ASSESSMENT OF THE ISA DRAFT EXPLOITATION REGULATIONS

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SUMMARY

Beyond the boundaries of national jurisdiction, the ocean floor and its resources escape sovereignty claims and are governed by a complex regime, which determines by whom and under which conditions these natural resources can be mined. The rules and principles of the United Nations Convention on the Law of the Sea and the 1994 Implementation Agreement with regard to deep sea mining are further developed in regulations and procedures issued by the International Seabed Authority (ISA), governing prospection, exploration and exploitation of deep seabed resources. The Authority already issued rules for the first phases of mining activities (prospection and exploration), but is yet to adopt exploitation regulations. A draft version is however developed and official approval of these exploitation regulations is expected during the summer of 2020. The current Draft Exploitation Regulations set out a thoughtful, balanced regime, but there is still room for improvement in various areas.

AIM

This assessment aims to present a general overview of the discussed rules, identify the strengths and weaknesses of the most recent Draft Exploitation Regulations of the International Seabed Authority and offer legally underpinned suggestions to improve these.
1. OBJECT OF THE ANALYSIS


2. GENERAL OVERVIEW

Background

The gradual depletion of land resources and the increasing demand for precious metals as nickel, copper and cobalt have led to great interest from governments and commercial entities in the deep seabed, one of the few places on our planet where human interference has so far been minimal and which thus contains valuable ecosystems and interesting organisms. Beyond the boundaries of national jurisdiction, which extend to the outer limits of the continental shelf, the seabed and the subsoil are labeled as ‘the Area’.1 The Area and the resources that are located there are qualified as ‘common heritage of mankind’ and are not susceptible to appropriation2. A significant part of the ocean floor thus escapes sovereignty claims and is governed by a complex regime, which determines by whom and under what conditions these natural resources can be mined. This regime is formed by part XI and some annexes of the United Nations Convention on the Law of the Sea, a subsequent Implementation Agreement of 1994 and detailed regulations of the International Seabed Authority (ISA), which is tasked to manage the Area and its natural resources. Declaring the available resources to be ‘res nullius’ would indeed instigate far-reaching international competition and potential conflicts and would prove a huge disadvantage for developing countries, who will not be able to exploit these materials when other countries will.

The Law of the Sea Convention provides that natural resources located in or on the deep seabed can only be acquired in accordance with the rules laid down by international law3. States, commercial entities and natural persons may apply to the International Seabed Authority to carry out activities in the Area and when a plan of work is approved, this takes the form of a contract4. It should however be noted that state-owned enterprises, private companies and natural persons wishing to pursue activities in the Area must be sponsored by the state of which they are nationals5. This state bears the responsibility to ensure that the companies or persons they are sponsoring act in accordance with the terms of their contract and their obligations under the Law of the Sea Convention, although it is stressed that there can be no state liability if the state has adopted legislation and has taken measures which are, within the framework of their legal order, reasonably appropriate to secure effective compliance by persons under its jurisdiction6.

The rules and principles of the Law of the Sea Convention and the 1994 Implementation Agreement are further developed in the ‘Mining Code’, as the comprehensive set of rules, regulations and procedures issued by the International Seabed Authority to regulate prospection, exploration and exploitation of deep seabed resources is often referred to.
The duration of an exploration contract may however be extended by 5 years if the contractor has acted in good faith and made all necessary efforts to follow the timing of the approved work plan, but for reasons beyond his will is not able to advance to the exploitation phase (section 1, §9 Annex Implementation Agreement 1994; article 26 Exploration Regulations PMN; article 28 Exploration Regulations PMS; article 28 Exploration Regulations FMC).

10 The duration of an exploration contract may however be extended by 5 years if the contractor has acted in good faith and made all necessary efforts to follow the timing of the approved work plan, but for reasons beyond his will is not able to advance to the exploitation phase yet (section 1, §9 Annex Implementation Agreement 1994; article 26 Exploration Regulations PMN; article 28 Exploration Regulations PMS; article 28 Exploration Regulations FMC).

11 The duration of an exploration contract may however be extended by 5 years if the contractor has acted in good faith and made all necessary efforts to follow the timing of the approved work plan, but for reasons beyond his will is not able to advance to the exploitation phase yet (section 1, §9 Annex Implementation Agreement 1994; article 26 Exploration Regulations PMN; article 28 Exploration Regulations PMS; article 28 Exploration Regulations FMC).

