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IV.1

THE AREA AND THE ROLE OF THE INTERNATIONAL SEABED AUTHORITY

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IV.1

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Aline Jaeckel

Introduction

In Arvid Pardo's well-known speech to the United Nations (UN) in 1967, he not only outlined his and Elisabeth Mann Borgese's vision of the international seabed becoming the common heritage of (hu)mankind but also envisaged an entity to give practical effect to this status. He imagined an 'agency with adequate powers to administer in the interests of mankind the oceans and the ocean floor beyond national jurisdiction'.[1] The entity established under the *United Nations Convention on the Law of the Sea* (UNCLOS) to fulfil this role is the International Seabed Authority (hereinafter ISA or Authority).[2] Its jurisdiction covers the entire seabed beyond national jurisdiction, otherwise known as 'the Area'.[3] In other words, the ISA is the institutional manifestation of the Area's legal status as the common heritage of humankind.[4] Details on the concept of the common heritage of (hu)mankind are provided in Chapter I.2 of this book.

Instead of offering a description of the ISA's mandate under UNCLOS, as is already available in the literature,[5] this chapter critically examines the ISA's role and mandate in light of current developments. In doing so, it discusses the extent to which the ISA has given effect to the common heritage principle to date, including through the Enterprise, site-banking system, and a benefit sharing regime.

The underlying reason for declaring the Area to be the common heritage of humankind was to ensure that all states, no matter their economic status, would share the benefits of the mineral resources that lie beyond national jurisdiction. This would prevent a small number of technologically advanced states from reaping all the benefits at the expense of the international community.[6]

1 UNGA, 1 November 1967, UN Doc A/C.1./PV.1516, paras. 8–9 (UNGA, A/C.1./PV.1516).

2 *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 3. Hereinafter 'UNCLOS'.

3 Article 1(1)(1), UNCLOS.

4 Article 136, UNCLOS.

5 M.W. Lodge, 'The deep seabed', in D. Rothwell et al. (eds), *The Oxford handbook of the law of the sea*, Oxford University Press, 2015, 226–53; A.L. Jaeckel, *The International Seabed Authority and the precautionary principle*, Brill Nijhoff, 2017, Chs 3, 4.

6 R. Churchill and A.V. Lowe, *The law of the sea*, Manchester University Press, 1999, p. 224.

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In line with this aim, Part XI of UNCLOS as well as the 1994 Agreement[7] set out a framework regime for the Area. Central to this regime is the ISA, which was created in 1994 and is headquartered in Kingston, Jamaica. It is mandated to organise, carry out, and control 'activities in the Area',[8] a term of art that encompasses all activities relating to exploration for and exploitation of mineral resources in the Area.[9] This mandate is underpinned by far-reaching competencies which include regulatory, enforcement, inspection, and oversight powers.[10]

While UNCLOS and the 1994 Agreement set out the broad legal framework for the activities in the Area, the ISA is tasked with filling the gaps and developing detailed and binding regulations that determine who can access minerals in the Area and under what conditions. Indeed, the ISA is currently in the process of developing the first international regulations for the commercial-scale exploitation of minerals in the Area. These extensive powers to regulate access to and management of minerals in the Area distinguish the ISA from other international organisations and make it 'an unprecedented experiment in international law-making'.[11]

The next section introduces the actors of the seabed mining regime and offers reflections on the challenges created by the ISA's contractual system. Following that, the chapter discusses the ISA's mandate against the background of current discussions regarding the implementation of the common heritage concept. The discussion is structured in sub-sections on regulating seabed mining, controlling access to minerals, the participation of developing states, the sharing of benefits, and compliance and enforcement. The final section offers concluding remarks.

Actors and the contractual system of the deep seabed mining regime

Before examining the mandate and role of the ISA, this section provides a brief introduction to the actors involved in the seabed mining regime. While the ISA is the central regulator and administrator of the regime, the mining activities are carried out by so-called contractors. As illustrated in Figure IV.1.1, these can be the Enterprise (as discussed below), states parties, state enterprises, or natural or juridical persons which possess the nationality of states parties or are effectively controlled by them or their nationals.[12] Thus, both public and private actors can be involved in mining operations although they have to be sponsored by a state party.[13]

The sponsoring state has an oversight role and a due diligence obligation to ensure that the contractor complies with all legal obligations.[14] The sponsoring state can be held liable if environmental harm is caused by the contractor and the state did not meet its due diligence obligation.[15] However, the precise parameters of the role of the sponsoring state remain unclear.

7 *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea*, 28 July 1994, 1836 UNTS 3. Hereinafter '1994 Agreement'.

8 Articles 153(1), 157(1), UNCLOS.

9 Article 1(1)(3), UNCLOS.

10 See e.g. Articles 137(2), 145, 153, 157, 160(2), 162(2), UNCLOS.

11 J. Harrison, *Making the law of the sea: A study in the development of international law*, Cambridge University Press, 2011, pp. 151–2.

12 Article 153(2), UNCLOS.

13 Article 153(2)(b), ibid., and article 4, Annex III, UNCLOS.

14 *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, ITLOS Reports 2011, case no 17*. Hereinafter 'ITLOS, *Responsibilities and Obligations of States*'.

15 Ibid.

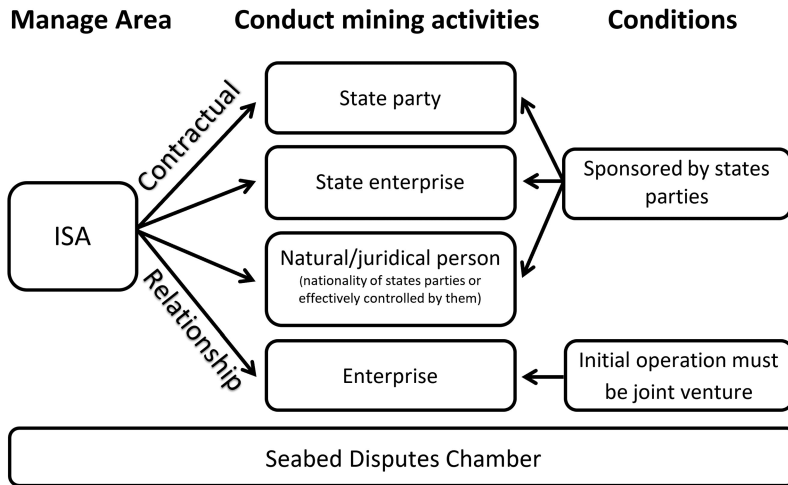

Figure IV.1.1 The structure of the seabed mining regime.
Source: Aline Jaeckel, *The International Seabed Authority and the Precautionary Principle* (Brill, 2017).

