MODULE EIA LESSON 9

OVERVIEW OF ENVIRONEMENTAL OBLIGATIONS IN THE ISA REGIME

LECTURE NOTES

Slide 1 – Context and definitions

Ladies and Gentlemen, my name is Marie Bourrel-McKinnon and I have the great pleasure to share with you today an overview of the legal regime in place for ensuring the protection of the marine environment of the deep seabed beyond the outer limits of the continental shelf as defined in Article 76 of the United Nations Convention on the Law of the Sea (also called "UNCLOS"),[1] with a specific focus on the specific focus on how to protect the environment from the potential harmful impacts of deep seabed mining.

Another entire module of DeepDive discusses at length the potential environmental impacts of deep seabed mining so I will not attempt to cover this matter. I do however strongly encourage you to enrol into this module which will provide you with a very detailed knowledge of what are the expected impacts and mitigation measures under consideration.

Before to move forward, let's take the time to clarify some fundamental concepts.
You already know for instance that both the Area and its mineral resources are designated by Article 136 of UNCLOS 'the common heritage of mankind',[2] a *sui generis* legal status which entails that no State may exercise sovereignty or sovereign rights over the Area or its resources and that rights in the resources of the Area are 'vested in mankind as a whole', on whose behalf the International Seabed Authority (also called "ISA") acts.[3]

[1] United Nations Convention on the Law of the Sea (adopted and opened for signature 10 December 1982, entered into force 16 November 1994) 1833 UNTS 397 (LOSC).
[2] LOSC, Arts 1, para. 1(1), 133 lit.(a) and 136.
[3] LOSC, Art. 137, para. 2.

You also already know that ISA has been established as the organisation through which States Parties to UNCLOS organize and control exploration for, and exploitation of, the mineral resources of the Area.[4]

What is very important to have in mind when approaching the discussion of the overall legal regime of the Area is that UNCLOS tasks ISA with the development of the resources of the Area[5] while at the same time, protecting the marine environment. In my opinion it is not at all what some argue to be a "dual" mandate. It is rather an "integrated" mandate recognized to ISA as a regulator and as Steward of the Area and its resources for the benefit of humanity.

To achieve this delicate balance, States Parties have equipped ISA with unusually broad and far-reaching competences, including the power to allocate rights, legislative competence and enforcement powers.

Slide 2 – Basic legal framework

The provisions on the protection of the marine environment contained in Part XII of UNCLOS constitute the basic framework for the legal regime that establishes the obligations, powers and responsibilities of States with respect to the marine environment. These apply to all marine environments, including the Area.

Article 192 of UNCLOS establishes the overarching obligation of all States to protect and preserve the marine environment. Part XII also describes the specific measures to be taken by States to prevent, reduce and control marine pollution[6] as well as to ensure that activities under their jurisdiction or control do not cause pollution damage to other States and their environment, and

[4] LOSC Art. 1, para. 1(3) (uses the term of art 'activities in the Area' to refer to 'all activities of exploration for, and exploitation of, the resources of the Area').
[5] LOSC, Art. 150(a).
[6] It is worth noting that the definition of 'pollution of the marine environment' in Art. 1 LOSC is all-encompassing and applies equally to the introduction of pollution from land-based and atmospheric activities, including anthropogenic CO2 emissions. Michael W Lodge and Philomène A Verlaan, 'Deep-sea mining: regulatory challenges and responses' (2018) 14 *Elements* 331.

that pollution does not spread beyond the areas where they exercise sovereign rights under UNCLOS.

In relation to the Area, Article 209 states that *"[i]nternational rules, regulations and procedures shall be established in accordance with Part XI to prevent, reduce and control pollution of the marine environment from activities in the Area.*"

The nature of these international rules, regulations and procedures is detailed in Article 145 of UNCLOS.

This provision requires extensive regulation on the part of ISA. The protection required extends well beyond the Area ('including the coastline'), beyond pollution ('and other hazards'), and most visionary of all, it includes a comprehensive, ocean-wide ecological prerequisite that is not found in any other intergovernmental marine environmental treaty (prevention, reduction and control of 'interference with the ecological balance of the marine environment'). The only limitation is that the harmful effects must be attributable to 'activities in the Area'.[7]

To implement and give effect to the provisions of UNCLOS and the 1994 Agreement, ISA is required to adopt rules, regulations and procedures on all aspects of activities in the Area. Whilst these rules, regulations and procedures are subsidiary to UNCLOS and the 1994 Agreement, they are nevertheless binding on all members of ISA without requiring individual consent and without the possibility of opting out.[8]

This is an exceptional law-making competence for an international organisation and is one of the salient features of the legal regime for deep seabed mining. By virtue of the contractual nature of the relationship between ISA and entities carrying out activities in the Area, these rules, regulations and procedures also become binding on contractors, without further integration into domestic law.

