Implications of an Agreement on Biodiversity Beyond National Jurisdiction for the Interplay between Law of the Sea and International Environmental Law

by

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Introduction

The significance of the Inter-Governmental Conference (IGC) for an international legally-binding instrument for marine biodiversity of areas beyond national jurisdiction to the future of global ocean governance cannot be over-stated.[1] This international negotiation process is being conducted under UN auspices and three sessions of talks have been completed to date, yielding an initial draft text,[2] followed by a revised draft text,[3] for the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement. Unfortunately, at the time of writing, the world-wide Covid-19 pandemic lockdown prevented the fourth negotiating session of this IGC (scheduled for March-April, 2020) from taking place in New York.

This paper conducts an initial legal assessment of the relationship between the continental shelf *regime* beyond 200 nautical miles(nm) and the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement/Instrument that is currently being negotiated, using as its springboard the revised draft text that was the outcome of the third IGC session. In this regard, the present contribution will focus on specific issues identified in the revised draft text that need to be addressed to ensure both the clarity and coherence of the final agreement, as well as the proper implementation of the future BBNJ agreement, when it enters into force. In doing so, this contribution juxtaposes selected negotiating text provisions against, *inter alia*, the relevant 'international best practice' on these issues. The purported 'international best practice' on these topics is in turn drawn from a combination of relevant law of the sea, international environmental law, as well as international case law jurisprudence elaborating on the procedural and substantive aspects, and especially the thresholds, of these rights and obligations.

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[1] The full title of this IGC is as follows: Intergovernmental conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, convened on the basis of UN General Assembly resolution 72/249. All official materials associated with the Conference are accessible at: https://www.un.org/bbnj/

[2] The (initial) draft text for the proposed BBNJ Agreement, UN Doc. A/CONF.232/2019/6, published on 17 May, 2019 is available at: https://documents-dds-ny.un.org/doc/UNDOC/GEN/N19/146/28/PDF/N1914628.pdf?OpenElement

[3] See: President's Note to the revised draft text of the BBNJ Agreement, released on 27 November, 2019. Accessible at: https://www.un.org/bbnj/sites/www.un.org.bbnj/files/revised_draft_text_a.conf_.232.2020.11_advance_unedited_version.pdf

More generally, there is continuing uncertainty surrounding international governance of the natural resources within the deep sea-bed 'Area', both non-living and non-living. As Thompson *et al* note, 'Governance of human interactions with the seabed is fragmented and lacks transparency, with a heavy focus on facilitating exploitation rather than ensuring protection.'[4] Thus, the present exercise will also consider whether and how far the present global ocean governance regime will be enhanced in terms of its geographical and material scope(s) as well as depth of coverage with the advent of a BBNJ Agreement.

From the outset, however, the contemporaneous nature of this contribution must be recognised. This paper undertakes a 'snap shot' analysis of certain significant provisions of the revised draft text. As such, it simply cannot (nor does it) purport to be the definitive, or even a comprehensive, commentary on this revised draft text. Nor indeed can it even aspire to do so, given the fact that at the time of writing at least one more negotiating session is still to come in the IGC process, which may result in significant changes to this revised draft text.

I. Analytical Framework for the Revised Draft Text of the BBNJ Agreement

At its heart, the current negotiations at the Inter-Governmental Conference (IGC) for a BBNJ Agreement for Areas Beyond National Jurisdiction (ABNJ) comprising the high seas and deep sea-bed 'Area', represents a potential clash of priorities between the interests of (at least) three loosely-defined sets of (State) actors and stakeholder interest groups. These actors and stakeholder groups and their respective interests in the BBNJ Agreement negotiations can be summarized as follows:

1) *Developed Economies* that want access to 'marine genetic resources' (MGR) found in 'area(s) beyond national jurisdiction' (ABNJ) and apply biotechnology to such resources for their utilization and possible commercialization;

2) *Developing Economies* that want the *Developed Economies* to assist them with the financial, technological, and technical (human know-how) resources to access MGR in the ABNJ,[5] and to share the benefits from any commercial utilization of MGR from ABNJ, especially where the biotechnology applied to these MGR is either unavailable or inaccessible to *Developing Economies*;

3) *Environmental Interest Groups (comprised mainly of Civil Society/Non-*

[4] Kirsten F. Thompson Kathryn A. Miller, Duncan Currie, Paul Johnston and David Santillo, 'Seabed Mining and Approaches to Governance of the Deep Seabed, *Frontiers in Marine Science,* Vol. 5, Article 480 (11 December, 2018) Accessible at: https://www.frontiersin.org/articles/10.3389/fmars.2018.00480/full

[5] As provided in the deep seabed mining regime, under Part XI of UNCLOS. Article 148 entitled: 'Participation of developing States in activities in the Area', states: 'The effective participation of developing States in activities in the Area shall be promoted as specifically provided for in this Part, having due regard to their special interests and needs, and in particular to the special need of the land-locked and geographically disadvantaged among them to overcome obstacles arising from their disadvantaged location, including remoteness from the Area and difficulty of access to and from it.'

Governmental Organization - NGOs) that emphasize the need for *protection* of fragile ecosystems lying within, across and beyond national maritime jurisdiction zones and *(pre)caution* when attempting to access the MGR within these ecosystems in areas beyond national jurisdiction (ABNJ).

