New Draft?	Somewhat. See Preamble, DR2(7).

The common heritage of mankind (CHM) is included in both the Preamble and in Draft Regulation (DR) 2 "Fundamental Principles." However, there is no requirement to comply with these Fundamental Principles, and the CHM principle is not addressed in operative regulations. It is unclear whether or how the CHM principle may be considered in the review and approval of applications for plans of work.

The CHM principle could be incorporated into the operative regulations by amending DR 13, 14(2) and 16 to enable or require the Commission to consider whether a Plan of Work contributes to the development of the common heritage for the benefit of mankind as a whole, per UNCLOS Article 150(i). Alternately (or in addition), these regulations could be amended to require Plans of Work to comply with the Fundamental Principles set out in DR 2.

Also, DR2(7) refers to ensuring "the effective management and regulation of the Area and its Resources in a way that promotes the long term development of the common heritage of mankind" (emphasis added). This formulation differs from the Article 150(i) mandate to ensure the "development of the common heritage for the benefit of mankind as a whole". This addition of the notion of "promoting" the "long term" development of CHM is a potentially significant change in focus, one which is not consistent with the language of UNCLOS.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(b) Examine the interaction and cohesion between exploration and exploitation regulations; (i) Identify requirements in exploration phase.
Addressed in New Draft?	Somewhat.

Additional clarity is needed on: 1) documents required under the exploration regulations; 2) documents required under the exploitation regulations; 3) how exploration documents inform exploitation documents; and 4) timelines for all of the above. Neither the draft regulations nor the flow chart provided in ISBA/24/LTC/6 provide a full articulation. The draft regulations refer to "environmental plans" without defining the term.

The August 2017 draft regulations included provisions for a Scoping Report, Environmental Impact Assessment (EIA), Environmental Impact Statement (EIS), Environmental Management and Monitoring Plan (EMMP), Emergency Response and Contingency Plan and Closure Plan. Despite support from New Zealand, Norway, DSCC and NORI for the inclusion of a Scoping Report, the Scoping Report has been dropped from the current draft. If the intention is for the scoping work to be conducted during the exploration phase as suggested by the Secretariat in ISBA/24/LTC/6, will the Exploration Regulations be amended to include this requirement? If so, are other changes to the exploration regulation envisioned? If not, how will this important need for a Scoping Report be addressed through ISA rules or guidance?

Two documents, the EIA and Environmental Risk Assessment, are addressed only by reference. It is unclear whether those documents are formally required and, if so, what they must include. DR 7(2)(d) requires an EIS, but there is no separate requirement for an EIA or any provision for public comment on an EIA. The EIA is addressed by reference in Annex VII, which states that an EMMP shall be based upon and be consistent with the EIA. Similarly, an Environmental Risk Assessment is addressed by reference in Annex IV, but not explicitly required. The regulations should explicitly state that both of these documents are required and should additionally set out their essential minimum elements.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(b) Examine interaction and cohesion between exploration and exploitation regulations; (ii) Assess whether information from the exploration regulations and contracts would allow for the proper development of a Plan of Work for exploitation.
Addressed in New Draft?	Yes. DR7(3)(a); DR40(2)(k); Annexes II, IV and VII.

Information from exploration will be incorporated through the Mining Plan (Annex II); EIS (Annex IV); and Closure Plan (Annex VII). However, the draft regulations currently lack an explicit requirement for an analysis of the data from EIAs and associated EMMPs conducted during exploration to be included with an application for a plan of work; such a requirement should be added.

If a Scoping Report becomes required under the exploration framework as proposed by the Secretariat in ISBA/24/LTC/6, the exploitation regulation should require that this Report be used to support the development of the EIS and Plan of Work.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(b) Examine interaction and cohesion between exploration and exploitation regulations; (iii) Re-examine definition of "exploitation", which differs from that in the exploration regulations.
Addressed in New Draft?	Yes. Schedule 1.

The definition of exploitation proposed in Schedule 1 is broader than the definition in the exploration regulations, but narrower than that proposed in 2017. The current definition has been expanded to include the decommissioning and closure of mining operations; the 2017 proposal to include exploration activities conducted under an exploitation contract has been dropped. The current definition (and the definition used in the exploration regulations) includes activities that could fall outside the scope of UNCLOS. For example, the proposed definition includes reference without restriction to the construction and operation of processing and transportation systems for the production and marketing of minerals, some of which may occur in the Area, but some of which may occur outside the Area.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(b) Examine interaction and cohesion between exploration and exploitation regulations. (iv) Regulation of exploitation activities under an exploitation contract.
Addressed in New Draft?	Somewhat. DR 19.

The revised regulations help clarify the rights and obligations of contractors regarding exploration within an exploitation Contract Area. DR 19 states, inter alia, that 1) only the Contractor has the right to explore for the same Resource category within the Contract Area; 2) no other entity can operate in the Contract Area for a different Resource type in a manner that might interfere with the rights granted to the Contractor; and 3) the exploration regulations shall continue to apply to exploration activities within the Contract Area.

But significant questions remain. Would contractors be expected to submit an exploration plan, EIA and other documents required under the exploration regulations for exploration conducted under an exploitation contract? Or would these be covered under the plan of work for the exploitation contract? Where requirements differ, which would apply?

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(c) Review draft regulations (in Attachment 2 to Issue Note 1 in Annex 1) and consider further regulatory procedures.
Addressed in New Draft?	Somewhat. DR 7.

The revised regulations, particularly DR 7, provide more clarity than the previous draft on required documents and processes. However, further clarification would be helpful. For example, are applicants required to prepare both an EIA and Environmental Risk Assessment as implied by the Annexes? If so, must they be submitted as stand-alone documents and are they subject to publication and public consultation? The regulations should make clear that they are.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(d) Identify any further elaboration required under guidelines or procedures to ensure standards could evolve into good industry practices.
Addressed in New Draft?	Somewhat. DR 1(5), DR 92, DR 93, Schedule 1.