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13 An exploration contract can however be renewed for periods of 10 years (article 20 Draft Exploitation Regulations).

14 Article 84-87 Draft Exploitation Regulations.

15 Article 64-73 and Appendix IV Draft Exploitation Regulations.

16 Article 44 Draft Exploitation Regulations.

17 Article 26 Draft Exploitation Regulations.

18 Article 54-56 Draft Exploitation Regulations.

The Authority already issued rules for the first phases of mining activities (prospection and exploration) in the Area, divided into separate sets of regulations for three distinct categories of resources (polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts), but is yet to adopt exploitation regulations. A draft version is however developed and official approval of these exploitation regulations, which will have to strike a delicate balance between commercial exploitation, environmental protection and the interests of developing countries, is expected during the summer of 2020.

Structure

The Draft Regulations on Exploitation of Mineral Resources in the Area are built on an uncluttered structure, consisting of a preamble and 13 thematic parts, which are subdivided in different sections. The first parts of the Draft Exploitation Regulations cover the basic principles, the application procedure, the rights and obligations of contractors and the protection of the marine environment. These parts are followed, inter alia, by chapters concerning the financial terms of exploitation contracts, the gathering and handling of information, the development of accompanying standards and guidelines, the inspection and compliance system and the settlement of disputes. The Draft Exploitation Regulations also include 10 annexes and 4 appendices. The annexes consist of standard forms and useful instructions detailing the required content and structure of the documents and plans which need to be submitted to the Authority. The appendices in turn contain a list with all events that need to be notified by the contractor, a schedule for the payment of annual and other applicable fees, an overview of the possible monetary penalties and a methodology to calculate the payable royalty.

Rules and procedure

The Draft Exploitation Regulations of course build on the rules with regard to exploration activities, which can be conducted in a limited area for a maximum of 15 years. During this period, the contractor needs to gradually return parts of that zone to the Authority, ending with a fraction of the initially assigned area where exploitation activities can eventually be developed.

In comparison to the regulations regarding prospection and exploration, the eligible applicants remain the same and the requirement of a sponsoring state is retained, but exploitation contracts are concluded for a period of 30 years and entail, apart from the application fee and annual premiums, the payment of fees for the mined resources according to a royalty system. The precautionary principle is reaffirmed, but scientific evidence and transparency also play an increasingly important role.

In addition, before the commencement of actual production activities, the contractor must deposit a so-called Environmental Performance Guarantee to the Authority to cover, inter alia, the cost of monitoring potential environmental impact after the cessation of the activities, without in any way limiting the liability of the contractor. Besides that, the Draft Exploitation Regulations envision the creation of an Environmental Compensation Fund, which (financed by the fees and penalties owed to the Authority) should provide for preventive and restorative measures in the absence of liability of a contractor or sponsoring state and will promote scientific research and training related to the protection of the marine environment.
The application and approval procedure of a plan of work for exploitation also proves to be more extensive and thorough: among other documents a detailed Environmental Impact Statement\textsuperscript{19}, bundling the results of the environmental impact assessment process, an Environmental Management and Monitoring Plan\textsuperscript{20}, which needs to confirm that the environmental impact meets the relevant standards, and a Closure Plan\textsuperscript{21}, explaining the responsibilities of the contractor in monitoring the environmental impact after completion of the activities, must be submitted\textsuperscript{22}. These documents are subsequently published on the Authority’s website and all comments made by stakeholders are presented to the applicant, who has the opportunity to modify the plans\textsuperscript{23}. As part of the comprehensive review of an application, the Legal and Technical Commission examines these documents in light of the comments made by stakeholders and the possible responses of the applicant and considers whether the plans provide for effective protection of the marine environment in accordance with article 145 LOSC and the precautionary approach\textsuperscript{24}. The report of the Legal and Technical Commission on the environmental plans, including any suggested modifications or amendments, is again published on the website and the entire file is transferred to the Council. If the Legal and Technical Commission is of the opinion that the discussed plans do not provide adequate protection for the marine environment, the applicant will be informed and is offered a chance to rectify this, followed by a new assessment by the Legal and Technical Commission\textsuperscript{25}. The final decision shall be taken by the Council, but the same decision-making rules as for exploration contracts are applicable: a positive recommendation from the Legal and Technical Commission can be overturned by a two-thirds majority and a negative advice does not necessarily preclude the approval of the plan of work by the Council\textsuperscript{26}. 