[7] See (n 4) on the definition of 'activities in the Area.'
[8] James Harrison, *Making the Law of the Sea: A Study in the Development of International Law* (Cambridge University Press 2011).

Slide 3 – Environmental Regulations

Law-making power in ISA is vested in the Council,[9] which shall adopt the "*rules, regulations and procedures*" relating to activities in the Area,[10] including "hose relating to (…) the protection of the marine environment".[11]

The 1994 Agreement further emphasises that 'the adoption of rules, regulations and procedures incorporating applicable standards for the protection and preservation of the marine environment' is one of the matters to be given priority consideration by ISA between the entry into force of UNCLOS and the approval of the first plan of work for exploitation.[12]

Although law-making power is vested in the Council, the Council does not act alone in formulating environmental regulations for the Area. The other ISA organ with responsibility for the protection of the marine environment is the Legal and Technical Commission (also called the "LTC"), which is established as an organ of the Council under Article 163 of UNCLOS.

The LTC is required to formulate and submit to the Council environmental rules, regulations, and procedures and keep them under review.[13] It is required to make recommendations to the Council both on the implementation of such regulations and on 'the protection of the marine environment, taking into account the views of recognized experts in that field.'[14]

Furthermore, the LTC also has:

(i) to prepare environmental impact assessments of activities in the Area,[15]

[9] The Council is composed of 36 members, divided into five Groups (A, B, C, D and E) and for decision-making four Chambers (A, B, C and the developing countries in Groups D and E). For an overview of the structure and decision-making process within the Council see Michael C Wood, 'International Seabed Authority: The First Four Years' (1999) 3 *Max Planck Yearbook of United Nations Law* 173.
[10] LOSC, Art. 162, para. 2(o)(ii).
[11] LOSC, Annex III, Art. 17, para. 1(b)(xii).
[12] Part XI Agreement (n **Error! Bookmark not defined.**), Annex, s. 1, para. 5(g).
[13] LOSC, Art. 165(2)(f)-(g).
[14] LOSC, Art. 165(2)(e).
[15] LOSC, Art. 165(2)(d).

(ii) make recommendations to the Council concerning a monitoring programme to observe, measure, evaluate, and analyse the risks and effects of pollution caused by such activities,

(iii) ensure that existing regulations are adequate and complied with, and

(iv) coordinate the implementation of the monitoring programme.[16]

Pursuant to the legal provisions described above, the ISA has adopted three sets of Regulations dealing with prospecting and exploration for mineral resources in the Area and is currently in the process of drafting regulations governing exploitation of those resources.

The ISA Regulations define the marine environment in the broadest possible terms as:

> *The physical, chemical, geological and biological components, conditions and factors which interact and determine the productivity, state, condition and quality of the marine ecosystem, the waters of the seas and oceans, and the airspace above those waters, as well as the seabed and ocean floor and subsoil thereof.*[17]

This comprehensive definition appears to include all constituent elements of the marine environment including, for example, living and non-living resources, the water column above the seafloor, and the airspace above. When read with Article 145, this definition significantly extends the environmental mandate of the ISA.

Side 4 – The precautionary approach in deep-seabed mining context

The ISA Regulations place a strong emphasis on the need for a precautionary approach to activities in the Area. A strong focus is on gathering data to establish an environmental baselines from which to determine the range of potential environmental impacts that may arise during the exploitation

[16] LOSC, Art. 165(2)(h).
[17] ISA Regulations, Reg. 1(3).

phase and identifying options to those impacts in the most effective way possible.[18]

The precautionary approach is at the core of the way ISA has been discharging its mandate for more than 30 years a key tool to address the environmental protection challenges posed by activities in the Area.

It is widely incorporated in international environmental agreements and further developed in national law.

It is best encapsulated in, for example:
Rio Declaration 1992, Principle 15
And
Convention on Biological Diversity 1992, Preamble

At its core, the precautionary approach recognizes that lack of certainty regarding the threat of environmental harm should not be used as an excuse for not taking action to avert that threat.

