Fourth Report of the CODE PROJECT

Summary of Stakeholder Comments on the 2018 ISA Draft Regulations

23 January 2019

PREFACE
THE MINING CODE AND THE CODE PROJECT

The International Seabed Authority (ISA) is writing regulations to govern contracts for mining the ocean floor in areas beyond national jurisdiction. When approved, these exploitation regulations will provide the core of an ISA rule book, the entirety of which will constitute the ISA Mining Code. The Mining Code represents the first attempt to regulate an extractive industry before it begins.

The ISA Secretariat provides first drafts of the various sections of the Code. The drafts are reviewed by the ISA Legal and Technical Commission in closed session and considered by the ISA Council in open session. When the Council agrees on a set of exploitation regulations, it will send them for final approval to the ISA Assembly, a legislature that meets once a year, usually in July, and in which each member State receives one vote.

The Code Project was created to monitor and report on the process. The Code Project is an electronic, ad hoc working group of 16 scientists and legal scholars from 11 countries who contribute to a collective review of each major stage in the development of the ISA Mining Code. This is its fourth report; previous reports can be found on the Code Project's website.

The report contains summaries of:

- Key provisions of draft exploitation regulations prepared by the ISA Secretariat.
- Comments on those draft provisions submitted by member States, observers, and other Stakeholders.
- Responses and suggestions from the Secretary-General.

The Pew Charitable Trusts has supported this international collaborative and welcomes suggestions for its improvement.

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ACRONYMS & ABBREVIATIONS

Area of Particular Environmental Interest	APEI
Center for Polar and Deep Ocean Development	PDOD
Deep Ocean Stewardship Initiative	DOSI
Deep Sea Conservation Coalition	DSCC
Exclusive Economic Zone	EEZ
Environmental Impact Assessment	EIA
Environmental Impact Statement	EIS
Environmental Management and Monitoring Plan	EMMP
EU ATLAS Horizon 2020 Project	EU Atlas
Federated State of Micronesia	FSM
Global Sea Mineral Resources NV	GSR
International Cable Protection Committee	ICPC
International Marine Minerals Society	IMMS
International Maritime Organization	IMO
Interoceanmetal Joint Organization	IOM
International Seabed Authority	ISA
International Tribunal for the Law of the Sea	ITLOS
Legal and Technical Commission	Commission
Marine Biodiversity of Areas Beyond National Jurisdiction	BBNJ
Mining Standards International	MSI
Nauru Ocean Resources Inc.	NORI
Neptune and Company Inc.	Neptune
Ocean Mineral Singapore	OMS
Tonga Offshore Mining Limited	TOML
UK Seabed Resources Ltd.	UKSR
United Nations Convention on the Law of Sea	UNCLOS

INTRODUCTION

This report summarizes written comments submitted by ISA member States and Stakeholders on the most recent draft of proposed regulations to govern exploitation on the international seabed. The draft [ISBA/24/LTC/WP.1/REV.1] was discussed by the Legal and Technical Commission and the Council of the ISA at its sessions in March and July 2018 [ISBA/24/C/8, ISBA/24/C/20]. At the conclusion of the July session, the Secretary-General and the President of the Council invited ISA members and Stakeholders to submit written comments by 30 September 2018. Forty-two submissions—21 from member States, one from a member State regional group, six from contractors, nine from ISA observer groups, and five from other Stakeholders—were posted on the ISA website on 19 November 2018. Their comments are summarized within.

Shortly after the Stakeholder submissions were posted on the ISA website, a "briefing note" from the Secretariat also was put up, outlining how it planned to address some of the leading subjects raised in the submissions. The briefing note covered common issues identified in the Stakeholder submissions, followed by a section on Next steps in which the Secretariat named "critical areas [that] would benefit from further discussion in the Council" and about which the Secretariat would prepare short discussion papers. The briefing note also contained an Annex on matters arising from specific regulatory text that summarized Stakeholder reactions to the most recent draft of the proposed regulations and described next steps to address their concerns. On 4 December 2018, a slightly revised version of the 19 November 2018 paper appeared as an official Council document under the title: "Comments on the draft regulations on the exploitation of mineral resources in the Area." [https://www.isa.org.jm/document/isba25c2].

This Code Project report is presented in two parts.

Part One summarizes Stakeholder submissions on the critical areas identified for further discussion in the Secretariat's document [https://www.isa.org.jm/document/isba25c2]. The order in which this paper treats them follows the sequence in which they are scheduled to be discussed during the Council sessions of 25-28 February. On each of the eight issues, the Secretariat's responses appear immediately after the summary of Stakeholder submissions.

Part Two summarizes comments on nine other issues raised in Stakeholder submissions but not referenced by the Secretariat or listed as a topic scheduled for Council discussion.

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PART ONE:

SUBMISSIONS ON ISSUES SCHEDULED FOR DISCUSSION BY THE ISA COUNCIL - 25-28 FEBRUARY

1. FINANCIAL MODEL

Summary of Submissions

Stakeholder submissions covered a wide range of finance-related issues with a comparably wide diversity of views. One key divergence concerns the development of an ISA financial model. Should an ad valorem royalty system apply to all exploitation contracts? Would a profit-sharing arrangement be more appropriate? Or should Contractors have the option of choosing among several models? Other significant divergences: the character and frequency of contract renewal processes; the calculation of key financial variables; and the implementation of the Convention's requirement of minimizing harm to States dependent on revenues from terrestrial operations whose prices could be affected by new supplies produced under ISA auspices.

1.1 General

ISA financial regulations were not covered by the Secretary-General's summary of issues to be addressed by the Council. The Council had earlier decided to empanel an open-ended ad hoc working group to review and discuss alternative financial models and then present its findings to the Council. Practical difficulties arose, however, and the working group agreed to meet for a two-day session in Kingston, Jamaica, on 21-22 February, at the end of the work week immediately preceding the Council sessions of 25 February-1 March. A report of the financial ad hoc working group sessions will be presented by its Chair on the morning of 25 February.

Stakeholder submissions on financial regulations described several concerns. Among them: transparency (Argentina); appropriate accounting for initial investments (Japan); units of measurement (China and NORI); mineral valuation criteria (India); royalty rates (Germany); determination of administrative and fixed fees and performance guarantees; development of equitable criteria for the sharing of economic benefits; and payments arising from activities on "extended" continental shelves beyond 200 nautical miles from territorial baselines (Australia).

UKSR stated that any financial regime should not disadvantage Contractors vis-a-vis land-based industry. OMS encouraged consideration of the costs involved in establishing transparent and fair monitoring. MSI noted that the draft regulations do not appear to consider nonfinancial economic benefits derived from mining activities as required by UNCLOS Article 140(2).

China called for a broader comparison of models. Discussions of ISA financial regulations have concentrated on an ad valorem royalty system, but that focus is too narrow, China maintained. Profit-based royalty systems and profit-sharing regimes have been widely employed in land-based mining. China strongly urged examination of models outside simple royalty regimes. The UK, however, expressed "serious concerns" about the workability of a

profit-based system and reiterated its support for a royalty-based "total cost" approach to ensure a level playing field.

Brazil recommended minimum floors and maximum ceilings on royalties to ensure a measure of financial certainty. Chile suggested that the royalty be determined by a progressive scale keyed to the market value of the product extracted. A return of 20 percent (as proposed by models presented by members of the MIT faculty) is excessive for mining anywhere in the world today, Chile said.

IMMS, NORI, and TOML said that the calculation of the royalty should be fixed and remain immutable from the time an exploitation contract is signed. IMMS recommended a 10-year period before the ISA could review and revise rates of payment (DR 80).

UKSR noted that the draft Code creates a number of uncertainties pertaining to rights of lenders, equity investors, and major suppliers, and places undue potential adverse impacts on first movers. A disproportionate cash flow burden may also fall on the first movers.

1.2 Financial incentives

The African Group noted that financial incentives to Contractors were not in keeping with the Convention, but acknowledged that DR 61, concerning incentives, represented an improvement. Germany and China requested clarity regarding the potential structure and composition of potential incentives, while the Russian Federation proposed an instalment system for the recovery of development costs incurred before and after the commencement of commercial mining. India called for further elaboration on the protection of "pioneer investors." Japan noted that financial incentives could come in the form of reducing or exempting payment of royalty and annual fees for the first period of commercial production. UKSR and OMS called for incentives to be made equally available to all Contractors, regardless of their structure. OMS further suggested that Contractors should not be subsidised or given a competitive advantage with respect to land-based miners. IOM noted that the regulations should include incentives for land-locked States as required by the Convention.

1.3 Enterprise

Stakeholders called for regulations on the Enterprise to be developed and adopted by the time the exploitation regulations are approved (Russian Federation) and before exploitation commences (IOM). Jamaica called for the regulations to address the Enterprise as a Contractor. China called for regulations sufficiently specific and detailed to enable initiation of the Enterprise, including its equity participation in joint ventures, and suggested four principles to govern its operation: cost-effectiveness; an evolutionary approach; observance of sound commercial principles; and preferential treatment for developing States. IOM asked how the Enterprise will handle access to confidential data and decision-making processes if handling multiple joint arrangements could give it an unjustified advantage over other Contractors.

1.4 Fees and payments

Tonga noted that the purpose of the fixed annual fee needs to be clarified, and that it should be designed to fit that purpose. The UK suggested that the administrative fee system should be tied to an administrative cost recovery mechanism that ensures efficiency in the administration of the Authority. OMS asked the Commission to develop a basis for the calculation of the annual fixed fee and how this fee can be credited against other payments due. OMS also encouraged the Authority to set guided parameters for the determination of annual rates to allow for proper economic planning by a Contractor.

The Russian Federation called for clarity regarding the fate of administrative fees and payments (including any advance payments) under DR 86 in case of termination of a contract. Italy suggested that criteria for adequate setting of fees and royalties should not be burdensome or excessively detailed but should provide guidelines for the Council to periodically decide their amounts and keep consistency over time. Italy and the UK suggested that fees be determined at specified intervals under DR 82, rather than "from time to time" and early enough in the year to give Contractors warning. The UK further suggested that reviews of fees under DR 80 should also include monetary penalties. China suggested that provision be made to reduce or exempt Contractors from annual fixed fees or royalties during a reduction or suspension in production under DR 30, to exempt reference areas from the fee calculation, and to provide different fees for different resource categories. China further called for more clarity regarding the calculation of fees and a redrafting of Part VIII. Jamaica called for the Authority's costs to be fully covered by fees and for royalty payments to be used exclusively for equitable sharing and compensation to land-based producers. GSR noted that the regulations should establish the criteria and calculation formula for monetary policies, including penalties.

Regarding unpaid interest, the African Group welcomed Contractor liability for interest on unpaid amounts, while the Russian Federation called for greater clarity around the terms "fraud" and "negligence" as exceptions to a 10-year time limit on claims for unpaid royalties, and proposed that these claims be time limited as well. MSI suggested that a 10-year period for audit and review of royalty returns is too long.

Germany suggested that audit costs should be covered by the Contractor (DR 73).

The Secretariat did not "address points raised by Stakeholders in connection with the development of the economic model and the financial terms of contracts" in anticipation of a report from the open-ended working group on financial models. As mentioned above, the working group will meet in Kingston 21-22 February and report on its deliberations to the Council on the morning of 25 February. The Enterprise is slated for Council discussion on 1 March, but it is not expected that there will be any significant actionable items on the subject.

2. STANDARDS, GUIDELINES, KEY CONCEPTS

Summary of Submissions

All parties agree that the ISA should develop Standards and Guidelines to inform exploitation activities. There are disagreements on some key questions, however. Should Standards and Guidelines be incorporated as enforceable obligations spelled out in contracts or should they be regarded as high-level suggestions for Contractors to follow only "as reasonably practicable?" Should Standards and Guidelines be regularly updated and, if so, how frequently? Should Contractors be compensated if new Standards and Guidelines incur significant new expenses? To what degree can Standards and Guidelines be made quantitative? To what degree and in what manner do Standards and Guidelines relate to "Best Practices?"