DR 1 states that the Regulations shall be supplemented by Standards and Guidelines, as well as further rules, regulations and procedures of the Authority. DR 92 tasks the Commission with recommending Standards for Council consideration and approval. DR 93 tasks the Commission or Secretary-General with issuing Guidelines, which shall be reported to the Council. However, it is not clear which Standards or Guidelines will be legally binding; how such decisions will be made; how Standards and Guidelines will inform Good Industry Practice and Best Environmental Practice; how Standards and Guidelines will be reviewed and updated; and what processes will be followed if standards, guidelines or procedures are not developed.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(e) Consider the concept of "best available technology" and its incorporation into exploitation regulations.
Addressed in New Draft?	Yes. DR 13(3)(f); DR 46(b); DR 53(d); DR 56(1)(f); Annex VII; Schedule 1.

The concept of Best Available Techniques (BATs) has been incorporated into the draft Exploitation Regulations in several places. It should also be incorporated into DR 2(5)(d) (Fundamental Principles), which calls for the incorporation of Best Available Scientific Evidence into decision-making processes but does not currently call for the use of BATs.

DR 53 provides that the Environmental Liability Trust Fund should fund research into BATs for restoration and rehabilitation of the Area. While efforts by the Authority to support and promote the development of BATs are welcome, this is not an appropriate use of the Environmental Liability Trust Fund. BATs could be considered as an element of a Plan of Work (DR 55, DR 56) and would thus need to be funded by each contractor. Processes to incorporate BATs without undue procedural hurdles should be examined.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond

Council Comment/Request	22(f) Ensure that provisions are technologically, scientifically and environmentally viable.
Addressed in New Draft?	No. But see DR 13(4)(a); DR 14.

DR 13(4)(a) requires the Commission to determine whether the proposed Plan of Work is "technically achievable and economically viable". DR 14 requires the Commission to determine whether the "environmental plans" provide for the effective protection of the Marine Environment. However, the term "environmental plans" is undefined, and it is unclear why the Commission isn't tasked with determining whether the Plan of Work as a whole (inclusive of the Mining Plan, EIA, EMMP, Closure Plan and other relevant documents) provides for the effective protection of the marine environment. The regulations should make this obligation clear. In addition, the draft regulations do not include an assessment of the scientific viability of either the Plan of Work as a whole or its "environmental plans". The Commission should be required to engage in such an assessment.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(g) Consider commercial viability of the regulatory provisions.
Addressed in New Draft?	Yes. DR 2, DR 21, DR 28, DR 29, DR 30, DR 75, Annex X.

Commercial viability is considered throughout the draft regulations. It is established as a Fundamental Principle in DR 2. Contractors are required to make "commercially reasonable efforts to bring the Mining Area into Commercial Production in accordance with the Plan of Work" (DR 28) and maintain Commercial Production (DR 29) but have the right to temporarily reduce or suspend production due to market conditions (DR 30).

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(h) Consider a progressive reporting and auditing mechanism that would consider the relevant stages of the exploitation contract while reflecting a precautionary approach.
Addressed in New Draft?	Yes. DR 40, DR 41, DR 49, DR 50, DR 56.

The annual reporting provisions in DR 40 should allow for more frequent reports if deemed necessary by the Commission or Secretary-General. The reports should be made public, with confidential material redacted.

DR 49, which addresses monitoring and reporting under the EMMP, should specify to whom the report is made.

DR 56 (Review of Activities in a Plan of Work) should provide for the full review of activities to be made public. There should also be independent reviews of activities under a Plan of Work, as was provided for in earlier draft regulations.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(i) Formulate an update and review mechanism for the financing plan (DR Annex III) to ensure an continued financial capability under an exploitation contract.
Addressed in New Draft?	Yes. DR 79, DR 80.

DR 79 and DR 80 establish a review of the payment system and rates five years from adoption and at intervals thereafter, with the length of such intervals to be determined by the Council.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond

Council Comment/Request	22(j) To collaborate with the Finance Committee and make recommendations on their roles and responsibilities, particularly regarding payment mechanisms, administrative fees and equitable sharing criteria.
Addressed in New Draft?	No.

The Commission and Finance Committee were scheduled to meet in joint session in Kingston, Jamaica, on 13 July to discuss benefit sharing and related matters and are expected to update the Council on how they plan to carry forward their responsibilities.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(l) Consider the requirement for resource-specific provisions in the draft regulations.
Addressed in New Draft?	No.

The revised draft regulations provide a single set of regulations for all resources types, rather than providing resource-specific regulations. It is not yet clear whether resource-specific rules will be established through standards and guidelines to be developed under the exploitation regulations, through Regional Environmental Management Plans (REMPs) or other mechanisms. Regardless of the mechanism, it is imperative for binding, resource-specific rules to be established and for the ISA to make clear that no exploitation contracts will be signed in the absence of such rules and in any region of the Area not covered by a REMP.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(m) Examine the approaches taken with regard to the balance between certainty and predictability, as well as flexibility and adaptability.
Addressed in New Draft?	Somewhat. DR 13, DR 15, DR 21, DR 55, DR 56.

It is unclear from the LTC report and cover note whether the balance between certainty and flexibility was addressed explicitly by the Commission. It is possible that the LTC's revised approach to standards and guidelines and modification of Plans of Work reflect discussions on this topic.