It is deployed in situations where there is:

- Uncertainty
- A threat of environmental damage
- Damage is of serious or irreversible nature

All of these are likely to be relevant considerations, albeit to different degrees, in the case of deep-seabed mining.

What is clear is that the precautionary approach has a strong substantive content and is primarily

[18] The system may be compared to a process of 'scoping' and 'tiering' as used by the United States Council on Environmental Policy, where tiering allows for phasing of the resolution of environmental issues to be compatible with the schedule of activities contemplated in the proposed action. See Michael W Lodge, 'Environmental regulation of deep seabed mining' in Andree Kirchner (ed) *International Marine Environmental Law: Institutions, Implementation and Innovations* (Kluwer Law International 2003) 49.

intended as a framework for action that allows activities to proceed in a way that prevents environmental harm but that is also flexible and adaptive to changing circumstances as the level of uncertainty increases or decreases.

Side 5 - The precautionary approach in deep-seabed mining context (II)

A useful starting point for understanding the application of the precautionary approach are the IUCN guidelines issued in 2007. These establish that the application of the precautionary approach involves institutional, procedural and scientific dimensions structured around 5 main axis.

All these can be seen in ISA regulatory system and the next part of the presentation will review this framework.

It is on the basis of the precautionary approach that exploration activities are permitted. Why? Because, they have little or no impact on marine environment.

Side 7 – Implementation

Consistent with the precautionary approach, the ISA regulations places different responsibilities on different actors.

- The responsibility of the ISA is to regulate, taking into account the best scientific information, to approve contracts for activities in the Area in accordance with the regulations, to monitor all such activities, and to take enforcement action where necessary
- The responsibility of contractors is to carry out their activities in compliance with their contract and the regulations.

- Sponsoring States are required to cooperate with the ISA in the implementation of the regime, to establish a satisfactory national legal regime, and to ensure that entities sponsored by them meet their contractual obligations.

In 2011, the first Advisory Opinion to be issued by the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, provided important clarification on certain issues associated with the deep seabed regulatory framework. In particular, the Chamber held that the obligation to apply the precautionary approach is an integral part of the 'due diligence' obligations on sponsoring States. The Chamber also emphasized the importance of applying 'best environmental practices' in the context of activities in the Area and recognized that the obligation to conduct an environmental impact assessment is also 'a general obligation under customary law'.

In 2011, the first Advisory Opinion to be issued by the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea[19] provided important clarification on certain issues associated with the deep seabed regulatory framework.

In particular, the Chamber held that the obligation to apply the precautionary approach is an integral part of the 'due diligence' obligations on sponsoring States. The Chamber also emphasised the importance of applying 'best environmental practices' in the context of activities in the Area and recognised that the obligation to conduct an environmental impact assessment is also 'a general obligation under customary law'.

Side 5 – Recommendations for guidance

[19] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion), ITLOS Reports 2011, 10 (hereafter *Advisory Opinion on Responsibilities and Obligations in the Area*). See also David Freestone, 'Advisory Opinion of the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea' (2011) 15 *ASIL Insights* 7; and Rosemary Rayfuse, 'Differentiating the Common? The Responsibilities and Obligations of States Sponsoring Deep Seabed Mining Activities in the Area' (2011) 54 *German Yearbook of International Law* 459.

An important instrument used by ISA to promote the effective application of the precautionary approach in light of best available science is to be found in the recommendations that LTC can issue to assist contractors in the implementation of the rules, regulations and procedures.

Although, strictly speaking, these recommendations are non-binding, they do carry significant weight and, in light of the Advisory Opinion on Responsibilities and Obligations in the Area, it is suggested that the contractual commitment to observe the recommendations has become an important element of the due diligence obligations of contractors. Furthermore, the recommendations relating to environmental matters are intended to reflect 'best environmental practice', which contractors are bound to apply.

The first set of recommendations was issued in 2001, one year after the adoption of the first set of Regulations, and dealt with the assessment of possible environmental impacts arising from exploration for polymetallic nodules. The recommendations described the procedures to be followed in the acquisition of baseline data, and the monitoring to be performed during and after any activities in the exploration area with potential to cause serious harm to the environment. They were largely based on the recommendations of an international workshop convened by the ISA in 1998, which had recognized the need for clear and common methods of environmental characterization based on scientific principles.