FSM posed two explicit questions that many other Stakeholders posed implicitly: 1) What are the normative distinctions separating "guidelines," "standards," and "recommendations"? 2) Is there a hierarchy?

Several States and Stakeholders suggested that the process for developing Standards and Guidelines should proceed in parallel with, or prior to, the adoption of the exploitation Regulations (Australia, Belgium, Jamaica, Japan, Kiribati, Russian Federation, Sargasso Sea Commission) or be made a prerequisite for mining (Germany, the UK, DOSI, and DSCC). Singapore, however, recommended that details of Standards and Guidelines could be further developed after the finalization of the Regulations. Brazil made a case for slender exploitation regulations complemented by an evolutionary development of Guidelines. Morocco agreed, and noted that, as a general rule, pragmatic evolutionary guidance is to be preferred over inflexible controls. New Zealand observed that clear Standards will improve transparency in decision-making.

Many Stakeholders argued that compliance with Standards should be mandatory (Belgium, Germany, Jamaica, Kiribati, Russian Federation, Sargasso Sea Commission, DOSI, DSCC), not excluding the need to comply with updates and revisions as they arise (Australia, Germany). Others argued that frequent changes to the regulations, Standards, and Guidelines would create uncertainty and instability (GSR, IMMS, NORI). NORI and GSR proposed that Contractors be compensated if changes in binding rules occasioned financial loss. NORI and TOML suggested that existing Contractors be afforded special "grandfather" status and be given 15 years to comply with new Guidelines and Standards or be exempted entirely if these would require changes to Plans of Work. IMMS suggested that Standards not be adopted if they impose an unreasonable financial burden on an existing operation.

Philomene Verlaan called attention to Annex X, Section 3.3(c) of the draft regulations, noting that this language renders Guidelines unenforceable by requiring that Contractors observe them only "as far as reasonably practicable." Nauru observed that "guidelines" by definition cannot be legally binding; any legal requirement should be described as a "regulation."

Chile noted the importance of learning from examples of national and international standard-setting in other industries. Tonga called for the operationalization of the concept of "best available science." Belgium urged the development of quantitative thresholds.

IMO queried whether Standards and Guidelines would be included in the "Rules of the Authority" referenced throughout the draft regulations. Nauru and Tonga suggested that the process for implementation of Standards and Guidelines be explicitly set out in the Regulations. Australia joined Jamaica and MSI in calling for explicit recognition that the Council plays a role in developing Guidelines. Australia went on to say that there was uncertainty as to the particular authority and responsibility of each ISA official body in regard to the development of Standards and Guidelines, but that in any case it would be inappropriate for the Secretary-General to issue Guidelines on his own authority. Belgium urged the involvement of all ISA bodies.

Japan, OMS, and MSI recommended that the procedure for adopting any mandatory standards take into account the views of relevant Stakeholders. GSR called for an explicit requirement that Contractors participate in the drafting of Standards. UKSR recommended a public notice process for setting new Standards and Guidelines. Belgium agreed and recommended that outside experts from relevant fields should participate. EU Atlas and the Sargasso Sea Commission also agreed as long as criteria for "expert" status were developed.

Germany and Jamaica proposed drawing up a list of issues and questions that would benefit substantially from the development of Standards and Guidelines. The UK called for a Plan of Work detailing the process for developing such Standards and Guidelines. Other Stakeholders called for the development of Standards and Guidelines for environmental protection (Russian Federation, IOM); health and safety (Russian Federation, Australia); marine scientific research (Russian Federation); management plans and environmental monitoring (Chile); contract renewal (DOSI); mining discharges (DOSI); and closure plans (EU Atlas). The Sargasso Sea Commission noted that Standards should be based on clear strategic environmental goals and objectives, with targets and performance indicators. The IMO suggested that the ISA harmonize its regulations with the IMO's Waste Assessment Guidance under Annex 2 of the London Convention and Protocol, which contains practical, step-by-step procedures that the ISA might be wise to emulate.

The Secretariat *recognized the importance of the questions raised by Stakeholders and emphasized the need to promptly address Standards and Guidelines through a transparent and inclusive process for determining their content and clarity as to their legal status. He went on to say: As highlighted by the Council, standards and guidelines must be prioritized and dealt with sequentially (ISBA/24/C/8/Add.1, annex I, para. 2. (h)). In view of the importance of this matter, a separate discussion paper will be prepared for consideration by the Council during the first part of the 2019 session. The paper will include proposals for a flexible and participatory process for the development and adoption of technical standards and guidelines, building on established structures within other international organizations and the comments made by Stakeholders in connection with draft regulations 92 and 93. In addition, the secretariat will prepare a list of indicative standards and guidelines by subject area and regulatory provision.*

3. GOOD PRACTICES AND BEST PRACTICES

Summary of Submissions

Member States and Stakeholders call for the establishment of, and adherence to, high standards to govern exploitation activities. Submissions called for clarification of the terminology applied to those standards, including:

- Good Industry Practice (Belgium, Germany, FSM, UK, DOSI)
- Best Environmental Practices (Belgium, FSM, EU Atlas)
- Best Available Techniques (Belgium, EU Atlas)
- Best Available Scientific Evidence (Belgium)

A consensus procedure to arrive at a consensus desideratum would enjoy broad support.

Belgium suggested that the Authority make clear the relationship between and among these concepts. FSM agreed, and suggested a note explaining why the relevant definitions were chosen. Brazil proposed the development of a manual for good practice in deep sea mining.

Australia noted that "best practice" should not be defined as a static concept but instead as a progressive evolution, particularly in regard to minimizing the impact on the marine environment, similar to the "Best Available Techniques" formulation in DR 13(3)(e). Jamaica observed that "best environmental practices" has been established as an important standard by the exploration regulations and ITLOS and should not, therefore, be subsumed within "Good Industry Practice".

IMMS and TOML said that terms should be defined to ensure that requirements are practical-minded and commercially viable. NORI suggested use of the qualifying phrase "within reasonable technical and economic constraints." MSI suggested reviewing the regulations in light of best practices developed within EEZ. IOM sought clarity on whether a Best Environmental Practice developed by one Contractor will become mandatory for all. IOM also asked what should happen if a Contractor—in particular, a Contractor of a developing State —could not afford to implement a Best Environmental Practice.

Other related terms on which more clarity was requested:

- Environmental Effect; Marine Environment; Mitigate/Mitigation (FSM): NORI and TOML would restrict the term "Environmental Effect" to "material consequences." DOSI recommended that regulations clarify the meanings of "rational management," "sound principles of conservation," and "acceptable levels." A consultative process with broad Stakeholder engagement should be employed "to define aspects such as significant changes, harmful effects, etc." UKSR sought to ensure that the term "Marine Environment" as employed in the draft regulations is congruent with its definition in the Convention. Would genetic resources be included?

- Contract Area; Mining Area; Project Area: Morocco and DSCC seek clarity on the distinctions. DSCC questioned why the term "Impact Area" was no longer employed and noted that the term "Project Area" was not yet defined.

- Rational Management; Sound Principles of Conservation; Acceptable Levels (DOSI).

The Secretariat took note of the discussion on "use and definition of good and best practices and related terms." Stakeholders, he observed, are seeking greater clarity in the content, uses and purposes of "good industry practice," "best environmental practice," "best available techniques," and "best available scientific evidence." "The Secretariat will prepare a short discussion paper for consideration by the Council and the Commission on the use of these terms in national regulatory environments, and also drawing on comments by Stakeholders."

4. DECISION-MAKING

Summary of Submissions

Numerous member States and other Stakeholders called attention to what they believe is a lack of a clear separation of powers and functions among Council, Commission, and Secretariat. Nor is it obvious, they said, which body exercises authority at key stages of oversight and regulation. Some Stakeholders expressed anxiety regarding the capacity of all Commission members to exercise their responsibilities without reference to positions taken, or contracts signed, by their home countries. Others worried that the exigencies of real-life exploitation would present issues that might normally come under the purview of the Council but that required more immediate attention than the infrequency of Council sessions would allow. How can and should the Council and Commission delegate oversight?

4.1 General

FSM, Chile, Morocco, Tonga, UKSR, and Verlaan emphasized the importance of specifying clear regulatory roles and functions for all ISA bodies referenced in the Mining Code. OMS, Australia, and UKSR proposed that new regulations address the potential for real or perceived conflicts of interest within the Authority's decision-making structures. Tonga called for clarifying the types of decisions that can be delegated to the Secretariat and discussing whether to take any action on ISA organs yet to materialize, e.g., the Economic Planning Commission. DSCC suggested assigning specific environmental responsibilities to individual Authority organs. MSI expressed concern that approvals by subsidiary organs (e.g., the Secretariat and Commission) could circumvent the authority of the Assembly.

4.2 Commission

Submissions reflected a range of views on the role of the Legal & Technical Commission. Australia called for a review of its responsibilities and a strengthening of its environmental and scientific capacities. Australia also made reference to the potential for real or perceived conflicts of interest where ISA representatives are from States sponsoring an application under review. Italy questioned the Commission's size and composition.

Australia viewed generally accepted standards of regulatory practices to indicate that environmental and safety requirements be reviewed by one expert body, and financial and commercial considerations by another. New Zealand called for the Commission to establish clear standards of evaluation to help ensure that its recommendations are consistent and transparent. DSCC suggested the establishment of a nonbinding oversight mechanism to review Contractor claims of confidentiality and the rationale of the Commission in granting them.

Japan recommended that the financial terms of an exploitation contract be reviewed by both the Finance Committee and the Commission rather than by the Commission alone (DR 60).

Verlaan noted that DR 58(3)(c) should be revised to reflect that, under the Convention, only the Council (not the Commission) can reject a final Closure Plan.

Various Stakeholders also took note of what they described as a pronounced improvement in the dispatch with which the Commission has recently handled a variety of pressing issues. Congratulations were offered to the new Commission Chair for her strong leadership.

4.3 Secretariat

Brazil called for discussions on whether the Secretariat has assumed authority to address issues more properly addressed by the Council or Commission. Illustrative examples to support Brazil's intervention were offered by Jamaica and Japan (transboundary harm and related compliance notices); DOSI (modifications of a Plan of Work); and Jamaica (determining changes of control). Brazil and DOSI suggested that henceforth the Council and/or the Commission become involved in assessing proposed changes in a Plan of Work. Japan called for oversight of the Secretariat's issuance of compliance notices. Jamaica recommended similar oversight of Secretariat determinations of the adequacy of Contractor insurance.

Singapore agreed that, under ideal circumstances, a Contractor's transfer of rights should not be reviewed by the Secretariat alone. But Singapore also noted that the Council and Commission's infrequent meetings undercuts the claims for enhanced jurisdictional powers.

Various Contractors also argued that practicality requires the Council to invest the Secretary-General with the authority to act on its behalf on time-sensitive matters arising during exploitation (GSR, IMMS, NORI, TOML). TOML added, however, that the Secretary-General should not have authority to direct a Contractor operating in accordance with its work plan to take on new obligations, particularly obligations based on the "vague" concepts outlined in DR 31 concerning optimal exploitation.

Verlaan cautioned that in any case the Secretary-General's authority should not be expanded beyond the "administrative" powers enumerated in UNCLOS 166(3). Jamaica proposed that procedures be developed to expedite independent review of administrative decisions taken by the Secretary-General. MSI suggested a process of administrative appeals. DOSI recommended that DR 56 be revised to ensure that the process for modification of a Plan of Work is conducted transparently and that the Commission become involved in that process. Verlaan suggested that the Commission and the relevant sponsoring State should also be empowered to initiate discussions with a Contractor regarding its Plan of Work.