The key challenge here is how the Authority can provide regulatory certainty for contractors while retaining an ability to review and amend contracts in light of new scientific information and technological developments. This balance is particularly crucial in new industries such as deep-sea mining. In other resources-extraction industries, the challenge is often addressed by either providing for long contracts that are easily amended, or by providing for shorter contracts that are easily renewed. The current draft regulations instead provide for relatively long contracts that are difficult to amend and are easily renewed; this approach is not in line with best practice in the resource extraction industry and should be revised. DR 13 provides for an initial contract period of 30 years and only grants the Authority the ability to approve a shorter contract period based on the expected life of the proposed Exploitation activities, not for any other reasons (e.g., scientific or technological uncertainty). While a contractor may propose minor or material changes to a Plan of Work during this period, the Authority has limited ability to either recommend or require changes (DR 55-56). Under DR 13, contracts may be renewed for 10 years through a streamlined process that does not require a full reassessment of the Plan of Work and whether it is continuing to provide effective protection of human health, safety and the marine environment. It is unclear whether the Authority or the Commission is able to request or require modifications of the Plan of Work at this stage in order to reflect changes in Good Industry Practice, Best Available Techniques, Best Environmental Practices or ISA guidelines. If the initial contract period is long (e.g., 30 years), the renewal process should include a review of any new information, technologies or circumstances that have arisen during the initial contract term. The review should be subject to public comment, and ISA should have the authority to require changes to the Plan of Work to ensure that it includes the most current BAT, BEP and ISA guidelines. There should be flexibility for a period shorter than 30 years if appropriate.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(n) To discuss, with the Secretary-General, the need to strengthen institutional resources and expertise to implement the new regulations.
Addressed in New Draft?	No.

There is no record of such a discussion, nor of any plan for strengthening institutional resources and expertise. There is little doubt that the ISA will need additional capacity to implement the exploitation regulations adequately. The institutional mechanism of the ISA may need considerable evolution, which is provided for in the 1994 Agreement. Key factors to consider are how best to incorporate independent scientific expertise into ISA decision-making and to ensure transparency of the ISA's regulatory and decision-making processes. Options include establishment of a scientific or environmental committee to advise the LTC or development of a pool of qualified, independent experts that can be called upon to provide advice as required.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(i) Re-examine structure and flow of the draft regulations.
Addressed in New Draft?	Yes. New order of items, plus a Table of Contents.

The draft regulations have been reordered and a Table of Contents has been added. These are helpful improvements.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(ii) Ensure the appropriate balance of a contractor's rights and obligations is properly reflected in the draft regulations.
Addressed in New Draft?	Somewhat. See Part III (DR 18-45).

The "appropriate balance" between contractor rights and obligations needs to be determined by the ISA Member States. The Council should, at its earliest opportunity, review that balance as it now is described in Part III, DR 18-45.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(iii) Ensure the regulations are clear on the health and safety of crew and third parties who might be directly affected by proposed exploitation activities.
Addressed in New Draft?	Yes. DR 13.

The draft regulations contain new language that clarifies that the Plan of Work should provide for the effective protection of health and safety of men and women "engaged in or affected by Exploitation activities".

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(iv) Examine the rationale and objectives for the Performance Guarantee.
Addressed in New Draft?	Yes. DR 27.

DR 27 establishes the general requirements for an Environmental Performance Guarantee, including its establishment, repayment or forfeiture. The exact form and quantum of the Performance Guarantee are to be determined by Guidelines yet to be developed.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(vi) Examine ways and means to pay reasonable regard to other marine activities, e.g., navigation; laying of submarine cables and pipelines; fishing; and scientific research.
Addressed in New Draft?	Somewhat. DR 13(4), DR 33.

DR 13(4) requires the Commission to determine if the proposed Plan of Work "(d) provides for Exploitation activities to be carried out with reasonable regard for other activities in the Marine Environment, including, but not limited to, navigation, laying of submarine cables and pipelines, fishing and marine scientific research". DR 33(1) further states that contractors shall carry out exploitation in accordance with Article 147 of the Convention, their EMMP and Closure Plan, and any "applicable international rules and standards established by competent international organizations. In particular, each Contractor shall exercise due diligence to ensure that it does not cause damage to submarine cables or pipelines in the Contract Area". There is no guidance on what any of these obligations entails in practice, how the Commission will assess whether they have been met, or what obligations may be triggered by a direct or potential conflict in use.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(vii) Clarify definitions of "contract area" and "mining area".
Addressed in New Draft?	Yes, DR 19, DR 40(1), Annex X, Schedule 1; but see DR 30(5), Annex VII.

The new draft regulations clarify the concepts of Contract Area and Mining Area (DR 19; Annex X; Schedule 1) but omit the concept of an Environmental Impact Area and instead introduce the term "project area" in DR 30(5) and Annex VII. The 2017 draft regulations required an EIA and EMMP to cover the entire Environmental Impact Area, not only the Contract Area. Monitoring now seems to be required "across the project area", without this term being defined. Similarly, Annex VII requires the contractor to provide details on the location and planned monitoring and management of preservation reference zones and impact reference zones, without defining these terms or providing any guidance on where these should be located. Such definitions should be added, and explicit guidance should be issued promptly. There should also be scope for protected areas within claim areas, where necessary.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(viii) Reconsider the basis for an administrative review mechanism in light of existing dispute settlement procedures.
Addressed in New Draft?	Yes. DR 19, DR 30(5), DR 40(1), Annex VII, Annex X, Schedule 1.

The draft regulations no longer include an administrative review mechanism; this provision has been dropped entirely from the draft regulations. There is no mention of this significant change in the Commission report or the Secretariat cover note, so it is unclear whether this was actively considered or simply deleted.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(ix) Review all timelines and deadlines, including the need for certainty in consideration and assessment of a Plan of Work and necessary consultations.
Addressed in New Draft?	No.

There is no explicit reference to this request in either the Commission report or the Secretariat cover note that accompanied the draft exploitation regulations. By including a reference to the need to consider the amount of time required for "necessary consultations", the Council indicated that more time may be needed for a proper review and assessment of a Plan of Work. The regulations should address this concern explicitly.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	22(o)(x) Clarify insurance requirements.
Addressed in New Draft?	Yes. DR 13, DR 38, DR 40.

DR 38 lays out contractor insurance obligations. DR 40 identifies annual insurance-related reporting requirements.

Council "Issue Note"	#1: Pathway to Exploitation and Beyond
Council Comment/Request	Elaborate on the categories of monetary penalties.
Addressed in New Draft?	Yes. Appendix III.