Finally, the Seabed Disputes Chamber offers judicial oversight of the seabed mining regime.[16] Originally intended to be an organ of the ISA,[17] the Seabed Disputes Chamber is based within the International Tribunal for the Law of the Sea (ITLOS) in Hamburg. As discussed in detail by Treves, Harrison, and Pecoraro in Chapters V.1 and V.2,[18] the Chamber has compulsory jurisdiction in respect of most disputes concerning activities in the Area[19] as well as jurisdiction to give advisory opinions at the request of the ISA Assembly or Council.[20]

Instead of the mining operators working under a license from the regulator, as is often the case for resource extraction under domestic governance, the Area regime involves a contractual system. Exploration and exploitation work in the Area can only be conducted under a contract issued by the ISA, which grants exclusive but temporary rights to the contractor.[21] This ensures a high degree of legal certainty for the contractor, as the conditions under which the contractor operates can, largely, not be changed unilaterally by the ISA.

However, the contractual system poses at least two challenges. First, it constrains the ISA's regulatory power and ability to impose new conditions on mining operators if new circumstances arise.[22] For example, if states were to agree on a new treaty with stringent measures to protect

16 Articles 186–191, Annex VI, articles 35–40, UNCLOS.

17 Judge Dolliver Nelson, 'The International Tribunal for the Law of the Sea', Presentation given at the Sensitization Seminar on the Work of the International Seabed Authority, 28–30 March 2011. Available online <www.isa.org.jm/files/documents/EN/Seminars/2011/ITLOS-DNelson.pdf> (accessed 18 August 2021).

18 T. Treves, 'Dispute settlement and seabed mining in the Area', in V. Tassin Campanella (ed), *Routledge handbook of seabed mining and the law of the sea*, Routledge, 2023, chapter V.1; and J. Harrison and A. Pecoraro, 'Dispute settlement options and rights of participation in deep seabed mining disputes', in V. Tassin Campanella (ed), op. cit., chapter V.2.

19 Article 187, UNCLOS.

20 Article 191, ibid.

21 Articles 3, 16, Annex III, UNCLOS.

22 For a detailed discussion, see A. Jaeckel, 'Deep seabed mining and adaptive management: the procedural challenges for the International Seabed Authority', *Marine Policy* 70, 2016, 205–11.

marine biodiversity, the ISA would have very limited ability to require current contractors to alter their operations to give effect to the new treaty. Instead, contractors would need to agree to the change, as their interests are protected through the contract. Indeed, the same applies to amendments of the ISA's regulations. In 2013, the Nodules Exploration Regulations were formally amended largely to increase environmental standards and obligations. The ISA Council did not ask for existing contracts to be renegotiated.[23] Thus, we can assume[24] that those operators that concluded their nodules exploration contracts prior to July 2013 continue to be subject to the lower environmental standards under the previous version of the Nodules Exploration Regulations.[25]

In light of the contractual system, designing flexibility into the contracts and the ISA's rules, regulations, and procedures becomes all the more important. Given that exploration contracts have a 15-year lifespan and exploitation contracts could be valid for 30 years, good regulatory design will be crucial to ensure that the ISA can regulate and manage deep seabed mining flexibly and reflect policy and legal changes that will inevitably occur over the coming decades as scientific knowledge about the effects of deep seabed mining increases.

Second, the contractual system poses challenges for transparency. Exploration contracts have been largely treated as confidential. While the standard contract clauses are publically available,[26] the actual contract and any subsequent modifications agreed between the parties remain confidential with only a few exceptions.[27] This prevents member states of the Authority from exercising oversight. Indeed, it is reflective of a culture of confidentiality at the ISA that has been widely criticised, especially in light of the ISA's mandate to act on behalf of humankind as a whole.[28] The current (2019) draft exploitation regulations might deliver some improvement in this regard as they foresee publication of exploitation contracts.[29]

Mandate of the International Seabed Authority

The core mandate of the ISA is to act on behalf of humankind in administering the Area and its mineral resources.[30] This involves ensuring that activities in the Area are benefitting humankind

23 ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, ISBA/19/C/17, 22 July 2013, para. 3. Hereinafter 'ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*'.

24 Because the exploration contracts between the ISA and the contractors are confidential, it is difficult to know whether any amendments were negotiated and what these entail.

25 The Seabed Disputes Chamber aimed to address this gap in environmental standards by finding e.g. that the obligation to apply best environmental practices, which was only incorporated in later sets of exploration regulations, forms part of a sponsoring state's due diligence obligation, and thus applies beyond the scope of the exploration regulations. See ITLOS, *Responsibilities and Obligations of States*, op. cit., note 14, para. 136.

26 They are annexed to the relevant exploration regulations. See e.g. ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, op. cit., note 23, Annex IV.

27 See e.g. the information published by one of the ISA contractors, UK Seabed Resources Ltd. Available online <https://www.lockheedmartin.com/en-gb/products/uk-seabed-resources/uk-seabed-resources-documents.html> (accessed 18 August 2021).

28 J.A. Ardron et al., 'Incorporating transparency into the governance of deep-seabed mining in the Area beyond national jurisdiction', *Marine Policy* 89, 2018, 58–66; K. Willaert, 'Public participation in the context of deep sea mining: luxury or legal obligation?', *Ocean and Coastal Management* 198, 2020, 105368; K. Komaki and D. Fluharty, 'Options to improve transparency of environmental monitoring governance for polymetallic nodule mining in the Area', *Frontiers in Marine Science* 7, 2020, 247.

29 ISA, *Draft Regulations on Exploitation of Mineral Resources in the Area*, ISBA/25/C/WP.1, draft regulation 17(3), 22 March 2019. Hereinafter 'ISA, *Draft Regulations on Exploitation of Mineral Resources*'.

30 Articles 153(1), 157(1), UNCLOS.

as a whole and that the benefits are shared equitably amongst states.[31] Discussions are underway as to which benefits humankind can best derive from the Area and how those might be shared. UNCLOS provides some guidance by providing for preferential treatment of developing states, including through the site-banking system and the Enterprise, as discussed below.

The ISA is to use its conferred powers to organise, control, and carry out activities in the Area, particularly with a view to administering the mineral resources of the Area.[32] This requires the ISA to develop the legal framework by adopting detailed rules, regulations, and procedures for prospecting, exploration, and exploitation of minerals in the Area.

Simultaneously, the ISA has an environmental mandate, requiring it to take 'necessary measures […] to ensure effective protection for the marine environment from harmful effects which may arise' from seabed mining.[33] This umbrella provision in UNCLOS, supported by a number of more specific provisions,[34] grants the ISA a broad capacity to enact environmentally protective measures as it deems necessary.[35] Striking a balance between mining and environmental protection is one of the core challenges for the ISA.