Argentina noted that DR 41(4) and (5) provided the Secretary-General full access to all Contractor data, information, and samples. But that access is vested in the Authority as a whole. Is there a way to grant access to representatives of the Council and Assembly?

The UK called for the Authority to develop a formal policy on decision-making by the Secretary-General. Such a policy should require the Secretary-General to report annually on regulatory decisions taken by the Secretariat.

Japan suggested that the Finance Committee be involved in any "arm's length adjustments" under DR 76.

The Secretariat stated: *"Effective regulatory compliance and enforcement will require the delegation of certain tasks and duties under appropriate guidance and supervision by the Council. This is an area that will benefit from more detailed discussion of the role, structure and funding of the secretariat. As noted by one Stakeholder, there needs to be an assessment of the types of decisions that can (or should) be delegated, and to whom, and parameters for decision-making need to be set out in a guidance document issued by the Council on the basis of which delegated decisions will be taken."*

In addition, it was noted that the fact that no specific tasks had been allocated to the Economic Planning Commission under the draft regulations should be reviewed. The secretariat will prepare a short discussion paper for the Council to share its thinking in this area.

5. REMPs

Summary of Submissions

On the incomplete evidence provided by off-the-record statements at Council sessions and by formal written submissions thereafter, Regional Environmental Management Plans (REMPs) are regarded as indispensable by many and opposed by none. All Stakeholder submissions that alluded to the subject recommended that no exploitation take place in any region not covered by a REMP. Few Stakeholders described the contents of an ideal REMP, although there appears to be wide support for setting aside Areas of Particular Environmental Interest (APEIs) where mining would be prohibited.

Australia, Germany, Nauru, Tonga, the UK, Sargasso Sea Commission, DSCC, EU Atlas, IOM, DOSI and Singh/Pouponneau endorsed a No REMP/No Mining policy. Others took the position that, ideally, REMPs should be approved before the regions in question are opened to exploration. The UK and DOSI called for an express condition that the Commission not recommend approval of any Plan of Work that did not demonstrate compliance with the relevant REMP. Belgium underscored that REMPs are a "necessary first step towards the precautionary approach." China called for the exploitation regulations to incorporate REMPs. Tonga suggested that REMPs be factored into environmental planning documents and compliance monitoring.

New Zealand highlighted the relevance of the timely development of strategic environmental assessments and plans that incorporate other users of the marine environment. DOSI advised that the Authority prioritize the drafting and adoption an "overarching environmental policy" and that REMPs should be generated based on these large-scale goals and objectives. Nauru noted that REMPs should include large protected areas off-limits to mining and agreed with the UK that regulations should prohibit the approval of contracts in those protected areas. DSCC argued that REMPs should provide a comprehensive framework for managing activities in a region, rather than merely establishing areas of particular environmental interest.

The Secretariat noted a "general consensus among Stakeholders commenting on this point that a REMP should be in place prior to the issue of an exploitation contract." He went on to say that, notwithstanding, a No REMP/No Mining policy "should not be used as an opportunity to prevent the approval of a Plan of Work, either through stalling the development of, or blocking the adoption of a relevant REMP." The Secretary-General encouraged the Council "to consider whether it wishes to create a binding legal obligation on itself to establish REMPs." The Secretariat will prepare a discussion paper on the topic.

The Secretariat invited a small group of Stakeholders to serve on a REMP Advisory Committee to propose standards and timetables for the development of REMPs during 2019 and 2020. The Advisory Committee submitted its recommendations on 12 January, and it is expected that a report will be made before or during the Council sessions in late February.

6. PRECAUTIONARY APPROACH

Summary of Submissions

Most submitters agreed that the Precautionary Approach was a good approach. Some member States and other Stakeholders thought that a better, more exigent formulation was provided by the Precautionary Principle. The challenge, it was agreed, is to embed the appropriate level of precaution within exploitation regulations, Contractor practices, and regulatory activities. There was less agreement on the precise measures and mechanisms that would determine the meaning of "appropriate precaution," and some member States thought that any reference to precaution in ISA exploitation regulations would unduly burden both regulators and those regulated with an imprecise and shifting measurement.

The African Group, Australia, and DSCC urged that precaution be reflected in numerous portions of the draft regulations. Australia suggested that reference also be made to other principles of sustainable development.

The African Group, with the UK, reiterated support for the use of the precautionary *principle* rather than the less stringent precautionary *approach*. FSM suggested including a specific definition of the precautionary approach in the regulations that goes beyond Principle 15 of the Rio Declaration and "gives the precautionary approach more regulatory teeth as well as clarity."

Chile asked if the reference to the Rio Declaration that appears in DR 2(b) was intended to encompass the Declaration's normative content, including its language on thresholds. GSR preferred to define the precautionary approach within the specific context of deep-sea mining rather than the generalities of the Rio Declaration. DOSI called for an ISA standard of precaution to be developed in conformity with the Seabed Disputes Chamber Advisory Opinion that "precaution should be applied where there are plausible indications of potential risks."

The Sargasso Sea Commission, DSCC, and DOSI argued that precaution needs to be applied in all stages of planning and exploitation, and not be confined to the assessment of risk of harm. Reports from Contractors should be supplemented by independent impact assessments of conditions within exploitation areas and in areas adjacent.

A few member States were uncomfortable with the imprecision of "precautionary." Brazil and the Russian Federation suggested deleting reference to the precautionary approach in DR 14(2) in favour of more specific obligations. The Russian Federation also suggested "appropriate rules, regulations and procedures adopted by the Authority" as an alternative formulation.

The Secretariat stated: "[T]he key question to be addressed is *how* the precautionary approach is to be applied...by an applicant, Contractor, the Authority and the sponsoring State or States. To facilitate further discussion of this matter, the secretariat will provide an updated analysis of how the precautionary approach is being applied in the context of the regulations."

7. INDEPENDENT ASSESSMENT OF ENVIRONMENTAL PLANS

Summary of Submissions

There was broad agreement on the potential value of a review of an ISA Contractor's environmental protection plans by a non-ISA entity (a suggestion originally put forward by Belgium). No conclusions were drawn as to ideal arrangements, but member States and Stakeholders agreed that the concept deserves a detailed investigation.

Australia suggested that the proposed DR 12(5)(b) section of the draft exploitation regulations could accommodate a process for seeking, receiving, and incorporating independent advice into the decision-making process. German and Belgian papers on this issue were suggested as useful starting points for further discussion. Regarding DR 11, Belgium recommended three independent reviews for environmental plans, each of which would be made publicly available. DSCC regretted that DR 11 does not provide for the ISA itself to revise Environmental Plans but instead assigns sole responsibility to the applicant. DSCC also called for more opportunities for public review of Contractors' Environmental Plans.

EU Atlas and other stakeholders sought clarification on how experts would be identified. Brazil recommended that criteria be established for their appointment. The Sargasso Sea Commission, DOSI, and DSCC emphasized the importance of independent scientific review of all Environmental Plans, especially the EIS and EMMP. The Sargasso Sea Commission and DOSI recommended that evaluations be open to public scrutiny and that data relevant to EIS preparation be made easily available.

Morocco and DSCC recommended establishing a scientific or environmental committee to advise the Commission, improve transparency and ensure that scientific uncertainties are addressed. The Russian Federation suggested a requirement that expert panels and the nominations of independent competent persons be reviewed and approved by the Authority. The Sargasso Sea Commission advocated a separate expert body with no conflicts of interest.

Jamaica called for transparent processes and geographic-representation criteria in the selection of external experts and raised the possibility of drawing from other international bodies: The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) could be a possible source. GSR, IMMS, NORI and TOML recommended that any independent person or organization assessing a Contractor's EMMPs under DR 50(6) should be mutually agreed upon by the Authority and the Contractor. EU Atlas supported evaluation of EMMPs by independent experts, but suggested clarification as to whether such evaluations will be required for all Environmental Plan documents.

The Secretariat proposed drafting a "short discussion note for consideration by the Council, which will include a suggested mechanism for the selection of experts and related processes."

8. INSPECTIONS

Summary of Submissions

Member States and Stakeholders raised concerns about Part XI of the regulations, particularly in regard to the exercise of ISA jurisdictional competence by means of inspections. The topic of inspections arouses widespread Contractor concern. Who determines the scope and frequency of inspections? What are the criteria for triggering an inspection? Who selects the inspectors, and based on what qualifications? The Legal and Technical Commission has asked the Secretariat to outline mechanisms and consider a code of conduct for the inspectors.

8.1 Selection of inspectors

The UK asked for more details on the selection of inspectors and urged the development of a code of conduct. The Russian Federation called for inspectors to be organized into multinational panels. The Russian Federation also asked for greater clarity regarding the "regulatory authorities" that may be consulted in the event of an incident pursuant to DR 36(3). Italy suggested that each Contractor be required to form a scientific advisory board to secure an integrated system for surveillance and monitoring of mining impacts. The UK and Japan suggested compiling a list of preapproved inspectors. The UK also suggested that those inspectors must act independently of member States, Contractors, and other Stakeholders.

Japan suggested that members of the Commission could be included in the inspectorate. Japan also suggested that DR 95 specify that the Commission be responsible for recommending inspector candidates to the Council and that the Council should decide on the appointments. The African Group suggested that other organs of the ISA might be placed on a parity with inspectors in regard to suspending operations. New Zealand suggested that the Council's authority to suspend or terminate contracts could be extended or delegated to the Secretary-General to allow for immediate action where necessary.

8.2 Jurisdiction

Germany questioned whether ISA inspector powers would be consistent with existing IMO and other maritime security provisions such as the International Ship and Port Facility Security Code. Germany also called for inspection regulations to be made consistent with IMO regulations on ship safety and rights and obligations under existing port and flag State regimes. The UK welcomed further discussion on the jurisdiction of the Authority to make regulations concerning the inspection of premises.

8.3 Sponsoring States and flag States

Australia suggested that sponsoring States—given their obligations and liabilities—share responsibility with their Contractors to assure compliance. Jamaica noted that it could not be

assumed for purposes of ISA regulation that all flag States are member States, or that all sponsoring States can apply criminal sanctions to address threats to, or obstruction of, inspectors (DR 94). The State of the perpetrator corporation or individual may also be the appropriate prosecuting State. It would be helpful if the ISA were to develop a protocol for primary jurisdiction for any prosecution. The exploitation regulations should also provide for the recognition and enforcement of a final judgment of a court of competent jurisdiction in any member State resulting from the institution of proceedings under the regulations.

Kiribati suggested that references be inserted, where appropriate, to enable Contractors to take actions expressly permitted by their sponsoring or flag State's national legislation. Japan noted that a representative of a State or other concerned Party should be able to accompany members of the Commission when on an inspection. MSI recommended that sponsoring States be involved in reviewing and responding to any complaints. MSI also recommended that the Secretary-General take action only on evidence of "material" breaches.

8.4 Inspections and orders

The African Group proposed that transboundary harm be classified as an "incident" or "notifiable event." Any State whose territorial waters or EEZs are thus affected should be consulted in formulating responsive measures. Australia said that the ISA should promptly respond to pollution emergencies, while also upholding the "polluter pays" principle when affixing liabilities. As a general proposition, Japan commented, inspections on a regular basis will not be needed. They should be conducted only when deemed necessary, such as in cases when there are reasonable doubts as to the veracity of the Contractor or when an accident threatens to induce a new and higher level of risk. Japan also recommended that inspection criteria be outlined in the ISA Standards and Guidelines (DR 94).

Australia suggested 1) drawing guidance from inspection schemes in Regional Fisheries Management Organisations (RMFOs); (2) designing a risk assessment process to determine which activities are to be inspected; (3) exploring whether sponsoring States can provide their own observers; and (4) explicitly addressing the role of flag State consent. Australia proposed that inspector powers extend to subcontractors and other providers mentioned in the Contractor's Plan of Work or supporting documents. Australia also proposed expanding DR 97 to include the power for an inspector to prohibit certain activities. Under the current wording of DR 97, instructions lapse after seven days, a limitation that runs the risk of tolerating a serious breach. DOSI and Neptune recommended measures against inspector harassment, with Neptune also calling for protections for Contractor whistleblowers.