Appendix III lists four specific types of penalties: underpayment of a royalty; failure to pay a royalty; false royalty returns; and failure to submit an annual report. It also notes that other penalties may be considered for violations such as failure to report notifiable events, environmental and other incidents and not achieving/exceeding environmental thresholds. A desktop study of monetary penalties under national regimes for extractive industries is proposed. The expansion of the list of contract violations that could result in a monetary penalty is welcome, as is the proposal for a study of approaches followed in similar industries. Such a study might also look at the advisability of establishing the dollar amount of such penalties in the regulations themselves, as currently proposed, versus establishing just the penalty categories or a minimum/maximum penalty per category so that the amount of the penalty can be adjusted more easily over time.

Council "Issue Note"	#2 Payment Mechanism

Council Comment/Request	(25) Assess the underlying assumptions and data in the cost, price forecast and cash flow components of the financial model; particularly: (a) Revenue forecasts and metal pricing; (b) Production and downtime assumptions; (c) Insurance and its impact on risk mitigation; (d) Constituent metals used for revenue forecasts; (f) Environmental costs; (g) Currency fluctuation; (h) Mining efficiencies; (i) Considerations for other resource categories; (j) Mechanisms to compensate the common heritage of mankind, including royalty and profit share scenarios; (k) Principles of no artificial advantage and disadvantage; (l) Cost impacts of ISA governance; (m) Supporting MIT with information and data collection; (n) Incentive mechanisms for reducing environmental impacts.
Addressed in New Draft?	No.

Neither the Commission report nor the Secretariat cover note provides any information on the extent to which the data or assumptions above were considered by the Commission nor how such discussions may have informed revisions to the draft exploitation regulations.

The team from the Massachusetts Institute of Technology (MIT) is scheduled to report back to the Council in July 2018 and may be able to provide additional information on some of the issues above.

With regard to revenue forecasts and metal pricing, Appendix IV of the draft regulations provides an indicative methodology for calculating royalties “for discussion only”, but no specific numbers are offered. The Commission says only that it “concurred with the fundamental principles applied and the approach taken by MIT”.

With regard to constituent metals used for revenue forecasts, Appendix IV provides an indicative list with several metals listed explicitly and a placeholder for “other” metals.

With regard to environmental cost assumptions, Mr. Richard Roth of MIT reported to the Council in March 2018 that his team had not estimated environmental costs attributable to deep-sea mining because it lacked the expertise required; outside expertise would be required for this task.

With regard to the request to consider mechanisms to compensate the common heritage of mankind including royalty and profit share scenarios, the draft regulations do not yet contain sufficient information to judge the adequacy of various proposed models for an ISA payment regime. The most recent Commission report (ISBA/24/C/9) notes that the MIT team has been requested to return to Kingston in July 2018 to address questions raised by Members of the Council and Commission and that the Commission will report to the Council in July 2018 on the status of the model and possible payment

options, in addition to the outcome of its joint meeting with the Finance Committee. No mention is made of considering financial regulations that incorporate profit-sharing arrangements or hybrid payment models. Discussions of the various equities of simple-royalty regimes, profit-sharing regimes and various mixed models and the financial and other implications of each approach should be fully explored.

With regard to the issue of artificial advantage or disadvantage, DR 61 introduces the possibility of providing financial incentives to contractors while requiring the Council to ensure that such incentives do not give an artificial competitive advantage with respect to land-based miners. It is unclear how such a determination would be made.

With regard to understanding the impact of the Authority as part of the cost structure for contractors, Appendix II provides a schedule of fees but does not link them to contractor cost structure. Neither the Commission report nor the Secretariat cover note provides any estimate of the future costs of ISA operations or the costs associated with specific regulatory activities.

With regard to incentive mechanisms, such as the use of funds, for reducing environmental impacts, the revised regulations (DR 52-57) propose the establishment of an Environmental Liability Trust Fund and its use for a wide range of activities relating to the reduction of environmental impacts. While extremely worthy of support and funding, most of the proposed activities are not consistent with the purpose of a liability trust fund.

Council "Issue Note"	#2 Payment Mechanism
Council Comment/Request	(26) Protect developing countries from adverse effects of exploitation activities.
Addressed in New Draft?	No.

The Council asked the Commission to make recommendations to the Council as to the obligations incurred under UNCLOS and the Implementation Agreement for protecting developing countries from the adverse economic consequences of an increased supply of minerals occasioned by exploitation approved by the ISA. The Commission report indicated that it established a working group on the subject, but no other details are currently available.

Council "Issue Note"	#2 Payment Mechanism
Council Comment/Request	(27-30) More information was requested on:

(a) “Special circumstances” regarding payment of royalty in installments;
(b) Standards for measuring and valuation equipment;
(c) Use of other internationally accepted accounting principles;
(d) Basis of the annual fixed fee, taking into account abundance and grade;
(e) Definitions for terms such as “commercial production”, “relevant mineral”, “monetary value”, “financial capability”, “resources”, and “reserves”.

Addressed in New Draft? Somewhat.

The Commission report and Secretariat cover note provide little information on the issues above and the extent to which they were considered in preparing the revised draft regulations.

The language allowing royalties to be paid in installments where justified by “special circumstances” is unchanged; see DR 68. The draft regulations do not explain what sort of circumstances might warrant such an arrangement.

There is no indication that the standard for the measuring and valuation equipment was considered.

The draft regulations no longer require the use of International Financial Reporting Standards (IFRS) but rather require contractors to keep a full set of financial records “consistent with internationally accepted accounting principles”. However, Annex I still requires applicants other than the Enterprise or State enterprises to use IFRS.

With regard to the calculation of the annual fixed fee, the draft regulations (DR 83) still include an annual fixed fee based on Contract Area, with no adjustment for resource type, mineral abundance or grade.

There is no indication that the definitions of “commercial production”, “relevant mineral”, “monetary value”, “financial capability”, “resources” and “reserves” were considered.

Council “Issue Note” #2 Payment Mechanism

Council Comment/Request	(28) Investigate recent changes to and developments in extractive industry fiscal regimes to draw upon best practices.
Addressed in New Draft?	No.

There is insufficient information in both the Commission report and the Secretariat cover note to determine whether this issue is being addressed.