In line with its common heritage mandate, the constituency of the ISA reaches beyond its member states and encompasses humankind as a whole. Nonetheless, decision-making power at the ISA rests with its 167 member states, which are represented in the ISA Assembly.[36] In practice though, decisions are largely taken by a small sub-set of states, namely the 36 member states on the ISA Council.[37] This is unusual amongst international organisations. While many organisations have a small council or board that assists the plenary body, that organ ordinarily has a narrow task.[38] In contrast, the Council is the ISA's primary decision-making organ with an extensive mandate to establish specific policies on *any matter* within the competencies of the ISA, including developing and adopting the Mining Code,[39] granting access to minerals,[40] and 'exercis[ing] control over the activities in the Area'.[41] In other words, despite the fact that the ISA has the unique mandate to govern our common heritage of humankind, its institutional structure is unusually restrictive, conferring governing responsibilities to a small group of 36 states.[42] It is perhaps questionable whether

31 Article 140, ibid.

32 Articles 153(1), 157(1), ibid.

33 Article 145, ibid.

34 For a detailed discussion of the ISA's environmental mandate, see Jaeckel, op. cit., note 5, Ch. 4.

35 F.M. Armas-Pfirter, 'The International Seabed Authority and the protection of biodiversity', in A. de Paiva Toledo and V.J.M. Tassin (eds), *Guide to the navigation of marine biodiversity beyond national jurisdiction,* Editora D'Placido, 2017, 223–48.

36 As of May 2020, the ISA has 168 members (167 states plus the EU). See ISA, *Report of the Secretary-General of the International Seabed Authority under article 166, paragraph 4, of the United Nations Convention on the Law of the Sea*, ISBA/26/A/2, 6 July 2020, para. 4.

37 For a detailed discussion on the ISA Council, see Jaeckel, 2017, op. cit., note 5, Ch. 3.4.2.

38 H.G. Schermers and N.M. Blokker, *International institutional law*, 6th ed, Brill, 2018, pp. 316–29.

39 Article 162(2)(o), UNCLOS; Sections 1(15)–(16), Annex, 1994 Agreement.

40 Section 3(11), Annex, 1994 Agreement.

41 Articles 153(4), 162(2)(l), UNCLOS.

42 Reflecting the importance of the ISA Council, its membership rotates and follows a complex formula of five interest groups: (a) consumers and importers of relevant minerals, (b) investors in seabed mining activities, (c) net exporters of relevant minerals, (d) developing states representing special interests such as island states, and (e) members representing equitable geographic distribution. See section 3(15), Annex, 1994 Agreement; for a table of the current membership of the Council see the list available online <https://www.isa.org.jm/authority/council-members> (accessed 18 August 2021).

decisions that are meant to reflect the interests of humankind as a whole[43] are best taken by a small group of states. The shifting of power from the ISA's plenary organ to the small Council occurred as part of renegotiating the Area regime in the early 1990s, culminating in the 1994 Agreement. The changes introduced by the Implementing Agreement jeopardised the operationalisation of the common heritage principle, while maintaining the label.[44]

As the ISA's focus is limited to mineral resources, unrelated seabed activities, such as deep sea fishing[45] or laying submarine cables and pipelines,[46] fall outside of its mandate. Furthermore, the ISA's jurisdiction is spatially limited to the international seabed, ocean floor, and subsoil thereof and does not include the waters superjacent to the Area.[47] One exception is the ISA's environmental mandate. Indeed, the obligation to protect the marine environment extends to the water column and coastal areas.[48] Thus, the ISA must protect all marine flora and fauna, regardless of where they occur in the ocean, though only from the effects of seabed mining.[49]

The magnitude of the ISA's task should not be underestimated. Despite only having a small Secretariat and its main organs only meeting twice a year, the ISA must administer and regulate a frontier industry which carries serious environmental risks[50] and which is riddled with uncertainties regarding the economic profitability,[51] technological feasibility,[52] and environmental sustainability of mining,[53] all while acting on behalf of humankind as a whole, and ensuring that benefits are shared equitably. In recognition of these factors, the mandate of the ISA is broad and extensive, comprising the following:

(1) regulatory powers to adopt the Mining Code and balance environmental protection with mineral development;
(2) gate-keeping functions to control access to minerals in the Area through the aforementioned contractual system;
(3) obligation to enable effective participation of developing states, including through the site-banking system and the Enterprise;
(4) obligation to share the benefits of activities in the Area; and
(5) far-reaching competencies to ensure compliance.

Each of these functions is discussed in turn in the following sections.

43 Article 140, UNCLOS.
44 See e.g. B.H. Oxman, 'The 1994 Agreement and the Convention', *The American Journal of International Law* 88, 1994, 687–96.
45 Articles 87(1), 116, UNCLOS.
46 Article 112, ibid.
47 Article 135, ibid.
48 Article 145, ibid.; S.N. Nandan et al., *United Nations Convention on the Law of the Sea, 1982: A commentary, volume VI*, Martinus Nijhoff Publishers, 2002, p. 196.
49 A. Jaeckel, 'An environmental management strategy for the international seabed authority? The legal basis', *The International Journal of Marine and Coastal Law* 30, 2015, 93–119, pp. 100–1.
50 D.O.B. Jones et al., 'Mining deep-ocean mineral deposits: what are the ecological risks?', *Elements* 14, 2018, 325–30.
51 M.V. Folkersen et al., 'Depths of uncertainty for deep-sea policy and legislation', *Global Environmental Change* 54, 2019, 1–5.
52 Midas Consortium, 'Managing impacts of deep sea resource exploitation: research highlights', 2016. Available online <https://www.eu-midas.net/sites/default/files/downloads/MIDAS_research_highlights_low_res.pdf> (accessed 18 August 2021), p. 24.
53 H.J. Niner et al., 'Deep-sea mining with no net loss of biodiversity—an impossible aim', *Frontiers in Marine Science* 5, 2018, 53, 1–12.

Regulating deep seabed mining

From the inception of the Area regime, Arvid Pardo stressed the need for the common heritage to be administered by an entity that has 'the power effectively to regulate the commercial exploitation of the ocean floor'.[54] This was realised through the ISA's regulatory powers.

UNCLOS requires the ISA to adopt rules, regulations, and procedures for all aspects of activities in the Area.[55] These include environmental protection,[56] financial management and internal administration of the ISA,[57] and equitable sharing of the financial and other economic benefits from seabed mining.[58] Importantly, the Mining Code must build upon, and add detail to, the general obligations contained in UNCLOS. As such, the Mining Code is considered 'subsidiary and supplementary to the Convention'.[59]

The Mining Code includes legally binding regulations as well as non-binding recommendations. It is envisaged that the future exploitation regulations will be supplemented by legally binding standards as well as guidelines.[60]

What is particularly significant is the ISA's power to adopt regulations that are *legally binding* on *all* member states, as well as contractors. This is highly unusual for an international organisation.[61] Amongst the few international organisations with the power to take binding decisions on matters beyond internal issues, most allow their member states to opt out of decisions. In contrast, ISA regulations are binding on all members without them needing to give individual consent and, more importantly, without the possibility to opt out.

These exceptionally far-reaching regulatory powers must be understood in light of the ISA's mandate to act on behalf of humankind as a whole. There are no precedents for this. The ISA is the only 'international resource management' organisation.[62] It acts as what Pardo called the 'trustee'[63] of the mineral wealth in areas beyond national jurisdiction. In doing so, the ISA must determine which rules apply to anyone seeking to access and mine the minerals. If a state could opt out, the integrity of the entire system would be compromised.