8.5 Reporting

The African Group proposed that inspector reports be provided to the Commission and Council under DR 98 and suggested that Contractor annual reports include inspector findings and Contractor responses. Australia suggested that DR 98 should be amended to better clarify the separate reporting obligations of the inspector and the Secretary-General.

Australia also suggested that: 1) the Secretary-General be notified within 24 hours (rather than 72 hours) when a Contractor is required to reduce or suspend production to protect the marine environment (DR 30(4)); 2) contractors be obliged to notify sponsoring States and the Secretary-General within 24 hours of an incident under DR 35(2)(a); and 3) a defined time frame be set for a Contractor to notify the Secretary-General of complaints under DR 36(5). In addition, Australia said, the Secretary-General should be invested with authority to impose a time frame for Contractor compliance on evidence of a breach of any kind. The UK suggested that in instances where a Contractor has been compelled to reduce or suspend production to protect the Marine Environment under DR 30(4), the Contractor not be required to submit a rationale for continuing such reduction or suspension under DR 30(2).

8.6 Monitoring

Tonga encouraged investigations into appropriate monitoring technologies and the administrative and operational costs they would entail. Jamaica suggested that regulations set a timeline for post-closure monitoring. The UK suggested the development of guidelines to ensure satisfactory post-closure monitoring. The UK also suggested guidelines to ensure that environmental data are included in the electronic monitoring system described in DR 100. Belgium recommended expanding the monitoring system to cover "all relevant activities on the involved vessels and of the underwater equipment." Belgium also noted that it will require its Contractors to transmit these data on a daily basis.

8.7 Compliance notices

The UK suggested that the Council be notified of any compliance notice issued under DR 101. Italy suggested general public notification. When a compliance notice has been issued, Jamaica proposed, remedial action should flow from the Council acting on a recommendation of the Commission. PDOD requested further clarification on the requirements for a compliance notice.

8.8 Historical sites

FSM noted that when a Contractor encounters an object or site of archaeological or historical nature pursuant to Article 149 of the Convention and DR 37, the ISA Secretary-General should notify constituencies of relevant indigenous peoples and local communities. China proposed that where a Contractor is required to cease exploitation due to encountering human or archaeological remains, the Contractor be compensated with an alternative exploitation area or a reduction in payments. IMMS recommended the elaboration of a specific timeline for procedures in such circumstances.

8.9 Penalties and liabilities

The African Group awaits the final recommendations of the ISA Legal Liability Working Group to inform member State discussions on penalties and liabilities, but suggested that as a general proposition, the ISA be assumed to possess the legal authority to impose monetary penalties for any breach of contract on a basis "proportionate to the seriousness of the violation," including the loss of ecosystem services. Australia looked favourably on the

penalties specified under DR 101(6). The UK suggested that DR 101(6) also incorporate a duty of restoration. DSCC insisted that enforcement of DR 35 (on preventing and responding to incidents) be based on strict liability, not reasonable foreseeability.

DOSI suggested that the ISA make clear that consequences for failing to conform to the regulations could include contract termination. DOSI also recommended clarifying the term "reasonable action."

8.10 Contractor concerns

Several Contractors expressed concern over the inspection process as drafted. Among the comments: Inspectors with unlimited rights to interfere with exploitation operations could occasion major expenses for the ISA and significant losses of revenue for Contractors (NORI). Inspectors should be obliged to show due cause or evidence of reasonable belief that a violation has occurred (IMMS, NORI). Contractors should be compensated if it is revealed that regulations were not breached (NORI) or if inspectors' instructions were unreasonable, unwarranted, or unjustified (TOML). Contractors should have a right and the means to challenge an inspector's instruction (NORI). Audit and site inspection documents and findings should be held in confidence until a complaint has been adjudicated (MSI). Inspections should proceed only when a Contractor's compliance with the terms of its contract proves difficult to confirm (PDOD).

The **Secretariat** took note of the questions prompting unease among Stakeholders. "The Commission has requested that the Secretariat outline possible inspection mechanisms, interactions with other regulators, and to consider the development of a code of conduct for inspectors (see ISBA/24/C/20 at para. 29). The Secretariat proposes that this outline will also be made available to the Council prior its meetings in February 2019."

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PART TWO:

ADDITIONAL ISSUES IDENTIFIED IN MEMBER STATE AND STAKEHOLDER SUBMISSIONS

1. CONCEPTS, PRINCIPLES, AND DEFINITIONS

Summary of Submissions

Numerous States and Stakeholders deemed it important that exploitation regulations refer to and incorporate certain key concepts and values. The UNCLOS principle of assuring the "effective protection of the marine environment" was cited by many. Additional examples: preventing transboundary harm; accommodating other legal uses; emphasizing the interdependence of the Common Heritage of Mankind and environmental protection; defining "preserve" and "conserve"; describing the characteristics of an "ecosystem-based approach."

Certain terms found in the draft regulations attracted special attention and opinions as to what they mean, what they don't mean, and how they could benefit from clarification or amendment. Examples include: "applicable international standards," "serious harm," "effective control," "environmental effects," "material change," "Stakeholder," and "mining area." Discussion regarding the Common Heritage of Mankind appears in the following section.

Tonga suggested replicating the "due regard" language of UNCLOS Article 87 on the freedom of the high seas in DR 1(4) and explicitly referencing the "common heritage of mankind" language of UNCLOS Article 36 in DR 2(1). Brazil proposed deleting the reference to an "ecosystem approach" in DR 2. Italy questioned the utility of reproducing portions of UNCLOS Article 150 in DR 2(2), and suggested that a simple reference to the article, and an identification of subordinate principles, would be more appropriate.

Tonga also supported an ISA obligation to build the capacities of developing States and thereby enable the effective exchange of information required by proposed regulation DR 3. GSR and Verlaan recommended the deletion of DR 3(g) concerning the provision of information by ISA Contractors to help document the effects of deep-sea mining on terrestrial production; the requirement would be difficult to fulfil on a nondiscriminatory basis. IOM asked how DR 3(f), concerning a duty to cooperate in knowledge exchange, would be operationalized. IOM suggested additional regulations better fit-for-purpose or the establishment of a new administrative function within the ISA itself.

DOSI asked how DR 1(4) could accommodate potential conflicts between commercial and scientific activities planned for the same location.

Australia welcomed reference to the need to protect the interests of developing States currently hosting land-based mining activities, but along with OMS, noted that it was unclear how this principle would be operationalized. OMS noted that any production limits would go against commercially sound principles. MSI and NORI encouraged the Authority to reconsider DR 2(2)(d), relating to the protection of developing countries from serious

adverse effects. MSI suggested this principle is better dealt with under the Convention and the Implementing Agreement.

Several Contractors suggested additional principles to inform ISA management: providing a stable and predictable regulatory regime for attracting investment (NORI); honouring the Convention's commitment to exploitation (UKSR, NORI); increasing the global supply of metals to ensure the availability of non-carbon emitting technologies (GSR); and ensuring that no regulation imposes an artificial disadvantage relative to land-based miners (NORI).

DSCC argued that fundamental principles should be reflected as criteria the Commission considers under DR 14. Germany and the African Group made similar points. DSCC said there must be no derogation from the fundamental principles.

Morocco noted that the terms "reasonable," "satisfied," "optimize," and similar usages require clearer definitions. OMS emphasized the importance of consistency in defining and using terms of reference; care must be taken to ensure internal ISA consistency as well as a common vocabulary shared with other international regulatory regimes. A list of such terms of reference would likely include the following:

- *"Applicable international rules"/"applicable international standards."* Germany proposed that clarifying language on these and other familiar but vague standards be featured in a separate Appendix.
- *"Serious harm."* The African Group requested more information on the source from which the ISA derives its definition of "serious harm" and the basis on which the term was defined. The UK agreed that the term should be clarified. Germany suggested reference to the "serious harm" guidelines issued by the Food and Agricultural Organization. MSI suggested that a distinction be drawn between harmful consequences of approved mining operations that have been scientifically evaluated and "serious harm" beyond that which was approved or authorised. NORI urged that serious harm not be defined in such a way that the definition precludes the approval of virtually any variety of exploitation. NORI noted the importance of the scale of any harm, e.g. regionwide harm as opposed to harm confined to the vicinity of mining operations. GSR, supported by NORI, recommended that "unlawful harm" be the term that denotes harm exceeding what was foreseen in the Contractor's approved Plan of Work. TOML proposed that "harmful effects" should only describe damages that "significantly exceed those permitted under the exploitation contract." Belgium sought clarification of the threshold for "serious damage" to property under DR 48(2), as do PDOD and Neptune. DSCC said "significance" should be elaborated.
- *"Effective control."* Argentina emphasized that a proper definition of effective control would reflect economic and material realities as well as narrowly construed legal issues. Jamaica noted that a change of effective control of operations carries with it a potentially significant impact on State sponsorship. DSCC said that a satisfactory definition should take into account potential changes in de facto control from the original sponsoring State to another (likely involving a shift of majority shareholders),

and that the ISA should be clear as to the changes in circumstance that would amount to a transfer of sponsorship.

- *"Material change."* NORI would restrict the use of the term to a change that is "significant." GSR and UKSR expressed concern about the imprecision of the phrase.
- *"Monopolize."* The Russian Federation and Jamaica both noted the challenges of defining and operationalizing the anti-monopolisation provisions of UNCLOS. GSR recommended that the Legal and Technical Commission conduct a study of foreseeable market conditions and the capacity of any ISA Contractor or sponsoring State to effectively monopolize the supply of any mineral to the world market.
- *"Stakeholder."* IMMS suggested that the definition of an ISA Stakeholder should apply only to "persons or an association of persons with a direct interest in—or who may be directly affected by—proposed or existing exploitation activities under an approved Plan of Work in the Area." NORI would restrict Stakeholder status to persons with current or future interests in an ISA-approved operation. TOML suggested similar language. DSCC supported the current, more inclusive definition.
- *"Vessel"* and *"installation."* Italy proposed "disambiguating" these two terms often used as if they were equivalent. The definition of "installation" should be carefully restricted.

2. COMMON HERITAGE OF MANKIND

Summary of Submissions

Though highlighted in the Secretary-General's briefing note, the Common Heritage of Mankind (CHM) is not scheduled as a topic of discussion for the next Council meeting. The importance of the principle of the Common Heritage of Mankind as proclaimed in UNCLOS was noted in submissions by both member States and observer groups. How the ISA can operationalize the principle and whether and how exploitation contracts can provide a vehicle for that operationalization remain open questions.

Jamaica noted the importance of *sustainable* development of the resources of the Area; CHM encompasses intergenerational equity. Guidelines should be developed to assess whether a proposed Plan of Work provides benefits to mankind as a whole (DR 12(4)).

China and PDOD said that fidelity to CHM dictates that a benefit-sharing mechanism be inseparable from a payment mechanism. Benefit-sharing is needed to provide assistance to developing land-based producer States and to optimize environmental protection (e.g., through the establishment of an environmental liability trust fund.) China also suggested that payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles, as provided in Article 82 of the Convention, should become a part of an overall benefit-sharing mechanism. PDOD called attention to recent BBNJ discussions on benefit-sharing of marine genetic resources. Argentina and Morocco urged that the ISA payment system provide equitable compensation for the exploitation of the common heritage.

Argentina suggested a fee structure along the lines recently proposed by the African Group and supported amending DR 12(4) to empower the Commission to review Plans of Work with regard to their contributions to "realizing benefits for mankind as a whole." Verlaan demurred. She argued that Commission review of a Plan of Work's contribution to CHM would be difficult to apply consistently and would place a disproportionate burden on Plans of Work.