Council "Issue Note"	#2 Payment Mechanism
Council Comment/Request	(29) Make arrangements for MIT to continue its work on the financial model.
Addressed in New Draft?	N/A

The Commission requested the Secretariat to continue working with MIT on elaborating the financial model. MIT is expected to present an updated financial model to the Council in July 2018.

Council "Issue Note"	#2 Payment Mechanism

Council Comment/Request	(30) Explore options in respect of the payment mechanism and make recommendations to the Council.
Addressed in New Draft?	No.

The Commission discussed the payment mechanism at its meetings in March but considered it premature to make recommendations to the Council until more information had been acquired.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(31) Formulate a matrix of responsibilities of both the Authority and Sponsoring States and consider extending it, where practical, to reflect the roles of flag States and coastal States.
Addressed in New Draft?	No.

There is insufficient information in the Commission report and Secretariat cover note to determine whether this issue was considered.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(32)(a) Review the Contractor's track record prior to a change of sponsoring state.

Addressed in New Draft? No. DR 22.

There is insufficient information in the Commission report and Secretariat cover note to determine whether this issue was considered.

There is no provision in the new draft regulations requiring a review of the contractor's track record prior to a change of sponsoring State. Such a provision should be included. Under DR22(6), once a sponsoring State submits a written notice of termination of sponsorship, the Council, "taking account of the reasons for termination of sponsorship, may require the Contractor to suspend its mining operations until such time as a new certificate of sponsorship is submitted". However, the criteria for such a decision are unclear.

Council "Issue Note" #3 Role of Sponsoring States

Council Comment/Request (32)(b) Address issues relating to multiple sponsoring States.

Addressed in New Draft? Somewhat. DR 5, DR 6.

The draft regulations provide some guidance on how to submit an application with multiple sponsoring States, but more detail may be needed. For example, if a contractor has multiple sponsoring States and one terminates its sponsorship, does this terminate the entire sponsorship agreement? What about instances where only one sponsoring State is listed, but effective control of the contractor changes such that another State should be added as a sponsoring State?

Council "Issue Note" #3 Role of Sponsoring States

Council Comment/Request (32)(c) Address provisions on cooperation between the Authority and sponsoring States.

Addressed in New Draft? Somewhat. DR3.

DR 3, and especially DR 3(e), is a welcome addition to the regulations, as it provides that "contractors, sponsoring States and members of the Authority shall cooperate with the Authority in the establishment and implementation of programmes to observe, measure, evaluate and analyse the impacts of Exploitation on the Marine Environment, to share the findings and results of such programmes with the Authority for wider dissemination and to extend such cooperation and collaboration to the implementation and further development of Best Environmental Practices in connection with activities in the Area". But it does not specify which organ of the Authority a sponsoring State is to communicate with, or the form of communication, or provide points of contact.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(32)(d) Consider the adoption and implementation of uniform rules, regulations and procedures to ensure a level playing field for contractors.
Addressed in New Draft?	No. DR 59, Annex X.

There are several areas in the regulations that provide a high degree of flexibility to contractors. While this may be advantageous to some, it does not guarantee a level playing field. For example, under DR 59, there is no set period for post-closure monitoring, which is instead to be determined in each contractor's Closure Plan. Also, Annex X states that contractors should comply with guidelines "as far as reasonably practicable", which is a highly subjective term and may differ across contractors.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(a) Re-examine the rationale for a 12-month period for termination of sponsorship.
Addressed in New Draft?	No. DR 22.

There is insufficient information in the Commission report and Secretariat cover note to determine whether this issue was considered. The draft regulations (DR 22) continue to provide that termination of sponsorship will take effect 12 months after receipt of notification of termination.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(b) Clarify that a change of sponsoring State must respect the effective control requirements.
Addressed in New Draft?	No.

This issue needs to be further clarified in the draft regulations. In the Convention, effective control arises in Annex III Article 4(3), which pertains to sponsorship; Annex III Article 9(4), which pertains to applications for reserved areas; Article 139 with respect to compliance and liability; and Article 153(2)(b) with respect to the Enterprise. Effective control and change of control would also be relevant to the issue of monopolization. The regulations need to clearly identify when change of control (of a contract) occurs, state whether and how that affects sponsorship of the contract, and establish criteria for determining whether changes in sponsorship affect the effective control requirements.

Among other measures, the annual report required under DR 40 should include a statement disclosing whether effective control has changed.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(c) Consider deletion of language requiring that sponsoring State consent to use a contract as security is not to be "unreasonably withheld or delayed".
Addressed in New Draft?	Yes. DR 23

The 2017 draft exploitation regulations required a sponsoring State or States and the ISA Council to provide prior consent to the use of a contract as security and further stated that this consent was not to be "unreasonably withheld or delayed". This language has been deleted from the revised draft regulations (DR 23) as recommended by the Council.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(d) Assess whether the draft regulations should refer to the registration of securities and guarantees.
Addressed in New Draft?	Yes. DR 23(6).

The draft regulations incorporate the Council's suggestion to include language regarding the timing of the registration of securities and guarantees (see DR 23(6)).

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(e) Specify which organ of the Authority should issue consent.
Addressed in New Draft?	Yes. DR 24(1).

DR 24(1) clarifies that the Council is responsible for providing consent to the transfer of a contractor's rights and obligations under an exploitation contract.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(f) Clarify the roles of the Authority and sponsoring State relating to protection of the marine environment.
Addressed in New Draft?	No. DR 2, DR 46.

The environmental obligations set forth in the draft regulations are largely contained in DR 2 (Fundamental Principles) and DR 46. The Fundamental Principles are not operationalized in the regulations, and no specific entity is tasked with ensuring their implementation, and DR 46 also does not assign responsibilities to specific entities. Rather, it leaves the Authority, sponsoring States and Contractors to "each, as appropriate, plan, implement, and modify measures necessary for ensuring the effective protection of the marine environment from Harmful Effects". The roles of the Authority and sponsoring State still need to be clarified.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(33)(g) Consider the issue of international responsibility with regard to sponsoring States.
Addressed in New Draft?	Yes. DR 103.