These different (State) actors and stakeholders bring their own interests and perspectives to bear on the negotiations for the following sets of specific provisions within the Revised Draft Text for the BBNJ Agreement:

1) Developed Economies will focus on, *inter alia*, the draft provisions for *Access* (to MGRs) and *Intellectual Property Rights (IPRs)* for the application of biotechnology to such MGRs;

2) Developing Economies will focus on, *inter alia,* the *Access* and *Benefit-Sharing* provisions;

3) Environmental Interest Groups/Civil Society/NGOs will focus on, *inter alia*, the draft provisions on *Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), Marine Protected Areas (MPAs)* and *Area-Based Management Tools*.

The simplified categorization of these groups of States and their purported interests in the outcome of this IGC can appear crude and inaccurate, for example, in relation to the intermediate role(s) in these international negotiations played by newly-industrialized economies such as Singapore and the Republic of (South) Korea, as well as major regional powers such as India and Brazil. Nevertheless, it is suggested here that these loosely-defined groupings of States, alongside their presumed broadly similar national interests, can be effectively utilised as a 'heuristic device or technique'[6] to encapsulate the main differences between groups of interested States in this negotiation.[7] This framework for the representation of the interests of the main actors and stakeholders to the BBNJ Agreement negotiations will be mapped onto the analytical approach taken here.

Applying a further, conceptual perspective to this proposed analytical framework, it is possible to initiate this narrative at the (higher) level of *governing principles*, as opposed to undertaking a discussion that merely establishes the applicable principles, rules and institutions, or even more simplistically, one that merely describes the relevant rights and duties of States, as well as their governing bodies in this endeavour. Rather, it is argued here

[6] Within this context, a 'heuristic device or technique' can be described as 'any approach to problem solving that uses a practical method or various shortcuts in order to produce solutions that may not be optimal but are sufficient given a limited timeframe or deadline.' See: 'Heuristics' by James Chen, available at:
https://www.investopedia.com/terms/h/heuristics.asp

[7] A similar approach has been utilised by Thambisetty in relation to prospective Intellectual Property Rights over the application of biotechnology to marine genetic resources collected or accessed from marine areas beyond national jurisdiction (ABNJ) see: Siva Thambisetty, 'Biodiversity Beyond National Jurisdiction: *(Intellectual) Property Heuristics*' chapter 7, in Myron H. Nordquist and Ronán Long (eds) *Marine Biodiversity of Areas beyond National Jurisdiction*, Brill, Leiden, The Netherlands (2021) 131-45.

that it is the interplay between several significant *governing principles* that ultimately forms the basis for the legal relationship(s) between the two main groups of negotiating States. However, even this interplay between these *governing principles* is taking place under the further, *overarching governing principle* of ecosystem protection that has been successfully advanced by self-defined stakeholder interest groups, comprising civil society generally, and specifically, the (mainly) non-governmental organization (NGO)-led environmental activist movement. The success of their collective efforts in this regard is evidenced by the acceptance and application of this *overarching governing principle* by both sets of State actors enumerated above. It is this *overarching governing principle* of marine ecosystem protection, with its attendant aim of ensuring marine ecosystem resilience, that has ostensibly taken centre stage in the revised draft text.[8] However, it remains to be seen whether the global marine ecosystem will ultimately benefit from outcome of the current BBNJ Agreement negotiations.

These *governing principles*, particularly as they relate to the two main groups of negotiating States (described above), can be elaborated as follows: First, the principle of *sovereignty* that in turn begets sovereign rights and attendant functional jurisdiction(s) on the part of coastal States over their 200nm EEZs and continental shelves, both within and beyond 200nm; second, the principle(s) of *freedom* of navigation, fishing, and scientific research for flag States, all of these combining to allow such flag States *access* to 'marine genetic resources' (MGR) in the high seas and deep sea-bed 'Area' beyond national jurisdiction (collectively to be regarded as ABNJ in this context) as well as protection through intellectual property rights (IPR) of any biotechnological (biotech) application to MGRs collected from ABNJ; third, the principle of (international/global) *equity*, [9] as embodied by the principle of *common heritage of (hu)mankind,*[10] and building on the principle of international *co-operation* to ensure benefit-sharing of the spoils from any MGRs collected in the ABNJ; [11] and last but certainly not least, the now transcendent environmental principles designed to ensure overall ecosystem protection in the face of any bioprospecting, exploration and exploitation activities for MGRs in the ABNJ.

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[8] As embodied in Articles 5(f) and 5(h) respectively, of the current revised draft text.

[9] See, for example, Oscar Schachter, *Sharing the World's Resources,* Columbia University Press (1977) where he charts the rise, justifications and 'dilemmas' of the notion of 'international equity', before examining its application in the form of 'international equitable distribution' within the deep sea-bed mining regime then being negotiated at the Third UN Conference on the Law of the Sea (UNCLOS III), 1973-1982.

[10] For example, Bourrel *et al*, chart the advancement of this conjunction between equity as a goal and the common heritage of mankind principle as one of the means to achieve it within the deep sea-bed 'Area' beyond national jurisdiction, through the sea-bed mining regime established by Part XI of UNCLOS, as modified by the 1994 Implementation Agreement. See: Marie Bourrel, Torsten Thiele, and Duncan Currie,, 'The common heritage of mankind as a means to assess and advance equity in deep sea mining', *Marine Policy*, Vol.95 (September, 2018) 311-316.