\textsuperscript{19} This environmental impact statement is the end product of a series of activities that identify, predict and evaluate the effects of the proposed mining operations, including a risk assessment, an impact analysis and a search for mitigating measures (article 47 and Annex IV Draft Exploitation Regulations).

\textsuperscript{20} This document, which should be drawn up on the basis of the environmental impact assessment and in accordance with the regional environment management plans, determines how mitigation measures will be implemented, how their effectiveness will be monitored and which adjustments may be made. During the exploitation activities, the contractor shall report on the environmental impact in accordance with this document and the plan itself is also subject to performance assessments, the results of which are submitted to the Authority and evaluated in public reports (article 48, 51-52 and Annex VII Draft Exploitation Regulations).

\textsuperscript{21} Article 59 Draft Exploitation Regulations.

\textsuperscript{22} Article 7, §3, d) and h)-i) Draft Exploitation Regulations.

\textsuperscript{23} Article 11 Draft Exploitation Regulations.

\textsuperscript{24} Article 11, §3-5 and article 13, §4, e) Draft Exploitation Regulations.

\textsuperscript{25} Artikel 15, §4-5 Draft Exploitation Regulations.

\textsuperscript{26} Article 16 Draft Exploitation Regulations; section 3, §1 Annex Implementation Agreement 1994.
3. STRENGTHS

The Draft Exploitation Regulations are characterized by a few strengths:

- The Draft Exploitation Regulations feature a clear and logical layout, arranged in thematic parts which are subdivided in different sections.

- Contrary to the regulations regarding prospection and exploration in the Area, the Draft Exploitation Regulations introduce one set of rules for all categories of resources.

- In comparison to the regulations regarding prospection and exploration in the Area, the Draft Exploitation Regulations introduce a higher level of transparency. It is explicitly stated that information and data regarding the protection of the marine environment cannot be considered classified.

- Contrary to the regulations regarding prospection and exploration in the Area, the Draft Exploitation Regulations provide for public participation with regard to the marine environmental aspects of applications.

- Through the introduction of an Environmental Performance Guarantee and an Environmental Compensation Fund, the Draft Exploitation Regulations provide more financial security in case of any incident or environmental damage.

- Incorporating the possible contribution to realizing benefits for mankind as a whole as one of the criteria in considering a plan of work for exploitation is a very positive sign and strengthens one of the main objectives of mining activities in the Area.
4. WEAKNESSES

The Draft Exploitation Regulations however show a number of flaws and gaps that should be noted:

- There’s a lack of proper definition and explanation of some of the key terms and concepts of the Draft Exploitation Regulations, including ‘objectives’, ‘standards’ and ‘thresholds’. Despite an attempt to clearly describe the following concepts in a list of definitions attached to the draft regulations32, the same goes for ‘best environmental practices’, ‘best available scientific evidence’, ‘best available techniques’ and ‘good industry practice’, which are frequently used in similar contexts. The precise scope and content of these important concepts is vague at best, as are the links and relationships between them. In addition, the hazy wording ‘from time to time’ is used multiple times throughout the Draft Exploitation Regulations, raising questions about the exact frequency of the concerned actions or decisions33, and the exact interpretation of the concept ‘serious harm’, which carries an important role within the context of marine environmental protection, is unclear.

- As already indicated, the Draft Exploitation Regulations have made major strides in terms of transparency and public participation, but there is still room for improvement. It is for example commendable for the draft regulations to stipulate that all data regarding the protection of the marine environment cannot be considered confidential34, but it is unclear how a third party stakeholder can act on the basis of that information during the exploitation activities, thereby diminishing the value of the envisioned transparency. The significance of the public participation process within the context of the consideration of a plan of work for exploitation is also limited: comments by third party stakeholders can admittedly lead to a negative advice by the Legal and Technical Commission, but this disapproval can subsequently be disregarded by the Council35. The absence of any appeal option for third party stakeholders against a Council decision to award an exploitation contract can therefore be considered a weakness, taking into account the objective of the protection of the marine environment and the status of the Area and its natural resources as common heritage of mankind36.

- The absence of independent expert reviews in the consideration of a plan of work for exploitation can be seen as a potential weakness. It is true that the Legal and Technical Commission can seek advice from independent competent persons according to the Draft Exploitation Regulations, but this is purely optional and thus not embedded in the decision-making process as a necessary step37.