The draft regulations contain a more general requirement (DR 103) regarding the responsibility of sponsoring States than the previous draft.

Council "Issue Note"	#3 Role of Sponsoring States
Council Comment/Request	(34) Convene a workshop on the roles and responsibilities of sponsoring States, flag States, coastal States and port States in monitoring and enforcement measures.
Addressed in New Draft?	No.

There is insufficient information in the Commission report and Secretariat cover note to determine whether this issue was considered.

Council "Issue Note"	#4 Standards, Recommendations, Guidelines
Council Comment/Request	(35) Develop an appropriate mix of performance and procedure-related standards, including an inclusive and transparent process for their development, and re-examine the legal status of Commission recommendations for guidance of contractors.
Addressed in New Draft?	Somewhat. DR 92, DR 93, Annex X.

The Commission report and Secretariat cover note both reference the need to develop a wide array of standards and guidelines. At least two workshops have been proposed. But many questions remain. For example, what is the list of standards and guidelines that will be developed? How will these standards and guidelines be developed? What steps will be taken to ensure that this process is inclusive and transparent? Which of the standards and guidelines will be legally binding, which will be voluntary and how will these determinations be made? What will the process be for reviewing and updating standards and guidelines? Additionally, the draft regulations refer to a variety of standards and guidelines that do not yet exist: Is their approval a precondition for approval of a Plan of Work?

DR 92 provides that the Commission, "taking into account the views of recognized experts", shall recommend standards which the Council shall consider and either approve or return to the Commission for reconsideration. DR 92 does not indicate whether this process will be transparent or broadly inclusive. The term "recognized experts" is not defined. DR 93 provides that the Commission or the Secretary-General shall issue guidelines and that these guidelines shall be "reported" to Council. It does not provide for an inclusive or transparent process of guideline development, nor does it offer the Council an opportunity to approve or reject guidelines. The regulations should do both.

Both DR 92 and 93 would benefit from inclusion of a mechanism for soliciting stakeholder feedback on draft standards and guidelines before these are presented to the Council for review and approval as well as a mechanism for reviewing and updating standards and guidelines as appropriate to ensure they reflect the Best Available Scientific Evidence, Best Available Techniques, Good Industry Practice and Best Environmental Practice as those standards evolve.

The regulations should also be clear on which standards and guidelines are legally binding. It is worth noting the use of the phrase "reasonably practicable" throughout may affect the binding nature of any Guidelines. This phrase should be eliminated as it introduces uncertainty. For example, Annex X states that contractors are required to "observe, *as far as reasonably practicable*, any guidelines which may be issued by the Commission or the Secretary-General". Who decides the meaning of "reasonably practicable?"

Council "Issue Note"	#4 Standards, Recommendations, Guidelines
Council Comment/Request	(36) Request to the Commission to consider development of relevant guidelines under a consensus-based approach.
Addressed in New Draft?	No, though relevant to DR 92 and DR 93.

The Commission report does not provide detailed information on how guidelines will be developed or whether this will be done through a consensus-based approach.

Council "Issue Note"	#4 Standards, Recommendations, Guidelines
Council Comment/Request	(37) Request that the Commission consider a regulatory mechanism that can strike a balance among interests of flexibility, adaptability and stability as a procedural tool that can facilitate its discharge of responsibilities to review, modify and adopt standards and guidelines.
Addressed in New Draft?	No. DR 92 and DR 93.

There is insufficient information in the Commission report to determine how it proposes to balance the interests of flexibility, adaptability and stability in the exploitation regime. Such a balance will require careful consideration of the processes for developing and amending standards and guidelines and include provisions requiring contractors to comply with standards and guidelines, as amended from time to time. The draft regulations should be amended to include a process by which the Authority or its stakeholders (e.g., contractors, independent experts) can request that the Commission review and consider updating a standard or guideline through an inclusive, transparent process to reflect new information or developments in technology, Good Industry Practice, or Best Environmental Practice. Contractors should be required to comply with Standards, even if these are updated during a contract period. If standards and guidelines are reviewed and updated through an inclusive, transparent process, contractors will have time to make any necessary adjustments to their operations.

Council "Issue Note"	#4 Standards, Recommendations, Guidelines

Council Comment/Request (38) Develop an inclusive and transparent process for the development of standards and guidelines and an indicative list of such standards and guidelines by subject matter.

Addressed in New Draft? No, though relevant to DR 92 and DR 93.

The Commission report and Secretariat cover note state that workshops will be held to support the development of standards and guidelines. However, neither contains details on the proposed process for the development of such standards nor on the steps that will be taken to ensure that this process is inclusive and transparent.

Neither the draft regulations nor the Commission report include an indicative list of standards and guidelines to be developed. Section 2.4 of the EIS template (ISBA/24/LTC/WP.1/Add.1) provides an example list of some of the standards and guidelines that may be required, but it is not complete and does not include any of the financial standards and guidelines that will be needed. Furthermore, any list of standards and guidelines should be considered indicative only, as it is likely to change over time, requiring regular updates.

Council "Issue Note" #4 Standards, Recommendations, Guidelines

Council Comment/Request (39) Consider the timing of a workshop on the development of standards and guidelines and consider the legal nature of such standards and guidelines.

Addressed in New Draft? Yes.

The Commission report recommends that a workshop on the development of standards be organized in the first half of 2019.

Council "Issue Note" #5 Broader Environmental Policy and the Regulations

Council Comment/Request (40)(a) Consider the importance of environmental protection as a core part of the regulations.

Addressed in New Draft? Yes. DR 2, DR 14, DR 97.

The draft regulations (DR 2) establish effective protection of the marine environment as a Fundamental Principle. DR 14 further requires the Commission to determine whether a Plan of Work provides for the effective protection of the marine environment.