[11] The current revised draft BBNJ text, paragraph 4 of Article 9 entitled: 'Activities with respect to marine genetic resources of areas beyond national jurisdiction', provides, *inter alia*, that '(t)he utilization of marine genetic resources of areas beyond national jurisdiction shall be for *the benefit of mankind as a whole*, …' (emphasis added); and thus, replicating the wording of Article 140 of the 1982 UNCLOS in relation to deep sea-bed mining activities for minerals in the 'Area'.

Within the revised draft text, several of these 'general principles and approaches', are embodied in Article 5, which states that:

'In order to achieve the objective of this Agreement, States Parties shall be guided by (*inter alia*) the following:
…

(b) [The polluter pays principle] [The endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should [, in principle,] bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment];

[(c) The principle of the common heritage of mankind;]

[(d) The principle of equity;]

(e) The precautionary [principle] [approach];

(f) An ecosystem approach;

[(g) An integrated approach;]

(h) An approach that builds ecosystem resilience to the adverse effects of climate change and ocean acidification and restores ecosystem integrity; …'

All these principles are to be deployed to achieve the 'General Objective' of the proposed Instrument/Agreement, established in Article 2 of the revised draft text, as follows: 'The objective of this Agreement is to ensure the [long-term] conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction through effective implementation of the relevant provisions of the Convention and further international cooperation and coordination.' However, such conservation and sustainable use of biodiversity can only really proceed when the marine habitats and ecosystems in which this biodiversity is located are protected. This over-arching goal of 'marine ecological protection' manifests itself in a number of inter-locking principles, techniques, and approaches, *inter alia,* the Polluter-Pays and Precautionary principles; the Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) techniques; and the ecosystem and integration approaches; as well as Marine Protected Areas (MPAs) and related, area-based management tools. This collection of governing principles (including those related to 'marine ecological protection') arguably function together as an overarching international legal framework designed to constrain the proposed activities by States (whether they are developed or developing economies) that are keen on bio-prospecting, exploring and exploiting marine genetic resources (MGR) in Areas Beyond National Jurisdiction (ABNJ).

Of these myriad environmental principles, approaches and techniques, one in particular stands out as being especially suitable for closer study here, namely, the Environmental Impact Assessment (EIA) principle. This is because by its

very nature, the EIA principle and its utilization as a tool of environmental law both facilitates and embodies important aspects of the other relevant environmental principles and approaches advocated for the conservation and sustainable use of marine biological diversity in Areas Beyond National Jurisdiction (ABNJ). These include notions of *precaution* in order to ensure *prevention* of marine habitat/ecosystem damage, or at the very least, to compile a complete *strategic assessment* of any and all negative environmental impacts of proposed bio-prospecting, exploration and exploitation activities for MGRs in ABNJ, as well as the *integration* of environmental concerns within these activities.

The Environmental Impact Assessment (EIA) principle can therefore be regarded as an underlying premise upon which *all* the other environmental principles and approaches are based. Moreover, as the *foundational* environmental principle for *all* proposed activities within the ABNJ, EIA fulfils an *a priori* paramount role in the entire enterprise of ensuring the conservation and sustainable use of marine biological diversity in ABNJ. This primary role for Environmental Impact Assessment also allows EIA to bridge any gap between marine biodiversity protection in ABNJ, and proposed deep sea-bed mining activities within the 'Area', defined in Article 1(1)(1) of UNCLOS as comprising 'the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction', to be regulated by Part XI of UNCLOS, as provided in Article 194(2): 'Activities in the Area shall be governed by the provisions of this Part', with Part XI now further modified/amended by the 1994 Implementation Agreement.[12] The significance of the EIA principle, as the foremost principle of international environmental law applicable across both the BBNJ and deep sea-bed mining regimes in this context, will be examined in relation to the developed and developing economy interests, as they are embodied in the revised draft text. This denotes the environmental perspective applied throughout the analysis of this (revised draft) text for a BBNJ Agreement.

This essay will begin by summarizing the progress of the IGC so far, before addressing certain definitional points related to the geographical and material scope of the proposed Biodiversity Beyond National Jurisdiction (BBNJ) Agreement. It will then examine the application of a specific (international) environmental principle, namely, the Environmental Impact Assessment (EIA) within the revised draft negotiating text of the BBNJ Agreement.

II. Summary of Progress in the Inter-Governmental Conference for a BBNJ Agreement

Following its resolution 72/249 of 24 December 2017,[13] the United Nations General Assembly (UNGA) convened an inter-governmental conference (IGC) to draft an international legally binding instrument under the United Nations Convention on the Law of the Sea (UNCLOS) on the conservation and

[12] Full title: 1994 Implementation Agreement Part XI of the 1982 UNCLOS …

[13] International legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, A/RES/72/249, 24 December 2017.

sustainable use of marine biological diversity of areas beyond national jurisdiction (hereinafter, the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement).[14] The IGC was envisaged to consist of (at least) four (4) sessions to be held at the UN Headquarters in New York between 2018 and 2020.[15] The IGC's third session was held between 19 and 30 August 2019, while its fourth was scheduled to convene in the first half of Spring 2020. The conclusion of the first two IGC sessions in September, 2018 and April, 2019 marked an important milestone in the international community's efforts towards establishing a viable international legal framework for biodiversity governance in areas beyond national jurisdiction (ABNJ). While palpable progress has been made, many issues remain to be resolved. In other words, there is some way to go before an agreed text for an international legal instrument on BBNJ is adopted for eventual acceptance and implementation by States across the world.