- The legality and appropriateness of assigning certain powers to the Secretariat, with a view to streamline decision-making procedures, can be questioned. A good example are the extensive competences of the Secretary-General within the context of the modification of a plan of work: he can independently assess if a proposed modification constitutes a material change and he can suggest and make non-material changes to a plan of work himself, in consultation with the contractor and only informing the Commission afterwards, although the most recent version of the Draft Exploitation Regulations specifies that this is only possible to correct minor omissions, errors or other such defects38.
It is strange that the Draft Exploitations Regulations do not assign any role or competences to the Economic Planning Commission, an organ of the Council of the International Seabed Authority that was envisioned by the Law of the Sea Convention. It was decided that the functions of the Economic Planning Commission would be performed by the Legal and Technical Commission, but only until such time as the Council decides otherwise or until the approval of the first plan of work for exploitation. As we are approaching the exploitation phase and the discussed draft regulations are specifically regulating exploitation activities, it would thus be logical to assign responsibilities to the Economic Planning Commission, which still needs to be set up.

The Draft Exploitation Regulations do not provide additional clarity regarding the specific role of the Enterprise and the rules and mechanisms that apply to it, raising a lot of questions about the way this organ will function in practice and the consequences thereof.

In general, the division of responsibilities between all involved actors, including the Authority, the sponsoring states, the flag states and the relevant international organizations, is not always clear, opening the door for possible duplication of efforts and undesirable gaps.

Further discussion is needed on the development and role of standards and guidelines, as it is not yet clear when they will be adopted and how they will relate to the regulations. It is positive that the most recent Draft Exploitation Regulations clearly state that standards shall be legally binding, but this does not answer all questions.

The practical implementation of the precautionary approach, which is a crucial principle of environmental protection and is explicitly mentioned in two draft regulations, raises a few questions.

Through ill-considered wording, the previous Draft Exploitation Regulations appeared to indicate that regional environmental management plans are only optional, which seems to be at odds with the objective of adequate protection of the marine environment. Although this dubious wording (adding ‘if any’ after the mention of regional environmental management plans) was removed from the most recent Draft Exploitation Regulations, this does not fully resolve this issue.

The nature, legality and effectiveness of the envisioned inspection mechanism are debatable. The jurisdictional competence of the Authority can be questioned, there are no clear criteria for when an inspection should take place and it is particularly concerning that little attention seems to be paid to remote monitoring.

The proposed financial model, which is provisionally based on an ad valorem royalty system, will probably have to cope with opposition, which can prolong discussions and prevent a consensus about the Draft Exploitation Regulations. In addition, the Draft Exploitation Regulations do not contain any provision regarding the distribution of the collected royalty payments, which should be considered an essential aspect.

The attached list of monetary penalties does not include any environmental infractions, which can be considered a significant shortcoming in light of the crucial objective of effective protection of the marine environment. Although the most recent Draft Exploitation Regulations do not contain any references to the attached list of penalties anymore, the absence of any environmental infractions on this list could nevertheless be interpreted as an illustration of the limited importance that is attached to such infringements.

References:
39 Article 163-164 LOSC.
40 Section 1, §4 Annex Implementation Agreement 1994.
41 Article 19 Draft Exploitation Regulations.
42 Article 94-95 Draft Exploitation Regulations.
43 Article 94, §4 Draft Exploitation Regulations.
44 Article 2, e), ii) and article 44, a) Draft Exploitation Regulations.
45 Article 145 LOSC.
47 Article 2, e) Draft Exploitation Regulations.
48 Article 96-102 Draft Exploitation Regulations.
49 Article 102 Draft Exploitation Regulations.
50 Appendix IV Draft Exploitation Regulations.
51 Appendix III Draft Exploitation Regulations.
5. RECOMMENDATIONS

To overcome the mentioned weaknesses and to implement additional improvements, a few suggestions can be made:

- If there’s one main priority in developing adequate treaties, laws or regulations, it would be clear definitions and explanations of the key terms and concepts. The Draft Exploitation Regulations have some deficiencies in that respect, as further clarification is needed for important terms as ‘objectives’, ‘standards’ and ‘thresholds’ and crucial concepts as ‘best environmental practices’, ‘best available scientific evidence’, ‘best available techniques’ and ‘good industry practice’, which are all frequently used. The relationships between the first three terms, which have close interlinkages, should furthermore be clarified and the same goes for the last four concepts, although it could be a more manageable and convenient solution to bundle these terms in a broader, overarching concept (‘Best Practices’), avoiding possible confusion and overlaps. The phrase ‘from time to time’, which is used far too many times in the Draft Exploitation Regulations, should also be replaced by clearly defined frequencies to provide more certainty and the exact meaning of the important concept ‘serious harm’ should be clarified. The Secretariat prepared a short paper to start discussions about these issues, in order to contribute to proper use of these crucial terms and concepts.