Additionally, DR 97 allows an inspector to give instructions to a contractor if there is a "threat of Serious Harm to the Marine Environment, or is otherwise in breach of the terms of its exploitation contract". It may need to be clarified whether lack of full compliance with any part of the contract (including the management strategies, commitments, monitoring plans and trigger thresholds outlined in the EMMP) can trigger the provision of instructions.

Council "Issue Note" #5 Broader Environmental Policy and the Regulations

Council Comment/Request (40)(b) Ensure a precautionary approach and the best available science are adequately reflected in the regulations.

Addressed in New Draft? Somewhat. DR 2, DR 14, DR 46, Annex VII, Schedule 1.

40(b) DR 2 establishes the precautionary approach and the use of best available scientific evidence as Fundamental Principles. DR 46 provides that the Authority, sponsoring States and Contractors shall each, as appropriate, apply the precautionary principle as reflected in Principle 15 of the Rio Declaration and integrate best available scientific evidence in environmental decision-making. These are welcome additions.

The Rio Declaration includes a high threshold for applying precaution ("serious or irreversible harm"), whereas the 2011 Advisory Opinion by the Seabed Disputes Chamber notes that precaution must be applied "where there are plausible indications of potential risks".

Also, while the use of best available scientific evidence is listed as a fundamental principle and required in the EMMP (Annex VII), it is not explicitly required in the EIS (Annex IV) or EIS template. This point should be made clear: The EIS required under Annex IV must be prepared in accordance with Good Industry Practice and using the best available scientific evidence.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(c) Reflect on relevant content for an environmental policy framework and make recommendations to the Council, taking into account the draft strategic plan.
Addressed in New Draft?	Somewhat.

The Commission report does not contain specific reference to an environmental policy framework. DR 2(5) refers to the Authority's "environmental policy" without specifying what such policy is, what it includes, what legal status it may have or where it can be found.

This ambiguity highlights the importance of establishing clear environmental rules, regulations and policies with clear legal status. Under the current approach, a wide array of measures necessary to ensure effective protection of the marine environment may be developed outside the regulations through standards, guidelines and regional environmental management plans. If this approach is retained, it will be vital for the regulations to reference these measures and identify which ones are binding and ensure there are consequences for non-compliance.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(d) Assess comments on incorporation of REMPs into the draft regulations and make recommendations to the Council.
Addressed in New Draft?	Somewhat. DR 2(5), DR 14, Annex IV, Annex VII, Annex VIII.

The draft regulations suggest that work should be conducted in accordance with "regional environmental management plans, if any" in DR 2 (Fundamental Principles), Annex IV (EIS), Annex VII (EMMP) and Annex VIII (Closure Plan). This language is inconsistent with the recommendation from several Council delegations that no exploitation contracts should be granted in the absence of an approved REMP. The words "if any" should be struck from this provision. This issue could be further clarified by amending DR 14 such that the Commission must affirm that the Plan of Work is located within an approved REMP. In addition, the regulations should explicitly require compliance with REMPs and prohibit the approval of an exploitation contract in an area closed to mining through an REMP. Neither of these points is clear in the current draft.

Council "Issue Note" #5 Broader Environmental Policy and the Regulations

Council Comment/Request	(40)(e)(i) and 40(e)(ii) Examine and expand on provisions on the effective protection of marine environment, including by determining the requirements for a comprehensive EIA and assessing the requirements for a comprehensive EMMP.
Addressed in New Draft?	Somewhat. DR 7, DR 11, DR 26, Annex IV, Annex VII.

40(e)(i) Annex IV para 1(a) and 1(g) refer to the requirement to deliver an EIS in accordance with the Guidelines and based on an EIA, although there is no explicit requirement to produce or submit an EIA. This ambiguity of terms and requirements should be addressed. The EIS Template is reasonably robust and may, when supplemented with additional guidelines and standards and guided by a Scoping Report, be sufficient to ensure that consistent, comprehensive environmental impact assessments are carried out.

The EIS template draws heavily on the template developed at the Surfer's Paradise workshop in 2016, but there are significant and important differences. These include:

- The requirements for the description of the existing biological environment have been changed from a comprehensive assessment to one where the detail is controlled by a prior environmental risk assessment. However, the draft regulations no longer explicitly require the preparation or submission of an environmental risk assessment. Unless this is addressed, the EIS template should require more detailed biological and environmental information, as such information is critical to decision-making.
- The reference to hazardous materials management has been moved from a stand-alone section to the on-site processing section, which may mean that some hazardous materials are missed (e.g., if used as part of the collection process);
- The reference to rehabilitation has been removed from section 3.8 (Development timetable) of the EIS template and from Section 11.3.1;
- The requirement for consideration of a "No-mining alternative" has been removed from Section 3 (Description of the proposed development);
- The requirement for a section on "Special considerations for site: Description of any notable characteristics of the site, such as hydrothermal venting, seamounts, high-surface productivity, eddies etc. Include site specific issues and characteristics, particularly for rare or fragile environments" has been removed; this removal is of particular concern as the draft regulations currently lack any resource-specific rules or regulations;
- The reference to reptiles has been removed from the description of the surface ocean characteristics (Section 5.4.1), yet turtles may be important.

There are no provisions for documenting the uncertainty of the information in the EIA/EIS (or indeed the EMMP, mine plan, financial plan etc.). In other relevant industries, documentation of uncertainty is regarded as important. It is even more critical in deep-sea mining, where uncertainty in equipment performance, environmental conditions and environmental impact is

high. A specific reference to quantifying (or at least discussing) and addressing uncertainty should be included in the regulations, EMMP, and EIS template. Calculations of uncertainty are needed both for effective decision-making and in the determination of the levels of precaution needed.

Finally, while stakeholders have 60 days to comment on an EIS, it is not clear whether they will be provided access to the data upon which the assertions in an EIS are based. It is likely that an expert assessment of an EIS would require access to the data. For example, physical oceanographers would need data to evaluate plume modelling results; chemists and ecotoxicologists would need data on potential toxic chemicals released; and biologists would need access to the underlying data to assess sampling strategies and statistical analyses that underpin the conclusions presented in an EIS. Under DR 12, the Commission can solicit outside expertise, but a transparent and regularized process for soliciting such expertise will be necessary given the extent of analyses likely to be required. The review in DR 12 should take into account public comments.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(e)(iii) Reviewing definitions of key terms in the drafting process.
Addressed in New Draft?	Yes.