Using its regulatory powers, the ISA has adopted three sets of regulations for prospecting and exploration of polymetallic nodules,[64] polymetallic sulphides,[65] and ferromanganese crusts[66]

54 UNGA, A/C.1./PV.1516, op. cit., note 1, paras. 8–9.

55 Articles 137(2), 160(2)(f)(ii) 162(2)(o)(ii), 209, UNCLOS, and article 17(1), Annex III, UNCLOS.

56 Article 145, UNCLOS.

57 Articles 160(2)(f)(ii), 162(2)(o)(ii), ibid.

58 Articles 82, 160(2)(f)(i), 162(2)(o)(i), ibid.

59 Preparatory Commission for the ISA and ITLOS, LOS/PCN/SCN.3/WP.1, 8 March 1984, para. 2.

60 ISA, *Draft Regulations on Exploitation of Mineral Resources in the Area*, op. cit., draft regulations 94, 95.

61 For a detailed discussion of the ISA's regulatory powers, see Harrison, op. cit., note 11; Jaeckel, op. cit., note 5, Ch. 5.2.

62 A.E. Boyle, 'Saving the world – implementation and enforcement of international environmental law through international institutions', *Journal of Environmental Law* 3(2), 1991, 229–45, p. 240.

63 UNGA, A/C.1./PV.1516, op. cit., note 1, para. 8.

64 ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area,* op. cit., note 23.

65 ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area*, ISBA/16/A/12/Rev.1, 7 May 2010. Hereinafter 'ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area*'.

66 ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area*, ISBA/18/A/11, 22 October 2012. Hereinafter 'ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area*'.

as well as a range of supplementary recommendations.[67] Regulations for the commercial-scale exploitation of minerals are currently being developed.

In an effort to broaden input into its regulatory work, the ISA has conducted a series of stakeholder consultations on various aspects of the draft exploitation regulations in recent years. This has allowed states without a seat on the ISA Council, as well as civil society organisations and others, to communicate their views on the evolving draft regulations. However, the extent to which their suggestions have been considered is unclear.

Controlling access to minerals in the Area

The ISA controls access to minerals in the Area. Deciding who receives an exploration or, in the future, exploitation contract, is one of its core mandates.

Assessing applications for so-called plans of work involves the ISA Council and its subsidiary body, the Legal and Technical Commission (LTC).[68] The LTC assesses applications and recommends approval or rejection to the Council which has the final decision-making power with respect to granting mining contracts.[69] A number of challenges exist with respect to the granting of mining contracts.

First, the decision-making process based on UNCLOS is biased in favour of approving an application. Where the LTC recommends approval of an application, the Council 'is essentially required to approve it',[70] except in very unlikely circumstances. If the LTC recommends disapproval or refrains from making any recommendation, the Council can still approve the application.[71] This is problematic as Council members do not have access to the actual application documents but merely to a brief summary of the application provided by the LTC.[72] Thus, the Council is unable to assess an application on its merits. Interestingly, the ISA's plenary organ, the Assembly, is not involved in the approval of exploration or exploitation contracts.

Given this procedural framework, it is perhaps unsurprising that the ISA has never rejected an application to date. Over 30 applications for exploration contracts have been approved.[73] The procedural bias towards approving applications can arguably limit the ISA's ability to implement an ecosystem-based approach,[74] which could involve minimising cumulative environmental impact by limiting the number of parallel mining operations within a region at any one time.

The limited powers of the Council in the approval process can be partially explained by industrialised states, during the negotiations of UNCLOS, seeking to ensure that the ISA would not restrict access to minerals, including on political grounds.[75] Thus, the LTC must approve an appli-

67 A list of ISA Recommendations is available online at <https://www.isa.org.jm/mining-code/recommendations> (accessed 18 August 2021).

68 For details on the process of assessing an application, see Jaeckel, op. cit., note 5, Ch. 3.5.2.

69 Article 165(2)(b), UNCLOS; Annex 3(11), 1994 Agreement.

70 Jaeckel, op. cit., note 5, p. 104; Annex 3(11), 1994 Agreement.

71 Sections 3(5), 3(11), Annex, 1994 Agreement.

72 See e.g. ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, op. cit., note 2, annex, regulation 36(3); UNCLOS, article 163(8).

73 A list of current contracts is available online at <https://www.isa.org.jm/exploration-contracts> (accessed 18 August 2021).

74 Ecosystem-based management is increasingly incorporated into ISA instruments. See M. Guilhon et al., 'Recognition of ecosystem-based management principles in key documents of the seabed mining regime: implications and further recommendations', *ICES Journal of Marine Science* 78(3), 2021, 884–99.

75 S.N. Nandan et al., *The development of the regime for deep seabed mining*, Kluwer Law International, 2002, p. 40; E.D. Brown, *Sea-bed energy and minerals: the international legal regime, volume 2: sea-bed mining*, Martinus Nijhoff Publishers, 2001, 113–16.

cation if it meets the 'objective and non-discriminatory criteria' set out in article 4 of Annex III to UNCLOS.[76] These criteria are discussed in the following paragraph. As noted by the then UN Secretary General: 'This procedure should ensure that access would not be denied to applicants who are found by the Legal and Technical Commission to be qualified under the rules and regulations of the Authority'.[77] However, as the following paragraphs argue, these criteria are not entirely objective and certainly involve a degree of discretion on the part of the LTC.

Second, there is a lack of transparency around the approval process. Application documents are only accessible to the LTC and are assessed in closed session.[78] The LTC has no guidance for how to determine whether an application complies with all requirements. As part of its assessment, the LTC must determine for example whether an applicant has 'the financial and technical capability to carry out the proposed plan of work' and whether the latter provides for 'effective protection of human health and safety' as well as 'effective protection and preservation of the marine environment' including its biodiversity.[79]

These assessments are difficult to make for a frontier activity that has never been undertaken before, for which no agreed environmental objectives exist, and that is characterised by significant uncertainties as to the environmental impacts, technological feasibility, and financial viability and requirements. Most importantly, the LTC is unable to independently verify the data and information provided by applicants.[80] Given these challenges and the role of acting on behalf of humankind as a whole, transparency would appear to be particularly important.

The lack of transparency may be partially explained by the fact that the legal framework for the Area regime was negotiated more than four decades ago, when international organisations operated predominantly on the assumption that 'information should be kept secret and public access should be an exception'.[81] Since then, transparency has become a widespread normative administrative standard for international organisations.[82] The ISA has lagged behind this trend, although some improvements in transparency have been registered in recent years.[83] This lack of transparency is particularly concerning in light of the ISA's mandate to govern the common heritage of humankind.

Participation of developing states through the Enterprise and the site-banking system

A core aim of negotiating Part XI of UNCLOS was to prevent the Area from only being accessible to a handful of technologically advanced states to the detriment of the rest of humankind. Indeed,

76 'Information note concerning the Secretary-General's informal consultation on outstanding issues relating to the deep sea-bed mining provisions of the UN Convention on the Law of the Sea, New York, 16 and 17 June 1992', reprinted in ISA, *Secretary-General's Informal Consultations on Outstanding Issues Relating to the Deep Seabed Mining Provisions of the United Nations Convention on the Law of the Sea: Collected Documents*, ISA, 2002, 79–84, para. 18.