- In addition to the improved transparency and newly introduced public participation process as an element of the consideration of a plan of work for exploitation, new procedures should be introduced in the Draft Exploitation Regulations to provide third party stakeholders with additional rights and safeguards. This means, among others, that the confirmed non-confidential nature of all information regarding the protection of the marine environment should be accompanied by a possibility for third party stakeholders to comment on these data and have their remarks taken into account by the competent organs of the Authority. Without such an option, the current transparency regime is nothing more than a nice billboard, with barely any concrete implications for contractors and third party stakeholders. With regard to the public participation procedure embedded in the review process of a plan of work for exploration, it should (although this is outside the scope of the Draft Exploitation Regulations) be noted that the introduction of an identical regime for plans of work for exploration is highly advisable and, given that multiple negative remarks during the public participation process and even a disapproval of the Commission can still lead to the granting of a contract by the Council, it is moreover recommended to discuss an appeal option for third party stakeholders against the approval of a plan of work, if only in certain circumstances. Some would consider this suggestion exorbitant, but as the deep seabed and its natural resources are considered common heritage of mankind and the designed international regime aims to ensure effective protection of the marine environment and equitable exploitation for the benefit of all countries, access to justice for third party stakeholders seems not at all absurd.
In a Belgian non-paper addressed to the Authority, titled ‘Strengthening the environmental scientific capacity of the International Seabed Authority’, a system providing for three separate opinions by independent experts is suggested, in order to prevent any political or commercial interference. This procedure would run parallel with the public participation process, so the Legal and Technical Commission can assess this input afterwards. For every case, the Legal and Technical Commission would choose three experts out of a pre-complied pool and their opinions would be taken into account when deciding to recommend the plan of work or not, without any legally binding power (“Strengthening the environmental scientific capacity of the International Seabed Authority”, https://www.isa.org.jm/document/statement-belgium-o (consulted on 5 February 2019)).

Consideration of a mechanism and process for the independent review of environmental plans and performance assessments under the regulations on exploitation of mineral resources in the Area (11 January 2019), ISA Doc. ISBA/25/C/7 (2019).


In April 2018, Poland expressed interest to enter into negotiations to form a joint venture with the Enterprise. The Secretary-General appointed a Special Representative for the Enterprise to negotiate with Polish representatives and a draft proposal for a joint venture was developed (Report of the Special Representative of the Secretary-General of the International Seabed Authority for the Enterprise on the proposal by the Government of Poland for a joint venture with the Enterprise (3 January 2019), ISA Doc. ISBA/25/C/7-16 (2019)).

Content and development of standards and guidelines for activities in the Area under the Authority’s regulatory framework (17 December 2018), ISA Doc. ISBA/25/C/3 (2018).

As advocated by a Belgian non-paper, including independent expert reviews as a necessary step in the consideration of plans of work for exploitation could strengthen transparent and environmentally sound decision-making, but these ideas need further elaboration before they can be implemented. Besides clear selection processes and adequate rules for compiling a pool of independent competent experts, ideally with geographically and culturally diverse representation and covering all relevant fields of expertise, the nature, extent and purpose of these expert evaluations should be determined in specific guidelines. The Secretariat has drafted a discussion note wherein it states that such a review process needs to provide an actual added value and should not introduce additional complexities or high levels of cost, but it should be perfectly possible to develop a simple, cost-effective system to strongly support informed decision-making, which cannot be valued high enough in the context of protection of the marine environment.