40(e)(iii) The term "Interested Person" has been replaced by the term "Stakeholder". This term, along with its definition in Schedule 1, is a welcome and considerable improvement.

Further consideration should be given to the term "Good Industry Practice" and its definition. The definition of Good Industry Practice as the exercise of a "degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected to be applied by a skilled and experienced person engaged in the marine mining industry…" is too weak and is inconsistent with "Best Environmental Practice". Consideration should be given to ways to strengthen this standard. Furthermore, the expertise and skills relevant to the "marine mining industry" may be quite different from those relevant to the deep-sea mining industry given differences in the technologies used, environmental impacts expected, legal context, etc.

"Serious Harm" is defined in Schedule 1 as "any effect from activities in the Area on the Marine Environment which represents a significant adverse change in the Marine Environment determined according to the rules, regulations and procedures adopted by the Authority on the basis of internationally recognized standards and practices informed by Best Available Scientific Evidence". This is an improvement. However, this definition will require further elaboration of "significance" and what the Authority considers as applicable internationally recognized standards and practices. For example, would these include the FAO Guidelines for VMEs and Significant Adverse Impacts?

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations

Council Comment/Request	(40)(e)(iv) Elaborating on the fundamental principles articulated in the draft regulations and considering their operation.
Addressed in New Draft?	Somewhat. DR 2.

The draft regulations articulate an expanded list of Fundamental Principles in DR 2. As in the previous draft, many of the principles set forth in DR 2 are not operationalized elsewhere and need to be mainstreamed into the Regulations. For example, DR 13 and DR 14 should be amended to require the Commission to determine whether a Plan of Work has been prepared in accordance with the Fundamental Principles elaborated in DR 2.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(f) Consider a specific provision regulating mining discharges, in accordance with applicable standards, keeping in mind technological challenges.
Addressed in New Draft?	Yes. DR 48.

40(f) A specific provision has been added on mining discharges. DR 47 states that "a Contractor shall take necessary measures to prevent, reduce and control Pollution and other hazards to the Marine Environment from its activities in the Area as far as reasonably practicable, and in accordance with the applicable Standards".

This new provision is welcome. However, the language "as far as reasonably practicable" is not consistent with the stronger obligation established under either Article 145 or Article 194 of the Convention. DR 47 states that the contractor does not need to comply with this obligation where action is necessary for the "safety of life or the preservation of property from serious damage". While it is important to protect human life and safety, different considerations may apply to property damage, which may be covered by insurance. Additional guidance on this matter should be requested. Moreover, "as far as reasonably practicable" is inconsistent with the requirement to ensure effective protection from harmful effects.

To establish a stronger standard, DR 47 could read "A Contractor shall take all measures necessary to prevent, reduce and control pollution of and other hazards to the marine environment from its activities in the Area, using for this purpose the best practicable means and in accordance with applicable Standards". Consideration should be given to how the ISA's approach will dovetail with the requirements of MARPOL and SOLAS.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(g) Consider frequency of reporting requirements regarding environmental performance.
Addressed in New Draft?	Yes. DR 40, DR 50.

Contractor reports should be submitted annually, as required under DR 40. The environmental reports requested under DR 50 should also be submitted annually. Furthermore, DR 50 should be amended to require contractors to provide an environmental trend report every three years. Trend reporting can dramatically improve performance analyses and environmental management and outcomes. The reports should be made public, subject only to redactions necessary to safeguard commercially sensitive confidential information not relating to the protection of the environment.

Council "Issue Note"	#5 Broader Environmental Policy and the Regulations
Council Comment/Request	(40)(g) Underline importance of data availability.
Addressed in New Draft?	Yes. DR 2, DR 3, DR 41, DR 73, DR 87.

40(h) DR 2(5)(d) establishes access to data and information as a Fundamental Principle. This is most welcome and should be further operationalized throughout the regulations and the general practices of the Authority.

DR 87, which addresses Confidential Information, needs to be considered carefully to ensure that only commercially sensitive information is kept confidential, for the minimum amount of time necessary, and that there are procedures in place to review the appropriateness of such designations. The provision that the Secretary-General may agree that certain information is confidential for "bona fide academic reasons" should be reconsidered. Academic considerations should not be grounds for keeping environmental data and information confidential. That said, there may be instances where the release of data may need to be delayed to ensure quality control measures have been applied to the relevant data sets. In addition, the 30-day period for the Secretary-General to intervene is likely to prove to be too short. Consideration should be given to deletion of any time period.

Council "Issue Note"	#6 Roles of Council, Secretary-General and Commission
Council Comment/Request	(41) Clarify the respective roles of the Council, Secretary-General, and Assembly and specify which body is to be held responsible when reference is made to "the Authority". (42) Review the balance of authority between the Council and Secretary-General.
Addressed in New Draft?	Somewhat. See, *inter alia*, DRs 18, 21, 22, 32, 52, 63, 79, 80, 84, 88, 105.

The current draft regulations provide somewhat more detail regarding the various responsibilities of the Council and the Secretary-General, though some responsibilities remain unclear and the regulations generally do not state explicitly *how* the Council and Secretary-General are to go about their duties.

Some duties assigned to the Secretary-General include: 1) issuing compliance notices (DR 50); 2) establishing procedures governing the handling of Confidential Information by members of the Secretariat DR 88; 3) determining the liability for a royalty (DR 75), and 4) issuing Guidelines in respect of the calculation and payment of royalties (DR 63).

The only responsibility assigned exclusively to the Assembly is amendment of the Exploitation Regulations (DR 105). Since the regulations anticipate the potential for amendments to be made, the regulations should also clarify that the regulations shall apply to all stakeholders "as amended, from time to time" to ensure that any amendments are applied to all parties equally.