77 Ibid.

78 Articles 153(3), 165(2)(b), UNCLOS.

79 Articles 4(6), 6, Annex III, UNCLOS; ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, op. cit., note 23, Annex, Regulation 21.

80 Jaeckel, op. cit., note 5, p. 103.

81 J. Tallberg, 'Transparency', in J. Katz Cogan et al. (eds), *The Oxford handbook of international organizations*, Oxford University Press, 2017, 1170–92, p. 1184.

82 M. Donaldson and B. Kingsbury, 'The adoption of transparency policies in global governance institutions: justifications, effects, and implications', *Annual Review of Law and Social Science* 9, 2013, 119–47.

83 Ardron et al., op. cit., note 28; J.A. Ardron, 'Transparency in the operations of the International Seabed Authority: an initial assessment', *Marine Policy* 95, 2018, 324–31.

ensuring participation of developing states is a key feature of Part IX[84] and was to be achieved primarily through two mechanisms: the Enterprise and the site-banking system. In practice, however, both of these mechanisms have so far failed to meet their intended aims, as the following paragraphs discuss.

The Enterprise

The Enterprise was planned to be the commercial arm of the ISA that would conduct mining operations on par with private or state-owned commercial mining companies. The profits generated by the Enterprise would be shared amongst ISA member states. The Enterprise was supposed to be a body that enables developing states to directly participate in mining the Area.[85] To allow the Enterprise to compete with other mining operators, it would receive funding from member states of the ISA, as well as technology transfer and training programmes to ensure the Enterprise has qualified staff.[86]

These measures were substantially altered by the 1994 Agreement,[87] which removed not only any obligation of states to finance the Enterprise,[88] but also the obligatory technology transfers, requiring instead for such transfers to be consistent with the protection of intellectual property rights.[89] The training programmes were maintained although with a focus on training scientific and technical experts from developing states generally rather than staff of the Enterprise.[90] While the vision of the Enterprise itself survived the 1994 amendments, its operational potential was significantly altered as a result of withdrawing funding and guaranteed access to technology.

Moreover, the 1994 Agreement delayed the independent functioning of the Enterprise and made it conditional upon approval by the ISA Council and adherence to commercial principles.[91] Specifically, the Implementing Agreement provides:

> Upon the approval of a plan of work for exploitation for an entity other than the Enterprise, or upon receipt by the Council of an application for a joint-venture operation with the Enterprise, the Council shall take up the issue of the functioning of the Enterprise independently of the Secretariat of the Authority. If joint-venture operations with the Enterprise accord with sound commercial principles, the Council shall issue a directive pursuant to article 170, paragraph 2, of the Convention providing for such independent functioning.[92]

84 Article 148, UNCLOS.

85 E. Egede et al., *A study on issues related to the operationalization of the Enterprise* (ISA, 2019). Available online <https://www.isa.org.jm/node/19575> (accessed 18 August 2021).

86 Final Act of the Third United Nations Conference on the Law of the Sea, Resolution II ‘Governing Preparatory Investment in Pioneer Activities Relating to Polymetallic Nodules’, para. 12(a)(ii).

87 ISA, *Legislative History of the Enterprise*, 2002. Available online <https://isa.org.jm/files/files/documents/enterprise-ae.pdf> (accessed 18 August 2021).

88 *1994 Agreement*, annex, section 2(3).

89 *1994 Agreement*, annex, section 5(1)(b). The original obligation for transferring technology was laid out in article 5, Annex III, UNCLOS.

90 ISA, *Recommendations for the Guidance of Contractors and Sponsoring States Relating to Training Programmes under Plans of Work for Exploration Issued by the Legal and Technical Commission,* 12 July 2013, ISBA/19/LTC/14; article 143(3), 144, UNCLOS and article 15, Annex III, UNCLOS.

91 Section 2(2), Annex, 1994 Agreement.

92 Ibid.

Despite the fact that expressions of interests for a joint-venture with the Enterprise have been received in 2012[93] and 2018,[94] discussions about establishing an independent Enterprise have been slow. Developing states have repeatedly voiced frustrations at the lack of momentum in creating the Enterprise.[95] For instance, in 2018 the African Group noted the following:

> [T]he African Group is concerned that principles and mechanisms designed to render the Area a level playing field, and which are the cornerstones of the Convention, are at risk of being eroded. The African Group does not wish to see an exploitation regime that facilitates the loss of common heritage resources in return for minimal or no benefit to the population of African countries, and other developing States.[96]

The African Group's call to establish an independently functioning Enterprise[97] 'received cross-regional support'.[98] However, progress remains slow. In March 2020, the LTC finally recommended appointing an interim director general of the Enterprise from within the ISA Secretariat.[99] Prior to that, an independent Special Representative for the Enterprise had been appointed on a temporary basis to participate in the negotiations for the draft exploitation regulations and liaise with Poland on a possible joint-venture arrangement.[100] No outcome has yet been achieved on the latter.[101]

The Commission, on the basis of what was stated in paragraphs 37 to 40 above, recommended that the Council consider requesting the Assembly, subject to the availability of the requisite funds, to establish the position of interim director general within the Secretariat and for the Secretary General to appoint a person to the position to oversee the specified functions listed in section 2(1) of the Annex to the 1994 Agreement.

The dismay of developing states is understandable, given that until recently, the ISA had neglected its functions and responsibilities regarding the Enterprise. Until the Enterprise functions independently, its rather modest initial functions, such as monitoring world metal markets and assessing approaches to joint-venture operations, are to be performed by the ISA Secretariat,[102] though this has not been the case since 2012, due to concerns over conflicts of interest.[103] Similarly,

93 ISA, *Proposal for a joint venture operation with the Enterprise*, ISBA/19/C/4, 20 March 2013.

94 ISA, *Considerations Relating to a Proposal by the Government of Poland for a Possible Joint-Venture Operation with the Enterprise – Report of the Secretary-General*, ISBA/24/C/12, 25 May 2018.

95 M. Remaoun, 'The International Seabed Authority and the Enterprise: how Africa is reinvigorating the principle of the common heritage of mankind', *Journal of Ocean Governance in Africa* 1, 2021, 1–37.

96 African Group, *Request for Consideration by the Council of the African Group's Proposal for the Operationalization of the Enterprise*, 6 July 2018. Available online <https://www.isa.org.jm/files/files/documents/alg-oboag-entp.pdf> (accessed 18 August 2021).

97 Ibid.

98 ISA, *Decision of the Council of the International Seabed Authority Relating to the Special Representative of the Secretary-General of the International Seabed Authority for the Enterprise*, 1 March 2019, para. 3. Hereinafter 'ISA, *Decision of the Council of the International Seabed Authority*'.