Following the IGC's first session, the President of this IGC, Her Excellency, Ambassador Rena Lee from Singapore, published a President's Aid to Negotiations.[16] This Aid performed the function, *inter alia*, of facilitating focussed discussion and text-based negotiations.[17] It was followed at the end of the second IGC session, with publication by the President on 25 June 2019 of an initial Draft Text for a BBNJ Agreement,[18] as an Annex to the Note by the President.[19] As paragraph 5 of the Introduction to this Note observes, *inter alia*, 'The document is structured in a form akin to a treaty and contains treaty language with provisions addressing each of the four topics identified in the package agreed in 2011, as well as cross-cutting issues.' Paragraph 6 then notes that: 'In the light of the discussions held and proposals made at the second session, the present document is aimed at streamlining the options contained in the President's aid to negotiations, including, *inter alia*, by merging options where possible, consolidating provisions across sections of the text to avoid duplication, and rearranging some sections to improve flow and readability, thereby also reducing the number of alternative options in the text. … Efforts were also made to harmonize the text across sections. In some cases, and in an attempt to propose a way forward where there were different positions, new language has been proposed in the light of suggestions made during the discussions and drawing from the provisions of existing instruments.'

The stated aim of this President's draft text is to facilitate the negotiation process for the next couple of sessions scheduled for August, 2019 and in the

[14] For more background information on these BBNJ Agreement negotiations, accessible at: https://www.un.org/bbnj/content/background

[15] The first IGC session took place from 4 to 17 September 2018, the second session from 25 March to 5 April 2019, and the third session from ?? to ?? November, 2019. The fourth IGC session & first following the publication of the revised draft text (which forms the basis of the present analysis) was due to take place from xx March to xx April, 2020 but due to the world-wide Covid-19 pandemic, is currently indefinitely postponed. See:

[16]

[17] See: Para.9 of Part one: Introduction to President's Aid to Negotiations,

[18] Draft text of an agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. Note by the President, A/Conf.232/2019/6, 17 May 2019.

[19]

spring of 2020.[20] This text therefore also serves to streamline the package deal options for the issues contained in the President's aid to negotiations document.[21] These package deal issues were agreed at the 2011 meeting of the Ad-Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of BBNJ.[22] They include issues related, *inter alia*, to the question of access to marine genetic resources in ABNJ and the sharing of benefits arising from their utilisation, as well as measures such as area-based management tools, including marine protected areas, environmental impact assessment (EIA) and Strategic Environmental Assessment (SEA).

III. Implications of the *Geographical* and *Material* Scope of the Revised Draft Text for a BBNJ Agreement for *Access* to Marine Genetic Resources

A. The *Geographical* Scope of the Area beyond National Jurisdiction under the Proposed BBNJ Agreement, in relation to the Continental Shelf Regime Beyond 200nm

Under Article 1 of the (current) revised draft text for a BBNJ Agreement, entitled: 'Use of terms', several definitional issues related to both the *geographical* and *material* scope of the proposed instrument is relevant to the present analysis. They will be considered in turn, as follows: The first set of issues relate to the *geographical* scope of the proposed BBNJ instrument. Under Article 3: 'Application', it is stated that the provisions of this draft text apply to 'areas beyond national jurisdiction'.[23] The phrase: 'Areas beyond national jurisdiction' is in turn defined as simply meaning 'the high seas and the Area.'[24] The above definitions appear to clearly separate marine spaces under national jurisdiction from those beyond national jurisdiction. The former, national jurisdiction spaces will fall under the exclusive economic zone (EEZ) and continental shelf regimes of the coastal State, and the latter, under the 'high seas' regime.

However, these provisions fail to clarify what is the applicable legal regime for the specific area of *interface* between the continental shelf (sea-bed) area beyond 200nm, which is still within the national jurisdiction of a coastal State, and its superjacent 'high seas' waters, which fall within the 'area beyond national jurisdiction' (ABNJ). This lack of specific legal provision for this area of *interface* is pertinent due to the inevitable *interaction* between species that live in the superjacent, 'high seas' waters lying above the continental shelf beyond 200nm but then come into contact with this (continental shelf) sea-bed area that is still within the national jurisdiction of the coastal State, as well as

[20] Para.10 of Introduction to the Draft text of an agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 25 June, 2019.
[21] President's aid to negotiations, A/Conf.232/2018/3, 25 June 2018.
[22] Letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, A/66/119, 30 June 2011.
[23] Art.3(1) of the draft text, *op. cit.*
[24] Ibid., Art.1(4)

vice versa, i.e. when living organisms on the sea-bed and subsoil of the continental shelf beyond 200nm under coastal State jurisdiction either *move into* (or otherwise *interact with*) the superjacent 'high seas' waters, which are part of the ABNJ. Situations of species interaction between sea-bed areas of continental shelf beyond 200nm and superjacent 'high seas 'waters are especially prevalent where hydrothermal vents are found on the sea-bed and waters surrounding these vents.[25]