The Sargasso Sea Commission emphasized that consideration of applications should take note of other forms of benefits to CHM: ecosystem services, conservation values, scientific knowledge, and the preservation of options for future generations. DOSI suggested that the Commission's assessment of an application include an itemization of the benefits the Commission will examine to determine net benefits to humanity.

DOSI and EU Atlas agreed that, with respect to DR 48(2), concerning action necessary for the safety of life or preservation of property, the property of a Contractor should not be considered more valuable than the common heritage of the marine environment of the Area. The Sargasso Sea Commission suggested that CHM be incorporated into the regulations

concerning reasonable/due regard to other users (DR 33), obligations relating to the marine environment (DRs 46-50), and the financial terms of an exploitation contract.

The Secretariat noted: *Stakeholders highlighted the importance of recognizing the common heritage of mankind throughout the regulations and the need for its clearer operationalization in the regulatory provisions. Stakeholders acknowledged that some progress had been made in strengthening the regulatory framework (ISBA/24/C/20, para. 6). There remained calls for continued examination, as well as a note of caution that the regulatory text must be precise and specific to facilitate its practical implementation and enforcement (see, for example, the comments on draft regulation 12(4) in paragraph (5) of the annex to the present note).*

3. TIMELINES AND CONTRACTS

Summary of Submissions

Though highlighted in the Secretariat's briefing note, this topic is not currently scheduled for discussion at the next Council meeting. Some member States and observers voiced concern that the proposed regulations would impose timetables that may not permit an appropriately thorough examination. Some prospective miners are concerned that the Commission and Council will not be able to review applications in a timely manner.

Australia offered a series of linked recommendations on the time available to the Commission to review contract applications. In general, the Commission should have more time at various stages of its contract application review process. The Commission should be afforded a minimum of 90 days to review contract applications and be empowered to delay meetings or reports when faced with particularly complex applications. Applicants should be required to observe deadlines for the submission of additional information called for by the Commission under DR 12(5)(d). In this regard, IOM also noted that under DR 15 (concerning amendments to proposed Plans of Work), the Commission could be put in the position of having insufficient time to review Plans of Work for which amendments have been requested.

The UK, IMMS, and IOM noted the importance of workable time frames, particularly given the Authority's annual meeting schedule. IMMS and NORI were concerned that awaiting Council approval could substantially delay operations. NORI and GSR recommended intersessional reviews enabled by virtual-meeting technology. IMMS suggested that the current application process was too long, while NORI calculated that the current application process would take up to 322 days. UKSR noted the importance of providing real-time responses to important questions and issues posed by Contractors or other Stakeholders. GSR recommended that a Plan of Work be deemed accepted were the Council to fail to make a decision within 60 days. Belgium recommended that regulations specify the meaning of the phrase "from time to time."

As to the renewal of a contract, Jamaica suggested that sufficient time be allowed to enable the Commission to conduct a comprehensive review. It should be made explicit, Jamaica said, that the Commission can recommend nonrenewal. The UK noted that it was not yet clear who would circulate documents related to a renewal, and suggested that a proposed renewal be accompanied by public consultations to address any changes to the magnitude or duration of environmental impacts. DSCC recommended that a Contractor's record on environmental protection should constitute a crucial factor in contract review decisions under DR 21.

DOSI shared Australia's concern that the submission of an application 30 days before a Commission meeting would not afford sufficient time for appropriate consideration. DOSI called for clarification of the time when the Commission begins its review. With respect to

DR 49(a), monitoring and reporting on environmental effects, DOSI recommended that monitoring reports specify the times covered. IOM noted the lack of a deadline for submission of a final performance assessment report.

The Secretariat took note of concerns that the timelines envisaged for the application process last too long and induce too much uncertainty. Part of the problem is the lack of predictability caused by the mutable schedules of ISA decision-making bodies. The Secretary-General took note of stakeholder comments questioning the practicality of current arrangements. “This is a matter the Commission will keep under review [as well as] its link with the institutional functioning of the Authority.”

4. ROLES AND RESPONSIBILITIES

Summary of Submissions

Representatives of ISA member States, and particularly representatives of developing countries, sought more information and counsel on how to apportion regulatory responsibilities among Stakeholders, a challenge compounded when an ISA member State relies on external partners to conduct mining operations, transport ore, or process ore into marketable commodities.

The African Group, Morocco, and Nauru requested information on the interrelated legal responsibilities of sponsoring States, exploitation Contractors, flag States, and the ISA itself. How would responsibilities be apportioned during exploitation? How would responsibilities be discharged on the termination of a contract or transfer of obligations?

The African Group expressed concern over the possibility of damage to the EEZs and territorial waters of coastal States occasioned by ISA-approved exploitation in the Area. The African Group suggested that the Authority assume a primary regulatory role and sponsoring States should render assistance in monitoring potential harm to coastal State waters. Jamaica suggested that the role of sponsoring States, distinct from but complementary to the roles of the ISA and flag States, be detailed in the exploitation regulations, particularly in relation to questions of environmental management. Jamaica also suggested that flag States be included in the obligation to cooperate (under DR 3). In reference to DR 46 (general obligations relating to the Marine Environment), Singapore was concerned with possible duplications of work by various actors, and suggested that a matrix of responsibilities could be useful.

FSM called for more stringent requirements for sponsoring States, going well beyond minimalist definitions of "due diligence" and encouraging sponsoring States to adopt a more proactive approach to compliance. Argentina suggested expanding DR 103 so that sponsoring States failing to take measures to ensure effective compliance "will be liable to incur international responsibility in accordance with applicable international regulations."

China and Jamaica questioned the appropriateness of DR 31(4), which calls for member States to provide information on the processing, treatment and refining of ore from seabed mining that occurs under their jurisdiction and control. The draft regulation lies outside of the Authority's mandate under UNCLOS, China and Jamaica agreed. Singapore suggested clarifying the role of the sponsoring State in the Training Plan. Singapore also requested more information on the extent of sponsoring State participation in review of Plans of Work under DR 56. In particular, would a sponsoring State require an invitation by the Secretary-General to participate in the review or could the participation be self-initiated? DOSI recommended revising DR 56(2) to require (rather than allow) the Secretary-General to invite the sponsoring State to participate in the Plan of Work review.

Tonga suggested the creation of a process for sponsoring States to withdraw sponsorship and for Contractors to find a new sponsor. Tonga and IOM noted that the sponsoring State's consent should also be required when transferring rights and obligations. IMMS suggested adding a requirement that sponsoring States specify the reasons for which sponsorship may be terminated. The Russian Federation called for discussion on setting a limit on the term of obligation of a sponsoring State after termination of its contract or sponsorship. China stated that the exploitation regulations should impose no additional obligations on sponsoring States, and suggested adding a reference to the 2011 Advisory Opinion to support that position. The UK proposed that DR 22, concerning termination of sponsorship, include an obligation for post-termination environmental monitoring.

Upon termination of a Contractor's state sponsorship, Brazil suggested, Contractors should be granted a one-year grace period to secure sponsorship of another State. Singapore and DSCC thought that a one-year grace period would be too long. Chile emphasized that each Contractor should ensure its sponsorship; a Contractor mining without State sponsorship should be considered unacceptable.

Verlaan suggested that DR 22(7) be reconsidered and rewritten: The proposed regulation does not clarify how a Contractor can remain responsible and liable for performance if State sponsorship is terminated. IOM sought clarity on how a consortium of multiple sponsoring States would be bound under the proposed regulations, particularly in regard to terminating sponsorship, using an exploitation contract as security, or complying with the laws of more than one sponsoring State. DSCC said that a Contractor's record of performance should be reviewed carefully before that Contractor be permitted to accept new State sponsorship.

MSI suggested that further clarification is needed on how State sponsors and the Authority should cooperate on liability questions. MSI noted that UNCLOS 139(2) provides that where a State acts together with an international organization, each party shall bear joint and several liabilities for damages.

PDOD noted that the Authority needs to strengthen coordination with other international organizations and encourage information exchange. Food and Agriculture Organization of the United Nations (FAO) and ICPC were suggested as particularly appropriate candidates for such outreach efforts. The IMO reported that it had engaged in fruitful discussions with the Secretariat—particularly on clarifying the roles and responsibilities of the Authority and sponsoring States—and looked forward to further exchanges.

The Secretariat noted that the ISA is "preparing two matrices of responsibilities to show the interfaces between the Authority and sponsoring States, and between the Authority and flag States. These matrices and a related narrative will be made available to the Council and the Commission before they meet in July 2019".

5. RIGHTS OF COASTAL STATES

Summary of Submissions

Multiple Stakeholders agreed that detailed provisions are needed to secure the rights of coastal States, including their rights when ISA-sanctioned mining takes place close to their Exclusive Economic Zones (EEZs). The African Group, supported by individual African nations as well as Pacific Island States, proposed extensive recommendations.

Among the measures recommended for inclusion in the ISA exploitation regulations:

- Lowering the threshold for mandatory notification of coastal States by the ISA of any potential for "serious harm" or "adverse impacts" from mining in the Area. The relevant ISA Contractor would bear the burden of demonstrating that no serious harm will occur (African Group, Jamaica, Nauru, FSM, Tonga, DSCC).
- Developing a robust consultation process wherein the ISA reaches out to potentially affected coastal States (African Group, Singh/Pouponneau).
- Requiring ISA inspectors to provide instructions to coastal States on how to recognize, prevent and rectify any occurrence of transboundary harm (African Group).
- Specifying that consideration of possible transboundary harm be evidenced in all ISA environmental planning documents and all ISA regulations concerning monitoring, enforcement, and remediation (African Group, DSCC).
- Recognizing the rights of coastal States to dispute resolution (African Group).
- Requiring would-be Contractors to notify neighbouring coastal States when submitting an ISA contract application (Nauru).
- Establishing Preservation Reference Zones and Impact Reference Zones at strategic points where transboundary harm might be more easily detected. (Singh/ Pouponneau).

FSM noted that knowledge from indigenous peoples and local communities is commonly sought in other international regimes. A parallel series of consultations for ISA Contractors could provide mutual benefit. FSM urged that "the long-standing cultural and spiritual connections between indigenous peoples and local communities and the Ocean must be respected by Contractors, sponsoring States, and the ISA." The Sargasso Sea Commission suggested that the right to bring to the Secretariat's attention evidence of a risk or threat of serious harm (as provided in DR 4) should be afforded to all States and Stakeholders, and not be limited to coastal States.

6. CONTRACT REVIEW AND APPROVAL

Summary of Submissions

The contract review-and-approval process that will oblige would-be deep-sea miners and the ISA will be routinely complex. Most of these complexities are described in detail in the most recent draft exploitation regulations. Disagreements have emerged as to the nature and frequency of contract-application reviews and renewals and the particular responsibilities of Contractors and the ISA to protect the marine environment in the light of evolving scientific evidence.

6.1 Preliminary assessments

Member States suggested several additional preliminary requirements and amendments to strengthen the review of applicants. Under DR13, Germany proposed that licenses and evidence of successful test mining be considered prerequisites for exploitation, with licensing procedures governed under a separate set of regulations. Germany also recommended that an independent and legally binding scientific monitoring strategy be incorporated in any Plan of Work, with explicit permission for third parties to conduct their own environmental impact studies.

Australia and Jamaica suggested adding a provision empowering the Commission to determine if an applicant has a satisfactory record of past performance in the Area or elsewhere. Tonga suggested that the application materials listed under DR 7 should include information on "economic viability" to ensure consistent interpretation. GSR also called for a clearer definition for the criterion of "economic viability" and questioned who would determine whether it has been credibly demonstrated. Verlaan expressed concern that the regulations might empower the Authority to make commercial judgments without corresponding support for such judgments in the Convention.

The Russian Federation suggested that the Authority clarify whether applications will be reviewed in the order in which they were submitted. Japan proposed that applications for consent to receive transfers of rights and obligations under DR 24 should be given priority. Brazil and Japan would restrict exploitation applications to those applicants who have conducted exploration activities under an exploration contract, with Brazil noting the lack of clarity on whether exploration work is permitted under an exploitation contract.