99 ISA, *Report of the Chair of the Legal and Technical Commission on the work of the Commission at the first part of its twenty-sixth session*, ISBA/26/C/12, 9 March 2020, para. 41.

100 ISA, *Decision of the Council of the International Seabed Authority*, op. cit., note 98.

101 ISA, *Report of the Special Representative of the Secretary-General of the International Seabed Authority for the Enterprise*, ISBA/26/C/15, 13 May 2020. Hereinafter 'ISA, *Report of the Special Representative*'.

102 Section 2(1), Annex, 1994 Agreement.

103 ISA, *Final Report on the Periodic Review of the International Seabed Authority Pursuant to Article 154 of the United Nations Convention on the Law of the Sea*, ISBA/23/A/3, 8 February 2017, para. 21.

the LTC has not yet considered questions around establishing the Enterprise, despite this having been on its agenda since 2014,[104] presumably because of an unmanageable workload, which has been discussed elsewhere.[105]

The Enterprise is central to the operationalisation of the common heritage principle. It is designed to enable developing states and others to collectively and directly participate in the mining of minerals, without the significant risks of seeking active participation individually through becoming a sponsoring state.[106] The lack of political ambition at the ISA, with the exception of pressure from some developing states, is arguably depriving the Area regime of one of its most innovative, albeit also controversial, features.

The site-banking system

The second important measure to facilitate active participation by developing states in the Area regime was the so-called site-banking system or parallel system.[107] It was designed to ensure developing states can skip the costly process of locating a mining site with economic potential. Under the site-banking system, an applicant for an exploration contract with the ISA needs to submit relevant geological and biological data for an area that can sustain two separate mining operations, both in terms of size and estimated commercial value of the mineral resources. If successful, the applicant receives exclusive rights to explore and/or exploit one part of the application area, whereas the other part is reserved for mining operations by a developing state or the Enterprise.[108] This effectively lowers the upfront costs for developing states and the Enterprise.

Importantly, the Enterprise has privileged access to reserved areas, meaning reserved areas only become available to developing states if the Enterprise does not intend to develop them itself.[109] However, because of delays in becoming fully operational, the Enterprise has missed out on seven contracts that have already been granted for reserved areas. These are now under contract with mining corporations, often headquartered in the global north, that use individual developing states as their sponsoring states to obtain access to reserved areas.

As has been discussed elsewhere,[110] engaging in the Area regime as individual sponsoring states instead of collectively through the Enterprise increases the legal and financial risks for developing states. Specifically, sponsoring states may be held liable for environmental harm caused by their sponsored mining operator if they do not meet their due diligence obligations.[111] They potentially also face financial risks from foreign investor claims.[112] Despite these risks for sponsoring states, the site-banking system has to date been used only by individual developing states.

The site-banking system has been stifled through a regulatory change introduced by the ISA in 2010, which allows contractors exploring certain types of mineral deposits to offer the Enterprise

104 Ibid.; ISA, *Report of the Special Representative*, op. cit., note 101.

105 Jaeckel, op. cit., note 5, Ch. 8.3.

106 A. Jaeckel, 'Benefitting from the common heritage of humankind: from expectation to reality', *The International Journal of Marine and Coastal Law* 35, 2020, 1–22, p. 13.

107 Article 153, UNCLOS and articles 8, 9, Annex III, UNCLOS.

108 Articles 8, 9, Annex III, UNCLOS; sections 2(2), 2(5), 1(10), Annex, 1994 Agreement.

109 Article 9, Annex III, UNCLOS.

110 Jaeckel, op. cit., note 105, pp. 12–14.

111 ITLOS, *Responsibilities and Obligations of States*, op. cit., note 14.

112 A. Pecoraro, 'UNCLOS and investor claims for deep seabed mining in the Area: an investment law of the sea?', *ECILS Working Paper Series*, 2021.

an equity interest in its future mining operations instead of contributing a reserved area.[113] The change was introduced because some mineral deposits that were not yet known at the time of negotiating UNCLOS, are three-dimensional. As ISA documents summarise:

> [I]t would not be possible to determine two sites of equal estimated commercial value without substantial and costly exploration work. Consequently, it appeared to members of the Authority that it would be impracticable to implement a site-banking approach for polymetallic sulphides and cobalt-rich ferromanganese crusts in the same manner as for polymetallic nodules.[114]

This change resulted in significant consequences for the site-banking system. Of the 12 exploration contracts granted for sulphides and crusts, only one contributed a new reserved area to the pool.[115] This arguably reduces opportunities for developing states to actively participate in the Area regime, either as sponsoring states or collectively through the Enterprise. As a 2018 note by the ISA Secretariat highlights:

> Collectively, the reserved areas and the resources contained therein represent the core financial asset available to the Enterprise in the future and a key element in giving effect to the principle of the common heritage of mankind.[116]

It remains unclear how the equity interest option will be implemented and whether and how benefits will be generated for developing states.[117]

Benefit sharing

As alluded to in the introduction, central to the Area regime from its very inception was the notion that benefits derived from the Area would be shared equitably amongst all states, with special consideration being given to developing states.[118] However, the modalities of, and mechanisms for, benefit sharing remain contested,[119] as this section briefly discusses.

113 ISA, *Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area*, op. cit., note 66, regulations 16–19; ISA, *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area*, op. cit., note 65, regulations 16–19; see also A. Jaeckel et al., 'Sharing benefits of the common heritage of mankind – is the deep seabed mining regime ready?', *Marine Policy* 70, 2016, 198–204.

114 ISA, *Issues related to the possible alignment of the Authority's regulations on prospecting and exploration concerning the offer of an equity interest in a joint venture arrangement*, ISBA/24/LTC/4, 6 February 2018, para. 10. Hereinafter 'ISA, *Issues related to the possible alignment of the Authority's regulations*'.

115 ISA, *Application for Approval of a Plan of Work for Exploration for Cobalt-Rich Ferromanganese Crusts by the Ministry of Natural Resources and Environment of the Russian Federation*, ISBA/19/LTC/12, 25 June 2013.

116 ISA, *Issues related to the possible alignment of the Authority's regulations*, op. cit., note 114, para. 13.

117 ISA, *Issues related to the possible alignment of the Authority's regulations*, op. cit., note 114; I. Feichtner, 'Sharing the riches of the sea: the redistributive and fiscal dimension of deep seabed exploitation', *European Journal of International Law* 30, 2019, 601–33.

118 Article 140, UNCLOS.

119 M. Bourrel et al., 'The common of heritage of mankind as a means to assess and advance equity in deep sea mining', *Marine Policy* 95, 2018, 311–16; Jaeckel et al., op. cit., note 110; A. Jaeckel et al., 'Conserving the common heritage of humankind – options for the deep-seabed mining regime', *Marine Policy* 78, 2017, 150–7.