The 2001 recommendations were revised in 2010,[20] consolidated into a single edition applicable to all resource types in 2013,[21] and subsequently revised and updated again in 2016 and 2020 (referred to hereafter as the 'Environmental Recommendations').[22] The latest Environmental Recommendations take into account new knowledge, including the outcomes of workshops convened by the ISA, and set out the detailed observations and measurements that need to be

[20] ISA, *Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for polymetallic nodules in the Area*, ISBA/16/LTC/7, 2 November 2010.
[21] ISA, *Recommendations for the guidance of the contractors for the assessment of possible environmental impacts arising from exploration for marine minerals in the Area*, ISBA/19/LTC/8, 1 March 2013.
[22] The latest edition of the Recommendations is: ISA, *Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area*, ISBA/25/LTC/6/Rev.1, 30 March 2020 and Corr.1, 11 June 2020.

made while performing specific activities and recommended data collection, reporting and archiving protocols.

Importantly, the Environmental Recommendations also elaborate on and clarify the obligation on contractors to undertake environmental impact assessments (EIA) by listing the activities that do and do not require prior environmental impact assessment and, in the case of the former, providing a template and a process for EIA. The majority of activities carried out in the early stages of exploration are considered to have no potential for provoking serious harm to the marine environment and thus do not require EIA.

The 2020 edition of the Environmental Recommendations includes important new provisions relating to stakeholder consultation.[23] Reflecting the different responsibilities and jurisdictional boundaries between the ISA and sponsoring States, the Environmental Recommendations encourage sponsoring States to undertake stakeholder consultations with respect to the EIA, with a default public consultation process by the Secretariat of the ISA if the sponsoring State notes its intention not to carry out a stakeholder consultation. Since the current edition of the Recommendations was adopted, three sponsoring States – Belgium, India and Nauru – have undertaken stakeholder consultations in relation to proposed tests of mining components.

Side x – Compliance and enforcement

The effective action of ISA as well as the importance of the precautionary approach in deep-seabed mining are also closely tied up to the broad powers given by UNCLOS to ISA to ensure compliance and enforcement.

Article 153(4) states that ISA 'shall exercise such control over activities in the Area as is necessary for the purpose of securing compliance' with UNCLOS, the Regulations, and approved plans of work.

[23] ISA, Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area, ISBA/25/LTC/6/Rev.1, 30 March 2020, Section E.

Moreover, 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.'

In addition to these general powers, the Council has the mandate to 'exercise control over activities in the Area' in accordance with the general powers listed in Article 153(4), including inspecting activities in the Area through a staff of inspectors. No inspectorate has been established at this time, although the draft exploitation regulations currently contains extensive provisions relating to inspection.

The secretariat's Compliance and Regulatory Management Unit (CARMU) carries out certain functions related to inspection and will fulfil the inspection functions under the exploration regulations, when required, until such time as an inspectorate is established.

The LTC has a corresponding mandate to make recommendations to the Council regarding the direction and supervision of such inspections.

Although the Council has the power to institute proceedings against a contractor in cases of non-compliance, no such cases have been alleged to date.

Side x – Environemental emergencies and contingency plans

UNCLOS confers a general power upon the Council to issue, on the recommendation of the Legal and Technical Commission, emergency orders to prevent serious harm to the marine environment[24]. It has not been necessary to invoke this provision so far. Such orders may include

[24] Serious harm is defined in the Regulations as 'any effect from activities in the Area which represents a significant adverse change in the marine environment determined according to the rules, regulations and procedures adopted by the Authority on the basis of internationally recognized standards and practices'. This definition raises issues common to other environmental treaties, including what constitutes a 'significant adverse change', what 'internationally recognized standards and practices' may be relevant and the question of the threshold at which environmental damage triggers liability. Space does not permit a complete analysis here, but for a general discussion of these issues and a useful comparison of definitions used in other treaties see Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law*, (3rd edn, Cambridge University Press 2012) 706-709.

orders to suspend or adjust operations.[25]

Again, these broad provisions are broken down in the ISA Regulations. Contractors are required to notify the Secretary-General of the ISA of any incidents that 'have caused, are causing, or pose a threat of, serious harm to the marine environment.'[26]

Further, pending any action by the Council in relation to such incident, the Secretary-General is required to take 'such immediate measures of a temporary nature as are reasonable and practical in the circumstances to prevent, contain and minimize serious harm or the threat of serious harm'.[27] Such temporary measures may remain in effect for up to 90 days or until such time as the Council, acting on the recommendation of the Legal and Technical Commission, has determined whether to issue an emergency order to prevent, contain and minimise serious harm or the threat of serious harm to the marine environment.[28] This provision has been used recently by the Secretary-General of ISA who issued Interim Measures on the basis of disruptions caused by Greenpeace International to Nauru Ocean Resources (NORI) in the CCZ.