The continuing legal uncertainty over the *interaction* of species in the *interface* area between the continental shelf beyond 200nm and its superjacent 'high seas', as described above is not resolved by the primacy accorded to the Convention in its relationship with the (proposed) BBNJ Agreement, as currently provided in the revised draft text. Draft Article 4 describing the 'Relationship between this Agreement and the Convention and other [existing] relevant legal instruments and frameworks and relevant global, regional and sectoral bodies', first provides that: 'Nothing in this Agreement shall prejudice the rights, jurisdiction and duties of States under the Convention. This Agreement shall be interpreted and applied in the context of and in a manner consistent with the Convention.'[26] Draft Article 4(2) then arguably emphasises the coastal State rights in this *interface* area of continental shelf/sea-bed and superjacent 'high seas' waters when it provides that: 'The rights and jurisdiction of coastal States over all areas under national jurisdiction, including the continental shelf within and beyond 200 nautical miles and the exclusive economic zone, shall be respected in accordance with the Convention.' However, as noted above, neither here, nor elsewhere in this revised draft text does it address the potential for issues to arise regarding living natural resources that inhabit the interface area of continental shelf beyond 200nm and its superjacent 'high seas' waters.

In relation to *mineral* resource deposits that overlap the final limits of the continental shelves of coastal States and the deep sea-bed 'Area', Article 142(1) of the 1982 Convention first provides for the primacy of coastal State rights and interests,[27] before going onto prescribe an elaborate consultation procedure that prioritises the consent of the coastal State to the exploitation of such resources falling within its national jurisdiction, under Article 142(2), as follows:

'Consultations, including a system of prior notification, shall be maintained with the State concerned, with a view to avoiding infringement of such rights and interests. In cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction, the prior consent of the coastal State concerned shall be required.'[28]

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[25] The literature on these unique 'mini' ecosystems and habitats is now vast. Examples which explicitly consider their policy and legal implications are as follows: Philipp Thomas Detjen, Hydrothermal Vents: Conservation and Management Beyond National Jurisdiction, Verlag Dr Muller (2010); David Leary, Designing…

[26] Ibid., Art.4(1)

[27] UNCLOS, Article 142(1): 'Activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal State across whose jurisdiction such deposits lie.'

[28] Ibid., Article 142(2).

Given the above discrepancy in the applicable legal regimes governing this *interface* zone, more emphasis should be placed on the mechanisms for consultation between States and any international body (or bodies) established by the proposed BBNJ Agreement to govern the ABNJ. More detailed consultation requirements are provided elsewhere within the present revised draft text but they currently reside within the sections of this text devoted to the designation and establishment of Marine Protected Areas (MPAs) in the ABNJ,[29] rather than providing generally applicable principles and rules for such consultation.

Moreover, these provisions for consultation are limited to situations involving *mineral* (*i.e.* non-living) resource deposits. For any marine living resources that lie across or oscillate between the continental shelf beyond 200nm and the ABNJ (comprised of the superjacent 'high seas' and the sea-bed 'Area'), neither Article 142 of UNCLOS, nor revised draft Articles 3(1) and 1(4), adequately cover the potential *interaction* of species within the interface zone between the continental shelf area beyond 200nm and the ABNJ. This means that living resources found in this *interface* zone will be subject to different (legal) regimes. The former, continental shelf regime is provided for in Part VI of UNCLOS, whereas the 'high seas' is regulated by Part VII of UNCLOS. The mineral resources of the sea-bed 'Area' is covered by Part XV of UNCLOS, as modified by the 1994 Implementation Agreement; and the living resources of both the superjacent 'high seas' waters and sea-bed of the ABNJ is to be regulated by the proposed BBNJ Agreement.

Significant differences also abound in the legal treatment of marine living resources that are situated in the 200nm EEZ and the continental shelf beyond 200nm, as well as those marine genetic resources (MGR) found within the 'high seas' waters and sea-bed of the ABNJ. Specifically, the continental shelf regime does *not* provide for either the conservation and/or sustainable use of all natural resources (whether living or non-living),[30] whereas the high seas regime applicable to the superjacent waters above this continental shelf area provides for freedom to fish, subject to conservation and management duties.[31] As noted above, Article 2 of the revised draft text for the BBNJ instrument provides for 'conservation and sustainable use' of marine biological diversity in ABNJ as a 'General Objective' of this Instrument. Unfortunately, there are no definitions of either the separate terms of 'conservation' and 'sustainable use', or indeed the conjoined term: 'conservation and sustainable use' for application to MGRs under this Instrument. The absence of a definition for these terms within the present revised draft text is particularly problematic because the 'conservation and sustainable use' of marine biodiversity arguably forms the

[29] Currently provided for under PART III: MEASURES SUCH AS AREA-BASED MANAGEMENT TOOLS, INCLUDING MARINE PROTECTED AREAS, and specifically within revised draft text of Article 18 of the proposed Agreement.

[30] Unlike Articles 55, 61 & 62 of UNCLOS Part V on the EEZ, which separately & collectively provide for the conservation and management of fisheries.