UNCLOS specifically provides for the sharing of 'financial and other economic benefits' from activities in the Area.[120] This includes an equitable payment regime for profits generated from mining activities, which is discussed by Dingwall in detail in Chapter IV.2 of this book.[121] Here it suffices to say that the ISA's current proposal for sharing of revenues has been widely criticised[122] and discussed at several workshops, the summary of which has been lead-authored by an ISA contractor.[123] Discussions about alternative proposals are ongoing, including the question of how to design a payment regime that meets the ISA's mandate of acting on behalf of humankind[124] and reflects the full costs associated with seabed mining.[125]

UNCLOS also foresees benefits beyond direct economic ones, in particular relating to capacity building for developing states. As discussed elsewhere,[126] the types of benefits that are expected to be generated from the Area have changed over time. In the 1960s, seabed mining was thought to generate 'immeasurable wealth' and fund international development efforts,[127] a promise that appears preposterous today but ensured developing states would remain engaged in the UNCLOS negotiations.[128] As these expectations were adjusted, the framing of benefits shifted to supply security of critical minerals and lately to the contribution of seabed minerals to building a green economy.[129] The latter appears to be a form of corporate green washing[130] and frames seabed mining as

120 Article 140(2), UNCLOS.

121 J. Dingwall, 'The common heritage quandary: devising a global payment regime for exploitation activities in the deep seabed Area', in V. Tassin Campanella (ed), *Routledge handbook of seabed mining and the law of the sea*, op. cit., chapter IV.2.

122 See e.g. African Group, *Request for Consideration by the Council of the African Group's Proposal on the Economic Model/Payment Regime and Other Financial Matters in the Draft Exploitation Regulations under Review*, 9 July 2018. Available online <https://www.isa.org.jm/files/files/documents/nv.pdf> (accessed 18 August 2021). Hereinafter 'African Group, *Request for Consideration by the Council of the African Group's Proposal on the Economic Model/Payment Regime*'; Tonga, *Statement regarding agenda item 11: Draft Regulations for exploitation of mineral resources in the Area (Financial Model)*, 25 February 2019. Available online <https://www.isa.org.jm/files/files/documents/7-tg_financial_model.pdf> (accessed 18 August 2021); Deep Sea Conservation Coalition, *Statement regarding agenda item 11: Draft Regulations for exploitation of mineral resources in the Area (Financial Model)*, 25 February 2019. Available online <https://www.isa.org.jm/files/files/documents/17-dscc.pdf> (accessed 18 August 2021).

123 K. Van Nijen et al., 'The development of a payment regime for deep sea mining activities in the Area through stakeholder participation', *The International Journal of Marine and Coastal Law* 34, 2019, 1–31.

124 T. Thiele et al., *A Benefit Sharing Mechanism Appropriate for the Common Heritage of Mankind: Workshop Summary*, 2019. Available online <https://publications.iass-potsdam.de/rest/items/item_5009889_4/component/file_5009890/content> (accessed 18 August 2021); Feichtner, op. cit., note 117.

125 T. Thiele et al., *A Comprehensive Approach to the Payment Mechanism for Deep Seabed Mining,* IASS Policy Brief 1/2021, Institute for Advanced Sustainability Studies, 2021. Available online <https://publications.iass-potsdam.de/rest/items/item_6000737_2/component/file_6000738/content> (accessed 18 August 2021).

126 Jaeckel, op. cit., note 105.

127 UNGA, *Summary of Records for 1st to 9th Meetings* (Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction), UN Doc A/AC.135/SR.1-9, 10 May 1968, para. 69.

128 S. Ranganathan, 'Ocean floor grab: international law and the making of an extractive imaginary', *European Journal of International Law* 30(2), 2019, 573–600.

129 S. Christiansen et al., *Towards a Contemporary Vision for the Global Seafloor Implementing the Common Heritage of Mankind*, Heinrich-Böll-Stiftung, 2019. Available online <https://www.boell.de/en/2019/11/11/towards-contemporary-vision-global-seafloor-implementing-common-heritage-mankind> (accessed 18 August 2021), 60–62.

130 J. Childs, 'Greening the blue? Corporate strategies for legitimising deep sea mining', *Political Geography* 74, 2019, 102060; see also L. Casson et al., *In deep water*, Greenpeace Inc, 2019, p. 17; S. Teske et al., *Renewable Energy and Deep-Sea Mining: Supply, Demand and Scenarios*, Report prepared by ISF for J.M. Kaplan Fund, Oceans 5 and Synchronicity Earth, 2016.

a necessity rather than an opportunity for re-adjusting the global economic playing field, as was historically the case.[131] The debate remains dynamic with some car manufacturers and technology companies having recently rejected seabed mining until the environmental consequences can be adequately evaluated.[132]

Of course the Area is already generating benefits for humankind, including vital ecosystem services[133] and through marine science that increases knowledge about our life-support systems in the ocean and how to sustain them. Indeed, scientific knowledge of the deep oceans has improved dramatically in recent decades.[134] We now know that the 'deep ocean and seafloor are crucial to our lives through the services that they provide'[135] and that deep seabed mining could cause 'devastating, and potentially irreversible, impacts on marine life'.[136] In this regard, the current UN Decade of Ocean Science for Sustainable Development (2021–2030) offers an opportunity to scale up scientific research to better understand the role of deep ocean ecosystems and the effects that seabed mining might have on these.

Discussions around benefit sharing in the Area regime have started to consider not only benefits but also how the costs could be distributed equitably.[137] These costs include inter alia social costs,[138] environmental costs,[139] economic losses for land-based mineral producing economies including developing states,[140] and economic costs for sponsoring states from liability for environmental harm[141] and indeed from regulating seabed mining.[142] African states argue that seabed mining should 'only occur[] if it is demonstrably beneficial to mankind'.[143] They assert that:

> [A] proper reading of the UNCLOS and the Authority's mandate is for the Authority to develop Regulations that enable exploitation in the Area to occur only insofar as there would be (net) benefit to mankind as a whole. This must take into account all parameters set by the UNCLOS, including the effective protection of the marine environment, and

131 Christiansen et al., op. cit., note 129, 60–62.

132 D. Shukman, 'Companies back moratorium on deep sea mining', BBC News, 4 April 2021. Available online <https://www.bbc.com/news/science-environment-56607700> (accessed 18 August 2021).

133 J.T. Le et al., 'Incorporating ecosystem services into environmental management of deep-seabed mining', *Deep-Sea Research Part II: Topical Studies in Oceanography* 137, 2017, 486–503; A.R. Thurber et al., 'Ecosystem function and services provided by the deep sea', *Biogeosciences* 11, 2014, 3941–63; B.N. Orcutt et al., 'Impacts of deep-sea mining on microbial ecosystem services', *BioRxiv*, 2018, 463992.

134 R. Danovaro et al., 'Challenging the paradigms of deep-sea ecology', *Trends in Ecology & Evolution* 29, 2014, 465–75.

135 Thurber et al., op. cit., note 133.

136 O. Heffernan, 'Deep-sea dilemma', *Nature* 571, 2019, 465–68.

137 L.A. Levin et al., 'Challenges to the sustainability of deep-seabed mining', *Nature Sustainability* 3, 2020, 784–94; Feichtner, op. cit., note 117.