The Authority should determine and maintain strict rules with regard to delegation of powers and this should be adequately reflected in the Draft Exploitation Regulations. Efficient functioning of the deep sea mining regime in the Area will obviously require the delegation of certain tasks and duties, but this should always be under appropriate guidance and supervision by the Council. Some delegations to the Secretary-General are particularly problematic and it would be a good option to introduce provisional decisions in these cases, which can (within a strict timeframe) be approved or rejected by the Council. The opposite exercise should also be carried out: in cases where undue delay is systematically caused by the long time intervals between meetings of certain organs of the Authority, additional delegations to the Secretary-General should be considered when appropriate. This all starts with a clear assessment of which types of decisions can and/or should be delegated and which general decision-making procedures should be respected in such cases. Taking into account the current absence of any competences assigned to the Economic Planning Commission in the Draft Exploitation Regulations, the role of this organ within the context of the functioning of the Authority and its various decision-making processes should be thoroughly deliberated and embedded in the regulations. To start discussions about the comprehensive issue of delegations of power and decision-making, the Secretariat prepared a short paper. In addition, with the exploitation phase approaching and a proposal for a joint venture on the table, the Authority finally needs to shed more light on the role and functioning of the Enterprise, but this should preferably be done through specific guidelines, as detailed prescriptions should not be included in the Draft Exploitation Regulations.

In conjunction with the Draft Exploitation Regulations, the International Seabed Authority needs to provide for timely adoption of standards and guidelines, all the while striking a proper balance between the general rules and principles that should be embedded in the Draft Exploitation Regulations and the more detailed instructions to be included in standards and guidelines. To establish a clear and adequate regime from the start, standards and guidelines should be developed in parallel to the Draft Exploitation Regulations and should be finalized before the adoption of the latter. The Secretariat prepared a discussion paper with proposals for flexible and participatory development and adoption of technical standards and guidelines, which should kick-start and facilitate this important process.
• The Draft Exploitation Regulations should ensure consistent and proper implementation of the precautionary approach in practice by incorporating it as a tangible safeguard in the obligations of the contractors and in the functioning and decision-making processes of the Authority. The Secretariat provided an overview of how the precautionary approach is applied in the various draft regulations\textsuperscript{60}, but this must be thoroughly assessed, resulting in useful adjustments and additions.

• In order to achieve adequate protection of the marine environment, a fundamental principle within the context of deep sea mining, the Draft Exploitation Regulations should attach more importance to the development and implementation of regional environmental management plans. With the dubious wording of the previous Draft Exploitation Regulations in mind\textsuperscript{61}, it should be clearly stated that development of REMP is mandatory and it is strictly recommended to have these plans in place prior to the approval of a plan of work for exploitation, signifying the start of the exploitation phase. Although such rule could be abused, as delaying the adoption of a regional environmental management plan could stall or block the granting of an exploitation contract, this minimal risk does not weigh up to the realization of effective protection of the marine environment. Many even believe that the Authority does not need a specific provision in the Draft Exploitation Regulations to decide that no exploitation contract is to be granted in a particular region until a regional environmental management plan is implemented, as it already possesses these powers according to the Law of the Sea Convention\textsuperscript{62}. How these regional environmental management plans, which can be considered elements of the Authority’s environmental policy, should best be reflected in the Draft Exploitation Regulations is still up for discussion though and it also needs to be considered whether such plans should imply tangible legal obligations. As regional environmental management plans cannot be considered binding legal instruments, it is difficult to require contractors to comply with these, but assessing environmental management and monitoring plans against the objectives of regional environmental management plans is a valid option. The Secretariat has prepared a short paper outlining the legal issues with a view to facilitate consultations about this topic\textsuperscript{63}.

• It is advisable to reassess and possibly reshape the provisions concerning inspection in the Draft Exploitation Regulations, which are very important to guarantee compliance, improve safety and reduce environmental risks. There is a definite need for a transparent framework and sound legal bases for the jurisdiction of the Authority, the scope of the inspections and the applicable criteria in this regard. It should be clear

\textsuperscript{60} Implementing the precautionary approach to activities in the Area (9 January 2019), ISA Doc. ISBA/25/C/8 (2019).


\textsuperscript{62} Article 145 and 162 LOSC.