The UK suggested that the Secretary-General not be required to offer written justification for requesting missing documents in the preliminary review of applications under DR 10; the proposed regulations are sufficiently clear as to what information is necessary.

Germany asked for clarification as to whether an applicant is expected to submit both a Plan of Work and a feasibility study; without a feasibility study, it may prove difficult for an applicant to demonstrate economic viability. Australia suggested that the Commission have

the right to reject consolidated documents for multiple mining areas under DR 7 if it first determines that consolidation is inappropriate. Brazil disagreed: An applicant proposing noncontiguous mining areas should have a choice as to whether to submit separate plans for each area or submit one plan to cover all proposed areas. DOSI suggested that the regulations should clarify that the Secretary-General may direct an applicant to revise Environmental Plans during their consultation envisioned under DR 11(1)(c).

6.2 Criteria for approval

Member States proposed additions and amendments to the criteria for assessments of proposed Plans of Work by the Commission and Council under DR 13-17.

Italy and the UK suggested that the Commission's assessment of applicants under DR 13 should take into account the need for protection of the marine environment. Under DR 13(3)(a), concerning the Commission's evaluation of an applicant's technical and operational capability relative to Good Industry Practice, GSR and Verlaan noted that all personnel should be adequately supervised—the qualifier "where applicable" should be deleted. Nauru noted that the regulations should include requirements for the applicant to identify the predicted "'impact area," "preservation reference zone," and "impact reference zone."

The African Group noted that the Commission's assessment of Environmental Plans under DR 14 should consider whether all environmental obligations under UNCLOS have been met (beyond those enumerated under Article 145). The African Group and DSCC also urged that the Commission consider whether a plan provides for the Common Heritage of Mankind.

Belgium, the UK, and DSCC recommended that the regulations include a brief description of the various grounds for the Commission's rejection of an exploitation application. Nauru wanted to ensure that such various grounds include failure of the applicant to present persuasive evidence of a capacity for, and a commitment to, environmental protection. The African Group proposed that the Commission assess the Plan of Work's potential for causing transboundary harm. New Zealand suggested that DR 14 be expanded to specify matters that the Commission should take into account when it considers the capacity of an applicant to ensure the effective protection of the marine environment.

The UK queried whether under DR 15 an applicant would be able to offer amendments to its proposed Plan of Work on its own volition to account for developments following its submission. Also, the UK suggests an applicant should be allowed to provide additional information should the Commission determine that the information in question could be readily provided.

IOM noted that DR 15(1)(b) and DR 15(2) appeared to contradict each other insofar as the Commission can propose amendments but the applicant can reject them.

Germany asked for more clarity regarding the purposes and functioning of DR 16, which includes a list of grounds that would prevent the Commission from recommending approval. Australia called for an explicit statement that an application determined by the Commission to not meet the regulations' criteria would not be permitted to proceed to the Council. The African Group proposed that the regulations clearly describe who is entitled to appeal an approval or disapproval of an application of a Plan of Work.

The African Group noted that criteria for assessment could include factors external to an applicant or specific application, such as the number of exploitation contracts awarded in an area. The Russian Federation called for study of the Commission's ability to introduce new objections to a resubmitted application under DR 16. MSI noted that it should be clear that projects will be approved on a commercial basis, and that subsidization by a host country for political (or other) reasons is not permitted.

The Sargasso Sea Commission noted that an application should not be approved if the EMMP cannot show that activities will be managed to ensure effective protection and prevent serious harm. Grounds for approval or nonapproval should be carefully spelled out in DR 15 and DR 16, and be specifically addressed in any recommendations for approval or denial.

6.3 Consultation on applications

The UK suggested a requirement that the applicant consider any comments received and, where the applicant considers it appropriate, make corresponding amendments to the application. This would, presumably, include comments received from experts (see above regarding "Independent Assessment of Environmental Plans"). The African Group, Nauru, and DSCC proposed that the Commission be encouraged under DR 14 not only to consider Stakeholder inputs, but also to *respond* to Stakeholders as to how their inputs were considered. This response should include a generalised summary, if individual responses prove impractical. The UK further suggested that the Commission produce a decision document setting out its bases for concluding that an environmental assessment is sufficient.

DSCC called for developing procedures to facilitate and weigh public comments on EIAs. DOSI noted that the regulations should clarify both the process by which Stakeholders will be notified of the posting of an EIS, EMMP, and Closure Plan, and whether comments from Stakeholders will be made public.

6.4 Due regard

Member States expressed a broad range of views regarding the duty of due regard for other users of the marine environment and their relevance during the application process. Australia called for further investigations to ensure that all other legal users are taken into account. Tonga noted that under DR 17, the exclusivity of Contractor rights must be subject to "due regard" of other marine users. The Sargasso Sea Commission suggested that ISA regulations should establish specific provisions requiring prior and ongoing consultation.

New Zealand called for more detail in DR 33 regarding the information applicants must provide to other users of the marine environment. Germany noted that the rights of the Contractor should not impede marine scientific research. NORI indicated that marine scientific research should not be allowed to disturb a Contractor's Preservation Reference Zone, nor interfere with exploitation activities. IOM noted that regulations on scientific research are urgently needed, and that the introduction of a reporting system could address inconsistencies under DR 19(3). PDOD recommended that the Authority strengthen cooperation with other international organizations through information exchanges that could help inform Contractor operations, and suggested that the Authority issue guidelines on "reasonable regard" to assist applicants when submitting their Plans of Work.

Australia, France, and the ICPC all suggested that ISA regulations offer specific guidance to evaluate and minimize risk to submarine cables and pipelines. Easements or protected zones deserve consideration. Kiribati also called for the ISA to take more proactive responsibility for the protection of cables rather than devolving that responsibility to ISA Contractors.

China took a different position. It recommended the deletion of DR 33(1)—which specifically mentions cables and pipelines—as overly broad, unnecessarily selective, and redundant in light of existing obligations incurred under the Convention and ISA environmental planning documents. NORI suggested that cable owners have a reciprocal obligation to provide the Authority with details of their cable locations and to notify ISA Contractors operating nearby.

FSM emphasized that Contractors must also exercise reasonable regard for "traditional, instrument-free navigation by indigenous peoples and local communities on the open ocean."

6.5 Review, modification and amendment

Germany proposed that a review mechanism for Contractor activities under DR 56(2) include members of the marine scientific community. The UK questioned whether reviews at five-year intervals are sufficiently frequent and also suggested that reviews expressly include environmental responsibilities.

Jamaica suggested that guidelines describe examples of "non-material changes to a Plan of Work", and both Jamaica and Japan agreed that the Secretariat should be empowered to approve such non-material changes. The UK proposed that, under DR 55(1), a rationale be provided as to why a particular change doesn't rise to the level of "material."

New Zealand underlined the importance of subjecting material changes to public notification and further consideration by the Commission. DSCC suggested that the Secretary-General be empowered to recommend material changes to a contract subject to Commission review. DSCC also suggested that contracts be revised when regulations are amended, new circumstances arise, or new information comes to light.

Emphasizing the importance of certainty and predictability, UKSR urged that the Secretary-General *not* be invested with unilateral authority to propose, make, and enforce non-material changes to individual Contractors under DR 55(4). NORI stated that, provided a Contractor is not causing unlawful harm and honours the contract conditions as originally approved, that Contractor should be free to continue to carry out its Plan of Work. GSR suggested that the definition of "material change" should exclude requirements to add to, or modify, information contained in documents submitted under an approved Plan of Work or to adopt alternative technologies already considered in documents submitted with the approved Plan of Work.

7. RIGHTS AND OBLIGATIONS OF CONTRACTORS

Summary of Submissions

It is a signal challenge for the regulators and the regulated of an embryonic industry to strike an initial balance of rights and duties that must later be recalibrated in the light of early experience. Because the ISA's first-generation miners will be in the position of making mistakes and providing lessons for the benefit of future competitors, the "pioneer Contractors" and their supporters advocate special inducements. In the context of the high conservationist language embedded in UNCLOS and the influence of ISA member States committed to exigent environmental regulation, the primary inducements to the first set of exploitation Contractors will probably not take the form of relief from environmental obligations. Special financial incentives will likely be offered to pioneer miners, though none have been specified. One outstanding point of contention is the proper term of years for exploitation contracts and, therefore, the frequency and degree of Contractor obligations to modify operations in the light of new scientific information. There is also no discernible consensus on how to deal with Contractor noncompliance, at least in the first instance. The question of the proper ISA response to the possibility of a transfer of Contractor rights and assets has been raised but not addressed adequately. There also remain key unanswered questions as to rights and obligations on transferability, liability, insurance, training obligations, safety and health standards, reporting requirements, record keeping, and administrative reviews. All are briefly touched upon in the following pages.

7.1 General

Member States commented on several aspects of Contractor rights and obligations. As a general proposition, Japan commented, regulations should not be so overly burdensome that Contractors are discouraged from undertaking exploitation. In regard to near-term operations, Japan recommended flow charts that depict the order of Contractor procedures to be followed and the regulatory-compliance products to be produced. Specific references should be made to compliance notices and Environmental Impact Assessments. Several exploration Contractors emphasized the need for regulatory certainty and predictability (GSR, IMMS, NORI, OMS, TOML, UKSR). IOM sought further clarity on the role, rights, and obligations of a multinational mining consortium, and whether the designation of a lead member of the consortium will be required. PDOD noted that the range of domestic and international laws and regulations referred to in DR 45, regarding compliance with other laws and regulations, is both vague and redundant, because Contractors are already in compliance with the domestic laws of their sponsoring State.

7.2 Duration and renewal of contracts

The Russian Federation called for an amendment to DR 21(1) on contract duration to include a reasonable time period for the construction and testing of new commercial-scale mining and processing systems in advance of industrial production. Article 17(2)(b)(iii) of Annex III of UNCLOS was presented as evidence of the appropriateness of such an

approach. Italy voiced dissatisfaction with the duration of a license period, noting that DR 21 does not establish a ceiling on the allowable number of extensions. Contract terms, said Italy, should be limited to the time needed for efficient mining of the contract area. Kiribati recommended reducing the contract term to 10 years (with extension rights) to assure optimal environmental management. IMMS suggested that the initial contract period should be 30 years, while NORI explained that a contract term longer than 30 years would be needed to provide 30 years' worth of exploitation.

Nauru noted that the renewal process specified in DR 21 may be overly inclined toward renewal. Instead, Nauru suggested, a contract renewal should require a new Plan of Work and a corresponding assessment of its benefit to mankind and its effective protection of the environment—while also giving weight to the Contractor's record of compliance. The UK suggested that a new or updated Environmental Impact Statement should accompany any plan for a contract renewal. TOML and NORI recommended 15- and 20-year renewal periods (rather than a 10-year term) to encourage new investments and improvements in technology.

DOSI recommended that the ISA not convey any impression that the renewal of an exploitation contract can be regarded as an easily relied-upon expectation. New scientific information should inform all renewal decisions. DSCC observed that a long contract period, streamlined renewal processes, and a presumption of ecological sufficiency would be contrary to the long-term needs of environmental protection as mandated in UNCLOS.

7.3 Commencing and conducting mining

Australia suggested that DR 28 be amended to include a requirement for the Contractor to notify the Secretary-General, who in turn must notify member States, in particular any neighbouring States, of the commencement and location of mineral exploitation. Jamaica suggested that the ISA be empowered to terminate a contract under DR 29 upon presentation of evidence that work has been suspended for 24 months or more. Jamaica also suggested that the regulations detail more stringent procedures following a Contractor's failure to adhere to the timetable established in its Plan of Work. Jamaica further queried whether the Authority can require Contractors to adhere to specified levels of commercial production or intervene if inefficient mining practices are identified.