138 J.R. Wakefield and K. Myers, 'Social cost benefit analysis for deep sea minerals mining', *Marine Policy* 95, 2016, 346–55; Cardno, *An assessment of the costs and benefits of mining deep-sea minerals in the Pacific Island region*, SPC, 2016.

139 Jones et al., op. cit., note 50.

140 A. Lapteva et al., *Study of the potential impact of polymetallic nodules production from the area on the economies of developing land-based producers of those metals which are likely to be most seriously affected*, ISA, 2020. Available online <https://www.isa.org.jm/files/documents/impactstudy.pdf> (accessed 18 August 2021).

141 N. Craik et al., *Legal liability for environmental harm: synthesis and overview*, CIGI, Liability Issues for Deep Seabed Mining Series Paper No 1, 2018.

142 Levin et al., op. cit., note 137; Cardno, op. cit., note 138.

143 African Group, *Request for Consideration by the Council of the African Group's Proposal on the Economic Model/Payment Regime*, op. cit., note 122.

ensuring optimum revenues for the Authority for equitable sharing, in accordance with the UNCLOS.[144]

This view is supported by scholars who argue that seabed mining in the Area should only be authorised if it delivers a net-positive benefit to humankind, which must include 'an assessment of the likely impacts of mining activities on the natural capital of the Area and on other potential uses of the deep sea'.[145]

As this discussion demonstrates, while UNCLOS requires the sharing of benefits associated with the Area regime, how this mandate will be implemented remains uncertain.

Compliance and enforcement

UNCLOS sets out unusually far-reaching compliance and enforcement powers for the ISA, although these are not yet realised in practice, as this section briefly discusses.

The ISA is mandated to 'exercise such control over activities in the Area as is necessary for the purpose of securing compliance' with UNCLOS, the Mining Code, and the contractors' approved plans of work.[146] Moreover, the ISA has 'the right to take at any time any measures provided for under [Part XI] to ensure compliance with its provisions and the exercise of the functions of control and regulation assigned to it thereunder or under any contract'.[147] These provisions essentially grant the ISA the power to determine for itself which measures it considers necessary to secure compliance.

One measure which is specifically provided for in UNCLOS is inspections of 'all installations in the Area used in connection with activities in the Area'.[148] While discussions about establishing an Inspectorate within the ISA have been ongoing, inspections are not yet used in practice. It remains unclear whether and how inspections will be carried out in the future and how an Inspectorate is to be positioned relative to the ISA Secretariat and Council to avoid conflicts of interests.[149]

As of August 2021, the only process used to monitor compliance of current exploration contractors is annual reporting by the contractors themselves about their activities[150] and 5-yearly reviews of the contractor's plans of work.[151] Self-evidently, these methods to monitor compliance are weak as they do not provide member states, or indeed humankind as a whole, with any independently collected information. What is more, annual reports and the contractors' plans of work remain con-

144 African Group, *Submission on the ISA Draft Strategic Plan 2019–2023*, 2018. Available online <https://www.isa.org.jm/files/documents/EN/SPlan/Subs/Algeria-obo-AG.pdf> (accessed 18 August 2021).

145 S. Christiansen et al., *The International Seabed Authority and the common heritage of mankind*, IASS Policy Brief 2/2018, Institute for Advanced Sustainability Studies, 2018. Available online <https://www.umweltbundesamt.de/sites/default/files/medien/2875/dokumente/chm_policy_brief.pdf> (accessed 18 August 2021).

146 Article 153(4), UNCLOS.

147 Article 153(5), ibid.

148 Article 153(5), UNCLOS.

149 ISA, *Information Relating to Compliance by Contractors with Plans of Work for Exploration*, ISBA/24/C/4 (ISA, *Information Relating to Compliance*), 16 January 2018.

150 See e.g. ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, op. cit., note 23, annex IV, section 10.

151 Section 4.4, Annex IV, UNCLOS; ISA, *Evaluation of Annual Reports of Contractors and Monitoring Compliance with Plans of Work for Exploration – Note by the Secretariat*, ISBA/24/LTC/3, 16 January 2018.

fidential, except for a brief summary of the former.[152] This lack of transparency makes it difficult for the public to have trust in the current compliance regime.

Non-compliance by ISA contractors can result in sanctions, such as termination or suspension of the contract or monetary penalties.[153] However, these sanctions can only be imposed if 'the contractor has been accorded a reasonable opportunity to exhaust the judicial remedies available to him under Part XI, section 5' of UNCLOS.[154] One exception is emergency orders as they allow the ISA Secretary General to temporarily suspend a contractor's operation if these 'have caused, are causing or pose a threat of serious harm to the marine environment'.[155] As yet, no enforcement actions have been taken by the ISA.[156]

Conclusion

The ISA is central to the Area regime, having the exclusive mandate to govern all minerals in the Area and determine the conditions for accessing them on behalf of humankind as a whole. As this chapter outlines, UNCLOS sets the parameters of the Area regime and grants the ISA broad powers to regulate, enforce, inspect, and oversee activities in the Area. Several mechanisms under the ISA's mandate are not yet fully operational, such as inspection of activities in the Area, the Enterprise, the payment mechanisms, and the broader benefit sharing regime. In light of these realities, the Area regime has been described as 'one of the least understood, and so far least operational, international regimes for the utilisation of some of the remotest and least accessible natural resources'.[157]

Most importantly, the ISA is tasked with acting on behalf of all of us in governing our common heritage of humankind. This concept provides the framework and interpretative lens for the ISA's role and mandate. A contested concept from its inception, the manner in which the common heritage of humankind concept finds expression in the Area regime has changed over time, including through the 1994 Agreement and more recent trends towards transparency in the work of international organisations. Alongside these changes, the knowledge base around the deep ocean and its mineral and biological resources has changed dramatically in recent decades.

With the ISA developing its first regulations for commercial-scale mineral exploitation, we are at a crucial moment in the evolution of the regime. Now is the time to determine how the common heritage concept will be operationalised over the coming decades if and when seabed mining in the Area becomes a reality. This involves balancing sometimes competing interests for revenue, advancement of developing states, environmental protection, transparency, industry profits, and the equitable sharing of the costs and benefits of seabed mining. How to give effect to the concept of the common heritage of humankind in light of these interests remains as contentious as ever.

152 See e.g. ISA, *Report of the Chair of the Legal and Technical Commission on the work of the Commission at the second part of its twenty-sixth session*, ISBA/26/C/12/Add.1, section B25, September 2020.

153 Article 18, Annex III, UNCLOS.

154 Ibid.

155 ISA, *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, op. cit., note 23, regulation 33.

156 ISA, *Information Relating to Compliance*, op. cit., note 149, para. 19.

157 D. French, 'From the depths: rich pickings of principles of sustainable development and general international law on the ocean floor — the Seabed Disputes Chamber's 2011 advisory opinion', *The International Journal of Marine and Coastal Law* 26, 2011, 525–68, pp. 526–7.

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