\textsuperscript{63} Relationship between the draft regulations on exploitation of mineral resources in the Area and regional environmental management plans (20 December 2018), ISA Doc. ISBA/25/C/4 (2018).
which activities are to be inspected and when an inspection should take place, based on a risk-based approach to ensure efficient use of available resources. In addition to physical inspections, the Draft Exploitation Regulations should pay more attention to remote monitoring systems, which appear to be the most convenient option in these circumstances, given the far-away locations of future mining operations. In addition to the position of the vessels, electronic monitoring should be expanded to cover all relevant activities of the involved vessels and the underwater equipment, including the environmental monitoring instruments. The Secretariat has prepared a paper outlining possible inspection mechanisms and a proposal for a code of conduct for inspectors, which should facilitate a solution for the discussed issues64. The model adopted under the Convention on the Conservation of Antarctic Marine Living Resources is suggested as a viable option: inspectors, who need to be included in a specific register through recommendations of member states, would follow the regime established by the Authority to promote consistency, but would remain under the jurisdiction of the member states to ensure independence. Attention should also be paid to the interaction with sponsoring states, which is particularly important in this context: some sponsoring states have installed or envision their own monitoring regime and it is crucial that the monitoring system of the Authority is well aligned with these, in order to avoid any duplication of efforts or gaps. More in general, the respective responsibilities of all involved actors should be clearly established and adjusted to each other and the Secretariat will contribute to this by preparing orderly matrices, identifying possible interfaces.

64 Implementing an inspection mechanism for activities in the Area (20 December 2018), ISA Doc. ISBA/25/C/5 (2018).
65 The general payment system as well as the applicable tariffs may be revised by the Authority five years after the start of commercial production (article 81–82 Draft Exploitation Regulations; section 8, §1, e) Annex Implementation Agreement 1994).
66 By analytically comparing four suggested models, the Massachusetts Institute of Technology (MIT) identified the key variables and assumptions that lead to different perceptions of the economics of deep sea mining (“Financial Regimes for Polymetallic Nodule Mining: A Comparison of Four Economic Models”, https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/mit.pdf (consulted on 15 February 2019)).

- It is highly advisable to clearly emphasize the periodic review option and adopt an evolutionary approach with regard to the payment system, with a view to counter persistent objections against the proposed financial regime and not write off other options just yet65. This way these important financial rules are not carved in stone and if other systems appear more fitting in the future, the Authority can still make a switch. Implementing a pure profit-sharing mechanism, which is favored by some countries, is however a risk, as deliberate accountancy tricks could minimize the official profit, undermining the crucial objective of redistribution of wealth. The Authority would do well to attach appropriate importance to the comparative study by the Massachusetts Institute of Technology, in order to scientifically underpin the choice of the imposed royalty system66. In addition, general principles on distribution of paid royalties should be established and these rules should be further elaborated into a clear and transparent system through guidelines.
6. CONCLUSION

The current layout of the Draft Exploitation Regulations is logical and combining the rules for all categories of resources in one document is definitely an asset, but it cannot be denied that some aspects of the draft regulations can be improved. First and foremost, clear definitions of the key terms should be introduced, possibly combining some of these in overarching concepts to avoid any confusion or overlaps. In terms of transparency and public participation then, the Draft Exploitation Regulations definitely feature notable improvements in comparison to the regulations on prospection and exploration, but there is room for further optimization in different regards: the general non-confidential nature of environmental information should be linked to additional participation options for third party stakeholders and the current public participation process within the context of the consideration of a plan of work can be supplemented by possible appeal procedures. Obligatory independent expert reviews should also contribute to informed decision-making, but the rules and modalities of this concept are in need of further elaboration. With regard to the delegation of powers, it is very important that these issues are carefully assessed by the Authority, which will have to find a balance between legal and appropriate allocation of competences and timely decision-making. It is advisable to assign responsibilities to the Economic Planning Commission, which is currently not mentioned in the Draft Exploitation Regulations, and the role and functioning of the Enterprise should be clarified in guidelines. Such guidelines and standards, containing additional instructions that are not embedded in the draft regulations, should preferably be adopted before final approval of the Draft Exploitation Regulations, in order to establish an adequate regime at the start of the exploitation phase. Consistent and proper implementation of the precautionary approach is key in this stage and regional environmental management plans should be in place before a plan of work for exploitation is approved, although it is currently unclear how these plans should best be reflected in the Draft Exploitation Regulations. The inspection regime should in any case be reassessed: clear explanations of the legal bases, scope and criteria need to be provided, more attention should be paid to remote monitoring systems, covering all activities of the involved vessels and the underwater equipment, and interaction with sponsoring states, which is particularly important in this context, should be fine-tuned. Finally, with regard to the financial terms of exploitation contracts, an evolutionary approach concerning the envisioned royalty system appears to be the best choice to keep all options open and ensure widespread support for the Draft Exploitation Regulations, but it is equally important to work out a fair and transparent regime for the distribution of the paid royalties.

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