Chile suggested that the Council set limits on the overall volumes of the extraction of different minerals so as not to alter dramatically the balance of established markets with a large new supply. In the case of copper, Chile suggested, a reasonable limit on deep-sea supply could be set at 1 percent of the world's land-based copper production during the previous year. IMMS countered with a proposal that there be no limit on production rates as long as Contractors are complying with their Plan of Work, environmental impacts are not exceeding those permitted, and there is no evidence of a material safety risk. OMS also opposed any production limits. The UK suggested that DR 31(1), concerning optimal production, should be updated to include a reference to the need for protection of the marine environment.

DSCC proposed that, contrary to the suggestions made by Jamaica, any Contractor should be able to suspend or reduce production at its own discretion.

7.4 Exploration in exploitation contract area

China suggested deleting DR 19(7): A Contractor will already have paid annual fees or royalties based on its exploitation contract and therefore any exploration carried out in the Contract Area should be regarded as preparatory and incidental to exploitation. India suggested that the Authority consult with the Contractor before allowing exploitation of a different resource than those specifically permitted in its contract.

7.5 Security and transfers

The Russian Federation proposed further discussion of rights under an exploitation contract transferred as security (DR 23) as well as the possibility of transferring contract rights separately from contract obligations (DR 24) and the effects of insolvency of a Contractor, including consideration of their rights in insolvency proceedings (DR 25). The Russian Federation proposed deleting the provision in DR 24 that effectuates a transfer upon publication in the seabed mining registry. The UK suggested that DR 24 incorporate a precondition of sponsoring State consent, or State consent to take up the obligations of the sponsoring State, prior to any transfer approval. Singapore suggested that it would be both unnecessary and inappropriate for a sponsoring State to provide security under DR 23. FSM stated that in cases where contracts are used as security, ISA regulations should clearly state that the new beneficiary shall comply with all ISA rules, requirements, and obligations.

IMMS recommended deleting DR 24(10), regarding the terms of a transferee's exploitation contract, as unclear and potentially contradictory to contract obligations. GSR, IMMS, MSI, and NORI suggested that an approved contract's terms should be transferable. MSI sought more clarity on the term "change of control," particularly if a Contractor participates in an initial public offering. NORI noted that DR 24 and DR 25 appear to require financiers to accept exploitation contract terms at the time of transfer rather than at the time of financing. If so, such provisions would be inconsistent with contract clause 14.3. NORI did not agree that a "change of control" should necessarily be treated as a transfer requiring a new contract (DR 24(10)).

UKSR asked if DR 24 would apply to all parties under the Code, no matter whether entities are in partnership with the Enterprise or operate as standalone Contractors. DR 24 should be revised to ensure that transferees undergo the same procedures and examination as applicants, DSCC said, and suggested that the definition of "change of control" in DR 25 should be revised to recognise that a percentage change in ownership smaller than 50 percent can lead to significant changes in control and that any changes in control must be reflected in annual reports.

DSCC also said that third parties should satisfy all applicant requirements and evaluations before obtaining mining rights, and that the provisions in DR 24 on transferring rights and obligations should be strengthened accordingly.

7.6 Insurance

Germany, Italy, China, the Russian Federation, and UKSR pointed to a need to clarify DR 38 regarding insurance. Italy inquired about the kinds of damages such insurance should cover, the intended scope of such coverage, and its relationship with the guarantees given in DR 27 and DR 52. The Russian Federation called for clarification regarding criteria that would identify "internationally recognized and financially sound insurers satisfactory to the Authority," and the scope of a Contractor's duty to incorporate waivers of recourse against the Authority in their insurance. Rather than a "fundamental term," the Russian Federation proposed that insurance be made a "prerequisite" to an exploitation contract. Singapore noted that regulations on performance guarantees and insurance should create a level playing field and an effective market. UKSR encouraged the Secretariat to reach out to the insurance industry to better understand its capacity to support Contractors and their ability to comply with DR 38. TOML said that the requirement to secure a waiver by underwriters against any rights of recourse against the Authority may be unacceptable to most potential underwriters. DSCC said that the Authority must have the ability to require certain clauses and require the deletion of others.

7.7 Training obligations

The African Group called for a Contractor requirement to provide capacity building and training opportunities for citizens of developing countries in environmental management of seabed mining, particularly the preparation and analysis of Environmental Impact Assessments, baseline studies, or formal reports. The Russian Federation took a different view and suggested the deletion of the training programme requirement. Germany supports more and better training opportunities but regarded DR 39 as overly vague.

7.8 Safety, labour and health standards

The UK applauded DR 32 regarding safety, labour and health standards, and suggested that Contractors provide information to the Commission on their compliance with the provisions therein. Australia called for significant work on the draft regulations pertaining to safety, noting that essential components of the regulations should include design and process safety, details on the content of the health and safety plans, and provisions on dive safety. The Russian Federation suggested updating DR 32, first to avoid any confusion over "national" and "flag State" laws, but also to clarify that compliance with international norms and standards is necessary in addition to compliance with those of the flag State. Japan recommended a new provision in Annex VI under which contracting parties would share intelligence of any imminent dangers or risks. Jamaica called for the regulations to reflect the hierarchy of importance of protecting (in order): human life; the marine environment; and private property.

7.9 Reporting

The African Group proposed that annual reports be published in the seabed mining register. The Russian Federation asked for more clarity as to what information should be included in these reports regarding "changes made in connection with subcontractors." India suggested

that the annual report not include details of the volume of mineral resources produced. The Russian Federation also called for the addition of several items, including information on the relevant sponsoring State, all changes and additions to a Contract, transfer of rights and obligations under a Contract, any changes to terms of sponsorship, and any possible encumbrances. MSI called for more detail regarding the administrative procedures and roles of the mining register. NORI observed that the list of notifiable events in Appendix 1 includes many potentially minor or insignificant events and suggested a more reasonable set of reporting requirements.

7.10 Record keeping

China suggested that DR 72, concerning books and records, clarify the period for which such books and records must be maintained. Japan pointed out the difficulties of keeping core samples in good condition (see DR 41) and that therefore preservation obligations should be addressed in coordination with specialist agencies. TOML suggested qualifying the record-keeping obligations to apply "to the extent practical." DOSI urged the Authority to develop a policy on data and information management and suggested that DR 41(5) should define the term "reasonable notice" to clarify the length of time within which Contractors will be required to provide access to data, information, and samples.

7.11 Administrative review and dispute resolutions

FSM expressed its view that disputes must be resolved in accordance with the dispute settlement mechanism under Part XI, Section 5, of UNCLOS and its concern that an administrative review mechanism could be abused to delay or prevent full and proper litigation. FSM suggested the formation of a standing body of technical, legal, and scientific experts to assist the Seabed Disputes Chamber of ITLOS in screening cases. Jamaica called for consideration of an optional alternative system or the ITLOS special rules of procedure to accommodate expedited hearings, enhanced transparency, and the possible participation of third parties. The UK welcomed these approaches to operationalize Part XI, Section 5 of UNCLOS. DSCC suggested that there might be a place for a nonbinding resolution or fact-finding mechanism to facilitate efficiency without affecting the right to bring a case under the Convention.

8. Effective Protection of the Marine Environment

Summary of Submissions

Most of the formal comments on ISA environmental protections consist of brief submissions by member States on the importance of marine conservation (as mandated by Article 145 of UNCLOS). Often lacking are more systematic investigations of the *effectiveness* of conservation measures and how those lessons learned can be put to service in these early years of ISA's run-up to exploitation. This section describes stakeholder recommendations for effective environmental protections to be built into the administration of ISA affairs.

8.1 Objectives and policies

Tonga, DSCC, and DOSI agree that a clear set of strategic environmental goals and objectives would provide a useful tool in the development of ISA regulatory machinery. DSCC recommended adopting strategic objectives from other regulatory bodies and emphasised mainstreaming the fundamental principles throughout the regulations, as did Germany and the African Group. DOSI and the Sargasso Sea Commission recommended that the ISA adopt an overarching environmental policy before developing the particular applications of that overarching policy. DOSI also emphasised the importance of developing and articulating plans for developing environmental objectives, targets and metrics, as well as expected standards. DOSI further noted that the regulations should be revised to add further discussion on amending plans in light of new information, including on damages and APEIs. EU Atlas noted that whether environmental objectives and standards are defined by the Contractor or the Authority needs to be clarified. Belgium recommended the Authority consider establishing a contact group to liaise with the BBNJ process.

8.2 Scope of environmental obligations

Chile urged the Authority to establish environmental requirements similar to those proven as valuable in terrestrial mining. The Russian Federation called for amending DR 46 - the general obligation to protect the marine environment - by substituting a more specific duty to ensure effective protection "in accordance with the appropriate rules, regulations and procedures adopted by the Authority in respect of activities in the Area." FSM urged more emphasis on Article 145's 'preservation' of the marine environment and less emphasis on the its 'protection'. Italy suggested that mining impacts be "minimized" rather than "reduced." Germany wanted more information on incentive structures and market inducements to protect the environment under DR 46(e) while Jamaica queried whether incentives for environmental performance were consistent with the Convention's prohibition on state subsidies.

The Russian Federation proposed rewording DR 48(2) for better clarity and consistency with UNCLOS. The Russian Federation also suggested that the duty to minimize Serious Harm be reframed as a duty to undertake "reasonable measures" to do so. Italy suggested that the Authority prepare a public communication plan about mining discharges.

IMMS and UKSR recommended amending DR30(4) to require Contractors to stop production only when an environmental disturbance significantly exceeds that described in the approved Plan of Work, or to protect human health and safety.

DSCC offered a host of comments toward framing regulations that "ensure" rather than merely "provide" for effective protection. Among other things, they stressed the importance of considering cumulative impacts, including those induced or exacerbated by climate change; described the lack of reference to Environmental Impact Assessments as a 'major gap', said an applicant should be required to demonstrate the environmental sustainability of a proposed project as well as the scientific viability of the Plan of Work, similar to the economic viability requirements pursuant to DR 13(1)(f); argued that weighing commercial costs against environmental benefits, as is described in DR 34, is not in line with the Convention, and said that DR 2(5) should properly reference articles 145 and 194(5) of the Convention.

Belgium and EU Atlas requested clarity on the meaning of the term "significance" as applied to definitions of "serious harm."

The Sargasso Sea Commission emphasized that ISA Contractors should be required to respect and protect a range of significant and sensitive areas, including marine protected areas, vulnerable marine ecosystems, Ecologically or Biologically Significant Areas (EBSAs), and areas of geological, evolutionary, or scientific interest. EMMPs should not be authorized without clear evidence that exploitation activities will produce no significant environmental impacts or cause serious harm. Guidance on environmental baseline surveys should be updated to require Contractors to ascertain the presence of special sites so actions may be taken to avoid significant effects or harm.

8.3 Environmental planning documents

Germany and FSM noted that the current proposed draft regulations lack specific assessment criteria, including quantitative thresholds. DOSI emphasized that objectives and metrics need to be established for the entire Area as well as regionally and at the project level.

Several submissions recommended that the recently deleted provision requiring a scoping stage (previously DR18) be reinserted (Japan, DSCC, DOSI). The UK also questioned the rationale behind its removal. DSCC stressed that scoping and EIA processes should be iterative to ensure all necessary information is collected.

FSM stated that the status of EISs remains unclear and suggested cross-referencing EISs and EMMPs throughout the regulations to highlight them as "core components" of environmental protection. Germany suggested that the proposed methodological procedures in the EIS template are impractical and instead proposed using "state categories" and "impact categories" to address impacts with multiple methodological components. China expressed concern that the items listed for inclusion in the EIS are too numerous and would lie well beyond a Contractors' scientific research capacity. China suggested that guidance

be drawn from the existing environmental impact guidance for exploration contracts (ISBA/19/LTC/8). New Zealand suggested that an EIS should also consider traditional knowledge or cultural interests. The UK questioned whether social effects should be included in an EIS.