Under the terms of the exploration contract, contractors are bound to comply with emergency orders issued by the Council and with temporary measures determined by the Secretary-General. In the event of non-compliance, the Council may take 'such reasonable measures as are necessary', at the contractor's expense, to prevent, contain and minimise serious harm or the threat of serious harm to the marine environment, and may also impose monetary penalties in accordance with the terms of the contract and the ISA Regulations.[29] No guidance has been developed on the level of such penalties.

It should be noted that contractors are required in any event to submit a contingency plan to respond to environmental emergencies prior to commencing any activities at sea.[30] Depending on the circumstances, it may be that implementation of the approved contingency plan would, in most

[25] LOSC, Art. 162, para 2(w) and Art. 165, para. 2(k).
[26] Nodules Regulations, Reg 33(1); Sulphides & Crusts Regulations, Reg 35(1).
[27] Nodules Regulations, Reg 33(3); Sulphides & Crusts Regulations, Reg 35(3).
[28] *Ibid*.
[29] ISA Regulations, Regs Annex 4, s. 6.
[30] *Ibid*.

cases, be an appropriate response to an emergency and would not require further intervention by the Secretary-General or the Council. This view would seem to be supported by the Seabed Disputes Chamber in its *Advisory Opinion on Responsibilities and Obligations in the Area.*[31]

Side x – Responsibility and liability

The ISA Regulations generally reflect the provisions of Annex III of UNCLOS in providing that the contractor shall be liable for the actual amount of any damage, including damage to the marine environment, arising out of its wrongful acts or omissions.[32] The Regulations provide no guidance as to how these principles might be applied in practice, although useful guidance as to the nature and extent of liability on sponsoring States and contractors was provided by the Seabed Disputes Chamber in its *Advisory Opinion on Responsibilities and Obligations in the Area.*[33]

In the context of the development of the Exploitation Regulations, it is likely that there will be a need to develop further guidance on such matters as acceptable heads of claim regarding damage to the marine environment for which liability may potentially arise, as well as on levels of monetary penalties that may be imposed by the Council on contractors for damage to the marine environment.[34]

Another matter referred to by the Seabed Disputes Chamber was the possibility that, in the absence of a regime of residual liability for environmental damage, there may be cases of uncompensated damage, for example where the contractor has exhausted its capacity to pay, including through insurance, and the sponsoring State is unable to pay, or is not liable. Invoking Article 304 of UNCLOS, the Chamber suggested that, to deal with such an eventuality, SA may wish to consider

[31] In particular, the Chamber rejected a strict liability approach in favour of a due diligence approach defined by 'obligations of conduct'. *Advisory Opinion on Responsibilities and Obligations in the Area*, (n 13) para 189. See also decision of the International Court of Justice in *Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Merits) (2010) ICJ Rep 14 ('Pulp Mills, Merits'), para. 187.
[32] LOSC, Annex III, Art. 22; Reg. 30; Annex 4, s. 16.1.
[33] *Advisory Opinion on Responsibilities and Obligations in the Area* (n 19) para. 193-195.Unfortunately, space does not allow for a discussion of this topic. Interested readers should see Duncan 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' (2011) 26(4) *International Journal of Marine and Coastal Law* 525.
[34] LOSC, Annex III, Art. 18, para. 2; ISA Regs, Annex 4, s. 21.5.

the establishment of a 'trust fund to compensate for the damage not covered.'[35]

Many of these matters are under active consideration in the context of the Draft Exploitation Regulations. The current draft would require contractors to carry insurance and also envisages the possibility that contractors would be required to provide a financial guarantee covering the estimated costs of a closure plan as well as compliance with any emergency order issued by the Council in the event of an incident causing serious harm to the marine environment. The Council has also indicated its intention to establish a compensation fund, covering the 'liability gap' identified by the Chamber, and in 2020 requested the Secretariat to commission a study as to how such a fund might operate. The fund would potentially be financed by a levy on the royalties paid by contractors.