[31] Under Section 2 of Part VII of the 1982 Convention, as specified in, 118, and 119, which provide for flag State conservation of living resources in the high seas (Article 117), the elaboration of specific conservation measures in this regard (Article 119), as well as inter-State co-operation in their conservation and management (Article 118).

main aim and purpose of the BBNJ instrument, as reaffirmed, for example, in the third iteration of the Preamble to the revised draft text: 'Stressing the need for the comprehensive global regime to better address the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, …' The lack of precision in the formulation of these goals for the BBNJ Agreement is especially pertinent when we consider the vexed issue of the relationship between 'sedentary species' when they occur beyond 200nm under the continental shelf regime, and that of 'marine genetic resources' (MGR) as well as 'marine genetic material' under the provisions of the revised draft text for the proposed BBNJ Agreement.

B. The *Material* Scope of Proposed BBNJ Agreement: Relationship between Sedentary Species, Marine Genetic Resources, and Marine Genetic Material

i) Relationship between Sedentary Species and Marine Genetic Resources

This brings us to the second set of issues raised here, which is directly related to the first set of issues arising from the *geographical* scope of the proposed BBNJ instrument, covered above. This second set of issues relates to the *material* scope of the proposed instrument, and will first cover the legal relationship between 'sedentary species' and MGR, before going onto the relationship between MGR and 'marine genetic material'. In particular, where access to MGRs involve activities that constitute either bio-prospecting, or exploration and exploitation of living resources in areas beyond national jurisdiction, then a continuing issue involves the relationship between ssuch MGRs and 'sedentary species' as defined in Article 77(4) of the 1928 UNCLOS. Any discussion of this relationship needs first to contemplate the specific (international) legal context within which 'sedentary species' resides among the relevant UNCLOS provisions.

To begin with, within the 200nm EEZ, Article 56(1) of Part V applies and provides that the term: 'natural resources' *includes both living and non-living resources in the superjacent waters, as well as the seabed and subsoil.* (emphasis added) However, this provision only applies up to the 200nm limit of the EEZ. Part VI then governs the continental shelf, comprising the seabed and subsoil, both within and beyond 200nm, but crucially, *not* the superjacent waters over this continental shelf lying within and beyond the 200nm limit. Article 77(1) provides that in the continental shelf, both within and beyond the 200nm limit, the coastal State exercises sovereign rights for the purpose of exploring it and exploiting its 'natural resources'. Paragraph 2 of Article 77 specifies the exclusivity of these sovereign rights, stating that: 'The rights referred to in paragraph 1 are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State.' Paragraph 3 then buttresses this notion of exclusiveness by providing that: 'The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.'

Crucially, for this continental shelf (seabed & subsoil area) both within and beyond the 200nm limit, a different definition of 'natural resources' applies. Notably, paragraph 4 of Article 77 provides that: 'The natural resources referred to in this Part consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to *sedentary species,* that is to say, *organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.* (emphasis added) Thus, 'natural resources' in this context are (initially) limited to 'non-living resources', although this phrase has a broader meaning than just minerals and includes organic (hydrocarbons) and inorganic minerals, as well as other non-living resources. Significantly, there are no coastal State conservation, sustainable use and/or management duties over these natural resources within UNCLOS Part VI on the continental shelf.

Thus, an important task that is arguably yet to be properly considered within the IGC for the proposed BBNJ Agreement is to reconcile coastal State jurisdiction and regulation over living resources in the form of 'sedentary species' in the continental shelf beyond 200nm, with 'marine genetic resources' covered by BBNJ Agreement governing the sea-bed 'Area' beyond national jurisdiction and the superjacent (high seas) waters over both this sea-bed 'Area' and coastal State's continental shelf beyond 200nm. There are at least *three* related problems, presented here as inter-locking questions: First, is there a settled definition of 'sedentary species/fisheries' for the purposes of coastal State sovereign rights and jurisdiction over their exploration and exploitation within the continental shelf regime itself? Second, notwithstanding the lack of specific duties of conservation and management of these living natural resources on the continental shelf, as previously mentioned, is it still possible to impute such duties to coastal States under general international law?[32] And third, what is the legal relationship (if any) between such 'sedentary species' in the continental shelf beyond 200nm and commercial fisheries in the high seas, with marine genetic resources (MGR) in the high seas and seabed areas beyond national jurisdiction (ABNJ) that will be subject to the prospective BBNJ Agreement?

The first of these questions was raised in the recent 'Snow Crab' dispute between Norway and the EU (in the form of Lithuanian and Latvian fishing vessels) in continental shelf of the Svalbard Archipelago, which belongs to the former State. On Valentine's Day (14 February) 2019, the Norway Supreme Court ruled that Norway has exclusive sovereign rights over 'Snow Crab' as these species are to be considered as falling within the definition of 'sedentary species', under Article 77(4) of the 1982 UNCLOS, and thus comprised by the coastal state's exclusive right to exploit the natural resources on the continental

[32] For an early discussion of the application of the conservation principle to continental shelf resources, see: 'Towards an International Law for the Conservation of Hydrocarbon Resources within the Continental Shelf?', in David Freestone, Richard Barnes and David Ong (eds.) *The Law of the Sea: Progress and Prospects*, Oxford: Oxford University Press (2006) 93-119.

shelf.[33] However, the inclusion of other species of crustaceans, notably lobster, within this definition is also contested.[34]

With regard to the second and especially, the third question posed above, it is clear that the IGC negotiations for a BBNJ Agreement is trying distinguish between commercial fisheries and 'marine genetic resources'. However, it is altogether less clear whether this exercise will be completely successful in drawing legal distinctions between them. The former (commercial fisheries) are subject to coastal State jurisdiction within the 200-nm EEZ and the jurisdiction of flag States where these species are caught in the high seas beyond the 200-nm limits of coastal States. But when samples of individual specimens of fish are taken from the high seas and sea-bed in areas beyond national jurisdiction for their 'marine genetic material', therefore becoming 'marine genetic resources', then they will arguably be subject to provisions of the proposed BBNJ Agreement.