DOSI and EU Atlas emphasized that the regulations should include more details on the process and contents of the EIS. The EIS template should be more than a guide; it should set out requirements. DOSI gave detailed suggestions for each section of the EIS template in Annex IV and for the EMMP in Annex VII. EU Atlas also made suggestions on the templates regarding, for example, accounting for changes over time at the regional level, divisions of the site description by depth regime, consideration of functional diversity, and unfolding definitions of different biological components.

Several Stakeholders highlighted the importance of collecting baseline data (DOSI, DSCC, EU Atlas, Neptune) over appropriate temporal and spatial scales, and linking such data with EIAs and post-impact monitoring (EU Atlas) so that the ISA can adequately assess potential environmental risks (DSCC). Neptune suggested that the exploitation regulations should reference baseline data collected under exploration contracts as a good starting point for the development of an exploitation-stage EIS (DR 46 bis (1)).

FSM noted that both EMMPs and REMPs should facilitate the creation of protected areas "in order to protect and preserve vulnerable/fragile/sensitive seafloor ecosystems." Germany stated that important content of the ISA's EMMP annex was deleted and should be reinstated. In regard to mitigation measures, DOSI recommended that such measures be tested in advance to determine whether they are appropriate or effective. DSCC noted that there needs to be full testing of commercial equipment and sufficient time to evaluate environmental impacts, especially because exploitation contracts will likely run for decades and reliance on impact modelling can overlook key effects. DSCC also stressed the need to integrate EMMPs with provisions on public comments as well as independent scientific and technical review. EU Atlas recommended consultation with other users, particularly because there could be cumulative effects due to impacts from multiple users.

The Russian Federation suggested that DR 50 be revised to incorporate objective criteria as to when an EMMP can be deemed "inadequate." The African Group sought more clarity on the disposition of Environmental Plans deemed deficient. As to "Emergency Response and Contingency Plans" (DR 51), the African Group questioned the definition of "adequacy." Australia also asked for clearer criteria on this point.

Australia suggested that a proposed Plan of Work be accompanied by a plan to respond to environmental incidents. Neptune and DOSI noted that DR 46 bis (1) and (3) refer to an "environmental risk assessment," but a framework for this assessment is not yet defined. A protocol for deep ocean environmental risk assessment is needed.

EU Atlas noted that the EMMP is less detailed than the EIS and needs further clarification. The EMMP should consider frequency of monitoring and data collection and clarify whether

the Contractor is obliged to undertake further research. The Fish Reef Project emphasised the need for ecological restoration, noting recent progress. EU Atlas suggested trial restoration could be piloted during the test mining phase if considered as part of the EMMP.

Verlaan recommended the deletion of the entirety of Section 2, Annex IV of the proposed regulations as incompatible with the Convention and the Implementing Agreement. She also suggested revision of Annex X, Section 3.3(e) on Contractor undertakings, as the Convention does not employ a "due regard" standard with respect to protection of the marine environment as described in Article 145. Verlaan proposed that in Annex X, Section 13.1(d) concerning the Contractors obligation to make its area safe following the ending of an exploitation contract, the final phrase "to the reasonable satisfaction of the Authority" be eliminated because compliance with the obligation is, in fact, objectively verifiable.

8.4 Closure plans

It was variously recommended that the Council play a role in the formulation of Closure Plans (African Group); that they be subject to public consultation (UK); that they be evaluated through the environmental assessment protocol (Italy); and that Contractors include an estimate of the costs of their implementation (Kiribati). The UK welcomed DR 57 regarding Closure Plans, but suggested that submitting a plan 12 months prior to the end or suspension of production may not be sufficient in cases where the Commission requires substantial amendment. Japan noted that a detailed Closure Plan is not necessary at the outset of the project as long as it is finalized 12 months prior to the end of production. NORI suggested that DR 59 be amended to allow early termination where a Contractor has completed economic exploitation and submitted an appropriate Closure Plan. IOM and DOSI noted that the consequences for rejection of a final Closure Plan by the Commission are not adequately reflected in the draft regulations. EU Atlas observed that there is no guidance on the spatial or temporal resolution of sampling or the methods to be used for monitoring during and after closure. EU Atlas also noted that determining recovery may require monitoring for decades, even centuries, and that regular interim reports will be needed to confirm that the Closure Plan is performing as intended.

8.5 Environmental reporting

The African Group and the UK suggested that environmental planning regulations should be supplemented with provisions for annual reporting on Environmental Plan compliance. The African Group also called for regular evaluations of the adequacy of EMMPs over the life of a contract. Under DR 49, on compliance with the EMMP, Neptune sought clarification as to whom the Contractors would be reporting.

8.6 Performance assessments

Submissions called for greater accountability in performance assessments (Chile), including through Council oversight (Germany, UK), public scrutiny supported by nontechnical descriptions (Italy, UK), and expert review (African Group, Jamaica). India, however, viewed review of environmental performance as a matter for the sponsoring State, not the Authority, and questioned the ISA's competence to conduct an independent environmental

performance assessment under the strictures of DR 50(6). Kiribati suggested that the environmental performance assessment should be conducted annually. IOM noted that the consequences for failure or noncompliance with assessment reporting provisions are not described in the regulations. In reference to DR 50, Neptune suggested that the Commission address the issue of when an assessment might trigger a stop work order. DSCC said DR 56 should also provide for the full review of activities to be made available for public comment

8.7 Environmental liability trust fund

Italy noted that currently proposed regulations (DR 52 and DR 53) do not explain how to ensure that such a fund will be adequate when needed. Germany proposed that Contractors be required to submit a deposit. Several member States called for narrowing the scope of the fund. The African Group, Jamaica, Japan, Nauru, Singapore, Tonga, EU Atlas, DSCC and DOSI suggested that the fund not go beyond its primary purpose, i.e., to cover the liability gap identified by the Seabed Disputes Chamber 2011 Advisory Opinion. Tonga added that separate funds might support education and training programs, and be made accessible to Small Island Developing States affected by transboundary impacts. The African Group suggested that the fund not be restricted solely based on considerations of "technical and economic feasibility." Japan requested confirmation that the resources of the fund will come from fees and penalties, and not from sponsoring States or members of the Authority.

The UK asked for more discussion on the issue. Belgium recommended amending DR 54(a) to allow the Authority to decrease the percentage of fees paid to the Authority as an incentive to use less environmentally damaging technologies. Chile recommended that the Finance Committee support the Secretary-General in the preparation of audited statements for the fund. EU Atlas supported the fund and recommended listing indicative amounts for fees or percentages with the regulations text. PDOD recommended clarifying whether the fund can be used to support developing countries to protect the marine environment during mining.

8.8 Environmental performance guarantees

The African Group emphasized that environmental performance guarantees should incorporate any likely costs imposed on coastal States. The Russian Federation asked for clarification as to whether a guarantee would be separated from other funds of the Authority. Japan noted that is not necessary to create an Environmental Performance Guarantee before mining commences and that the performance guarantee could be funded by progressive appropriations out of Contractor revenues. Italy expressed concern that responsibility for incidents and serious harm and corresponding remediation remains unclear and suggested that DR 27 be amended to take into account the costs of managing possible emergencies, including subsequent restoration costs.

The UK also asked for clarity on this provision, noting it should not be used to permit otherwise unsanctioned and unacceptable environmental impacts. Stakeholders suggested

restructuring the guarantee as an annual contribution (UKSR), possibly determined in light of the demonstrated costs of closure and rehabilitation (MSI). DSCC recommended that such a guarantee cover performance during the mining stage rather than focus exclusively on closure and post-closure phases. PDOD suggested that Contractors from developing and developed countries bear different burdens when it comes to the cost of the guarantee.

9. CONFIDENTIALITY AND TRANSPARENCY

Summary of Submissions

There was considerable interest in confidentiality and transparency matters. Broad support was voiced, *inter alia*, for a presumption of confidentiality; for solicitation of public comment on application documents; and for more transparency, as evidenced by open meetings and reports of meetings and revision of documents by the ISA in light of public comment.

9.1 Confidentiality

The African Group welcomed new elements of the proposed regulations regarding the publication of certain kinds of information but sought more information regarding confidentiality designations and the availability of information to Stakeholders and the general public. The Africa Group suggested that a Contractor must demonstrate the confidentiality of resubmitted data *de novo* and called for the disclosure of confidential information to be permitted in cases of "overriding public interest."

New Zealand, UK, and Brazil supported the presumption that data be made publicly available unless otherwise stated or agreed to by the Secretary-General. The UK and Brazil suggested that the regulations make clear that information is presumed to be public unless and until it is deemed confidential. Morocco agreed that environmental data should be readily available to the public, but noted that the concept of confidential information remains vague and overly broad. Neptune suggested that confidential information should not include any environmental data collected as part of baseline studies or environmental risk assessments.

China and Japan suggested that a 10-year period of nondisclosure for confidential information under DR 87(3) was too short for a 30-year contract. Japan suggested that the confidentiality of information be determined through consultations between Contractors and the Secretary-General. The UK would instead require the Secretary-General to notify a Contractor of the possible release of data, at which point the Contractor would need to demonstrate why the data should continue to be classified as confidential.

The UK observed that the wording of a Secretary-General's obligation to circulate "information of a general nature which is not confidential" is confusing and impractical. For example, an entire application form should be circulated; any confidential information therein should be redacted. The UK suggested that academic-sourced data should be expressly excluded from any confidentiality privilege. Italy proposed that all contracts be made entirely public. Brazil welcomed the requirement for all payments by the Contractor to the ISA be made public (DR 81). But Australia emphasised the obligation of ISA staff and Contractors not to disclose or employ industrial secrets.

Tonga stated that clear criteria for confidentiality would be useful, and that such criteria be balanced so as not to hinder a robust process of consultations. Morocco also recommended developing a mechanism for determining confidentiality and that a list be created that distinguishes the confidential from the nonconfidential.

FSM, Italy, and the UK observed that information classified as confidential because of sponsoring State laws (DR 87(2)(e)) will lead to inconsistent obligations across Contractors and could result in "sponsor shopping." FSM recommended deleting or significantly revising DR 87(2)(e). Brazil, on the other hand, suggested that data and information should be confidential if the sponsoring State considers it to be of strategic interest or relevant to national security.

EU Atlas requested clarification as to how information considered confidential in the exploration phase might be dealt with in the exploitation phase. EU Atlas suggested a public comment period on a provisional list of what is considered confidential; a reduction in the period of years in which confidentiality protections apply; a regular review of information deemed confidential; and a log of how and where information was collected and who has sought permission to access it.

DOSI stated that the provisional definition of confidential information was too broad. DOSI made a point of emphasizing that no environmental data should be withheld from public scrutiny, nor should data used to prepare EMMPs be withheld for academic reasons. DSCC agreed, and called for a process by which confidentiality claims could be impartially adjudicated.

9.2 Transparency

FSM argued for much more transparency in the work of the Commission, including full disclosure of the identities of Contractors found to be noncompliant with information provisions. The Commission should issue public transcripts or recordings of its discussions, with necessary redactions of proprietary information and trade secrets.

The Sargasso Sea Commission welcomed the Authority's initiatives to enhance transparency and outreach, and suggested that all meetings, including those of the Commission, should be open except on the relatively rare occasion when matters of commercial confidentiality are under discussion. Data and information from Contractors should be freely available and easily accessible.

DOSI recommended that DR 46(d) be revised to "ensure" (rather than "promote") accountability and transparency, and to require "immediate" (rather than "timely") access to relevant environmental information. DSCC argued for transparency and public participation to be streamlined into all aspects of the regulations, including (a) opportunity for public comments on nonenvironmental documents, (b) public and scientific comments of formal reviews of activities under a Plan of Work (DR 56), (c) transparent and inclusive process to adopt Standards and Guidelines under DR 92-93 and, (d) open meetings and reports of meetings.