In 2021, the Secretariat issued ISA Technical Study 27, comprising a review of possible options for the establishment of an environmental compensation fund.[36] This important study outlines the legal and practical issues relating to the establishment of a compensation fund and discusses the critical issues that will need to be considered including, compensable damage, type of liability and exclusions, the standard of proof required, contributing entities, the necessary size of the fund, compensation caps and dispute settlement.

Side x – Environmental Management

So far, the discussion has focused on the environmental regulation of activities in the Area and on the responsibilities and obligations of contractors, sponsoring States and the ISA in relation to those activities.

UNCLOS however, allows great flexibility to ISA in adopting measures aimed at the protection of the marine environment from the harmful effects of such activities.

[35] *Advisory Opinion on Responsibilities and Obligations in the Area* (n 19) para. 205.
[36] ISA Technical Study 27, Study on an Environmental Compensation Fund for Activities in the Area, (International Seabed Authority, Kingston, Jamaica, 2021).

Under Article 165 para. 2(d) for example, the Legal and Technical Commission is required to 'prepare assessments of the environmental implications of activities in the Area', while under para. 2(e) it shall 'make recommendations to the Council on the protection of the marine environment, taking into account the views of recognized experts in the field'. This is perhaps logical as the Legal and Technical Commission is the only competent expert body within the ISA regulatory system that receives, through the annual reports submitted by contractors, a complete overview of activities in the Area, including ongoing environmental work. Although the Commission has not so far published a global environmental assessment, it regularly comments on the environmental implications of activities in the Area in the context of its reports to the Council as well as in its work on the development of environmental management plans.

One example of progressive environmental management is the Clarion Clipperton Zone Environmental Management Plan (CCZ-EMP), which not only implements ecosystem-based management at a regional scale, but also reflects the dynamic and flexible nature of the environmental regime for seabed mining. The plan, which was the first regional scale environmental management plan for the deep seabed, was proposed by the Legal and Technical Commission in 2011[37] for the Clarion-Clipperton Zone in the Eastern Central Pacific Ocean.

The CCZ-EMP was approved by the Council in July 2012 in a decision[38] that not only recalled the provisions of Articles 145, 162 and 165 of the LOSC, but also placed the environmental responsibilities of the ISA in the context of the BBNJ Agreement. The plan has been revised in 2021.

It covers more than 13 million skm2, at depths of four to six thousand metres, in a prime location for commercially viable deposits of polymetallic nodules and has been the subject of scientific investigation, mineral prospecting and exploration since the 1960s. It is the location of most of the

[37] The genesis of the plan was a 2007 proposal by a group of scientists to establish a representative network of protected areas to protect biodiversity structure and ecosystem functioning of the CCZ from the potential impact of human activities. For background and a description of the process leading to the recommendation by the Commission see Michael W Lodge, 'Some Legal and Policy Considerations Relating to the Establishment of a Representative Network of Protected Areas in the Clarion-Clipperton Zone' (2011) 26(3) *International Journal of Marine and Coastal Law* 463.

[38] ISA, *Decision of the Council relating to an environmental management plan for the Clarion-Clipperton* Zone, ISBA/18/C/22, 26 July 2012.

exploration contracts issued by the ISA for polymetallic nodules.

The guiding principles on which the CCZ-EMP is based are stated as: (a) the common heritage of mankind, (b) the precautionary approach, (c) protection and preservation of the marine environment, (d) prior environmental impact assessment, (e) conservation and sustainable use of biodiversity, and (e) transparency.[39] Perhaps the most significant feature of the plan is that it identifies a network of nine (expanded in 2021 to 13) areas that are designated as 'areas of particular environmental interest' and in which no mining is allowed. These nine areas, each of which is approximately 160,000 square kilometres in size, and together covers 1.9 millions Km2 include a wide range of the different habitat types present in the Clarion-Clipperton Zone.[40]

The decision of the Council is noteworthy for several reasons.[41] First, it places the plan firmly within the context of Article 145 of the LOSC by recalling that a comprehensive environmental management plan at the regional level is one of the measures appropriate and necessary to ensure effective protection of the marine environment of the Area from harmful effects that may arise from activities in the Area. Second, it places the plan within the context of Article 143 by encouraging the conduct of marine scientific research, including in the areas of particular environmental interest, and requesting the Secretary-General of the ISA to facilitate capacity development for marine scientific research in the Clarion-Clipperton Zone, for the benefit of developing States and technologically less-developed States. Thirdly, it associates the plan with the key strategic documents of the ISA, including its Strategic Plan[42] and high-level action plan,[43] and

[39] ISA, *Decision of the Council relating to an environmental management plan for the Clarion-Clipperton Zone*, ISBA/18/C/22, 26 July 2012., pt. I, s. C.