On the other hand, where a coastal State's continental shelf extends beyond 200-nm then any 'sedentary species' within this (extended) section of the continental shelf falls within the legal regime of the continental shelf, rather than as marine genetic resources (MGR) covered by the putative BBNJ Agreement. In practice, however, given the water depths and distances from coastlines in which any such resource collection activities will be taking place, it will be incredibly difficult to draw any kind of distinction between such MGR and 'sedentary species', especially if the MGR is found on the surface of the continental shelf/sea-bed interface, beyond 200nm.

ii) Relationship between Marine Genetic 'Resources' and Marine Genetic 'Material' under the Proposed BBNJ Agreement

The next issue arising under the *material* scope of the proposed BBNJ Agreement is the relationship between definitions of 'marine genetic material' and 'marine genetic resources', respectively, under Article 1(8) and two alternatives for Article 1(9) of the revised draft text, which state, respectively, that: 'For the purposes of this Agreement: …

[8. "Marine genetic material" means any material of marine plant, animal, microbial or other origin containing functional units of heredity.]

[9. Alt. 1. "Marine genetic resources" means any material of marine plant, animal, microbial or other origin, [found in or] originating from areas beyond national jurisdiction and containing functional units of heredity with actual or potential value of their genetic and biochemical properties.]

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[33] See: *A and SIA North Star Ltd v. The public prosecution authority (of Norway),* The Supreme Court (of Norway) HR-2019-282-S, (case no. 18-064307STR-HRET), criminal case, appeal against judgment, delivered on 14 February, 2019. Available at: https://lovdata.no/dokument/HRENG/avgjorelse/hr-2019-282-s-eng?q=snow%20crab

[34] See: Earlier editions of the authoritative D J Harris, Cases and Materials in International Law, Sweet & Maxwell (1st ed, 19xx, now in its 8th ed, 2019?) which cite a UK Foreign & commonwealth Office statement to the effect that lobsters swim and crabs do not, therefore lobsters are not sedentary species, whereas crabs are…

[9. Alt. 2. “Marine genetic resources” means marine genetic material of actual or potential value.]’

An ostensible lack of conjunction between the definitions of marine genetic ‘resources’ and marine genetic ‘material’, and the introduction of notions of ‘actual or potential value’ to the definitions of ‘marine genetic resources’ and ‘marine genetic material’, respectively, within these revised draft text Articles 1(8) and 1(9) may have inadvertently introduced discretionary space for States when they license marine genetic resource-gathering activities within the ABNJ, to the possible detriment of the conservation and sustainable use goals of the proposed Instrument as a whole. Specifically, the concern raised here relates to the fact that in both alternative texts of Article 1(9), ‘marine genetic resources’ are defined solely by way of ‘marine genetic material’ with ‘actual or potential value’. In other words, it is only when marine genetic ‘material’ is deemed to have either ‘potential or actual value’ that such ‘material’ may then become a ‘resource’.

These initial definitional distinctions are formally significant in light of the following revised draft Article 8, entitled: ‘Application of the provisions of this [Part] [Agreement]]’ which provides, in section 1, that: [1. The provisions of this [part] [Agreement] shall apply to marine genetic *resources* [of] [accessed in] [originating from] areas beyond national jurisdiction.] (*i.e., not* marine genetic *material*) The inclusion of this provision arguably highlights the potential for divergence in the interpretation of the legal relationship between marine genetic ‘resources’ and marine genetic ‘material’. This is because if the genetic ‘material’ that is accessed (or originating) from ABNJ is deemed (by a State, for example) to be of no ‘actual or potential value’ it can in turn be presumed *not* to fall within the definition of marine genetic ‘resources’ for the purposes of regulation under the proposed BBNJ Agreement. Conversely, any marine genetic ‘material’ which is at least initially deemed to be of no ‘actual or potential value’ at all is therefore to be considered as marine genetic ‘resources’.

Moreover, there is neither a definition, nor any suggested notion of what ‘value’ means in this particular context. One possible interpretation of this interplay between the definitions of marine genetic ‘resources’ and marine genetic ‘material’, whereby the former (resources) is seen only through the lens of the ‘actual or potential value’ of the latter (material) is as follows: If the term: ‘value’ here is given a fairly basic, one-dimensional definition or meaning, denoting monetary or ‘cash’ value only, as opposed to more complex notion(s) of ‘intrinsic’ value, then any marine genetic ‘material’ that is deemed in an *a priori* manner to have no possible monetary or ‘cash’ value at all, will also thereby be deemed *not* to be marine genetic ‘resources’ for the purposes of regulation by the proposed BBNJ Agreement. On the other hand, it is presumably only such ‘material’ that is deemed to have ‘actual or potential value’ that in turn becomes marine genetic ‘resources’, and thereby subject to the regulatory framework for access, benefit-sharing and intellectual property rights under the proposed BBNJ regime. This analysis also serves to (re-)focus the issue on *who decides* whether any marine genetic ‘material’ obtained from bio-prospecting or other exploratory-type activities in the ABNJ is of ‘actual or potential value’.