[40] The plan makes an explicit link between the establishment of the areas of particular environmental interest and the achievement of the goals and targets set forth in the Plan of Implementation of the 2002 Johannesburg World Summit on Sustainable Development including halting biodiversity; establishing ecosystem approaches to management and developing marine protected areas, in accordance with international law and based on the best scientific information available, including representative networks by 2012. See also UN Doc A/RES/63/111 (n **Error! Bookmark not d efined.**), para. 134. For a complete description of the process leading to the establishment of the environmental management plan and the designation of the nine areas of particular environmental interest, see Michael W Lodge et al, 'Seabed Mining: International Seabed Authority environmental management plan for the Clarion-Clipperton Zone: A partnership approach' (2014) 49 Marine Policy 66.

[41] ISA, *Decision of the Council of the International Seabed Authority relating to the review of the environmental management plan for the Clarion-Clipperton Zone*, ISBA/26/C/58, 10 December 2021.

[42] ISBA/24/A/10.

[43] ISBA/25/A/15 and ISBA/25/A/15/Corr.1.

the Action Plan in support of the United Nations Decade of Ocean Science for Sustainable Development.[44]

In adopting the CCZ-EMP both the LTC and the Council have shown themselves to be willing to go beyond a strict and limited interpretation of their powers and functions and to take a broad, purposive approach to the application of the precautionary approach and the principles of integrated, ecosystem-based management of marine space.

As of today, further efforts are made to develop similar REMPs in other regions. By 2018, the Council recognised that the development and implementation of regional environmental management plans (which were now called REMPs) in the Area are part of the ISA's policy framework for environmental management. The Council also recognised that the objective of REMPs is to provide ISA, as well as contractors and their sponsoring States, with a proactive area-based management tool to support informed decision-making that balances resource development with conservation. REMPs can also provide the ISA with a clear and consistent mechanism to identify particular areas thought to be representative of the full range of habitats, biodiversity and ecosystem structures and functions within the relevant management area, and provide those areas with appropriate levels of protection, thus helping ISA to meet internationally agreed targets, such as Aichi Biodiversity Target 11.[45]

Based on these considerations, the ISA in 2019 adopted a strategy for the progressive development of REMPs for three priority regions, namely the northern part of the Mid-Atlantic Ridge, the Indian Ocean triple junction and nodule-bearing province, and the Western Pacific Ocean.[46] The strategy involves a standardised and transparent process of collecting, compiling, and analysing available scientific data for each region through a series of international scientific workshops, prior to review and evaluation by the Legal and Technical Commission. The development, implementation and

[44] ISBA/26/A/4.
[45] See ISA, *Preliminary strategy for the development of regional environmental management plans for the Area*, ISBA/24/C/3, 16 January 2018.
[46] ISA, *Implementation of the Authority's strategy for the development of regional environmental management plans for the Area*, ISBA/25/C/13, 29 January 2019.

review of REMPs is also a key element of Strategic Direction 3 (Protect the Marine Environment) in the Strategic Plan of the ISA for the period 2019-2023.[47]

Side xx – concluding remarks

This leads me to the end of my presentation. Few words to conclude.

- UNCLOS gives ISA the mandate to develop the resources of the Area while at the same time protecting the marine environment. To achieve this, ISA is equipped with unusually broad competences to allocate rights, legislative competence and enforcement powers. No other international organization has such powers.

- The inherently evolutionary design of Part XI of UNCLOS has already allowed the ISA to develop innovative and progressive environmental solutions in the form of REMPs. The same approach should further allow the ISA to further develop its environmental regulations in line with new scientific knowledge and in the light of new evidence relating to the actual impact of mining activities as they progress, as well as to be proactive in environmental regulation rather than reactive.

[47] ISA, *Decision of the Assembly relating to the Strategic Plan of the Authority for the period 2019-2023*, ISBA/24/A/10, 27 July 2018. Strategic direction 3.2. Develop, implement and keep under review regional environmental assessments and management plans for all mineral provinces in the Area where exploration or exploitation is taking place to ensure sufficient protection of the marine environment as required by, inter alia, article 145 and Part XII of the Convention.