Given the fact that Articles 9 on ‘Activities with respect to marine genetic

resources of areas beyond national jurisdiction', and Article 10 on '[Collection of] [and] [Access to] marine genetic resources of areas beyond national jurisdiction] of the revised draft text, then attempt to regulate such 'activities' and 'collection of' and 'access to' marine genetic 'resources' only in relation to these 'resources' and *not* to marine genetic 'material' *per se*; this suggests that it is at least possible for States to license (or otherwise permit) scientific research (and/or other) vessels flying their flag to undertake bio-prospecting, or otherwise explore and collect marine genetic 'material' for so-called 'pure' scientific research, which are deemed, on an *a priori* basis, to have no 'actual or potential' value at all. In this particular context, it is as well to note that the revised draft Article 8(2) provides that: '[The provisions of this [Part] [Agreement] shall *not* apply to: … (d) Marine scientific research.]]' (*emphasis added*)

Given the complexities inherent when trying to distinguish between so-called 'pure' and 'applied' scientific research in general, it may be noted that such distinctions are arguably even more difficult to sustain in the *marine* scientific research context, where 'collection' activities can take place alongside commercial fisheries capture. Moreover, it is arguably almost impossible to establish exactly when such 'pure' research data/material is (or becomes) 'applied' in a practical way, possibly through the application of biotechnology, such that it is capable of being utilized for commercial purposes, and thereby deemed to have acquired actual or potential value. Thus, depending on how far the latter quality (actual or potential value) can be defined in ways whereby it can either be proven or disproven, and perhaps more importantly, to whom is it given the task of proving or disproving such 'actual or potential value', it would appear that collected marine genetic 'material' as a result of 'marine scientific research' would not qualify as MGR for the purposes of regulation by the proposed BBNJ Agreement. This is because any such marine genetic 'material' collected (or 'accessed') from ABNJ under this pretext (marine scientific research) would arguably not be included within the definition of marine genetic 'resources'.

The above interpretation(s) to the various provisions under scrutiny are at least technically possible unless *all* 'marine genetic material' is accepted as having *at least some* 'potential value' as marine genetic 'resources', so that all such marine genetic 'material' is to be automatically classified as marine genetic 'resources' as well. This all-inclusive interpretation, which basically equates *all* marine genetic 'material' with marine genetic 'resources', finds some support in the following proposal in revised draft Article 1(8): '[If a species of fish is found to have value for its genetic material, that species shall be treated as a marine genetic resource, regardless of the volume of the catch.]'

Special attention should also be given to the following provision within revised draft Article 8(2)(a), as follows:

'[2. The provisions of this [Part] [Agreement] shall not apply to:

[(a) The use of fish and other biological resources as a commodity.] …'

The combined effect of the above provisions being contemplated for inclusion within the BBNJ Agreement are a reflection of the concerns expressed by fishing nations that the regulatory attention being placed on MGR in ABNJ will inadvertently capture their 'activities' when exploring and exploiting the (living) natural resources of the 'high seas' and sea-bed of the ABNJ. It is interesting to note that this set of concerns has taken up much space and time within the IGC negotiations, possibly at the expense of the arguably equally, if not *more* important issues raised (above) on the absence of practical connexion(s) between definitions of marine genetic 'resources' and marine genetic 'material' for the purposes of either access to them, or their collection from, the ABNJ. This concern among States with large high seas fisheries industrial capacity can be traced back to the point made above, that MGR collection activities can take place alongside commercial fisheries effort, and possibly even from the same vessel, subject to licensing requirements, etc.

Neither can individualized MGR collection activities for 'marine scientific research' purposes be targeted for regulation from a conservation perspective, due to the (usually) vanishingly small numbers of specimens acquired. As Hunt *et al* have noted, 'Collecting marine organisms for the discovery and development of pharmaceuticals has been perceived variously as sustaining and threatening conservation. Our initial expectations that marine bioprospecting might pose conservation challenges were largely not confirmed. Thousands of marine species have been collected for initial assessment, but usually only in very small amounts.'[35] While promising data obtained from initially few collected specimens may result in larger, so-called 're-collections' of such specimens, Hunt *et al* go on to say that: 'Very few compounds are sufficiently promising to provoke re-collections, where volumes can be much larger. This is where conservation concerns may arise, particularly if the organism is rare, has a restricted distribution, or is targeted in one narrow area. However, industry generally seeks to avoid dependency on small populations, for economic as well as ecological reasons. Alternative supply strategies to wild capture include synthesis and culture'[36]. Thus, they propose that: 'Mandatory collection protocols and environmental impact (stock) assessments are useful routes for management to achieve sustainable use where extraction is desirable. In general, the scanty information available suggests that marine bioprospecting for pharmaceuticals may have minimal impacts on the environment, particularly compared with those created by other pressures.'[37]

IV. Managing Developed and Developing Country Interests in relation to *Access* and *Activities* with respect to MGRs within ABNJ

Having noted (above) the range of issues arising from: 1) possible jurisdictional overlaps between coastal State and proposed BBNJ Agreement over 'sedentary species' and MGR; and 2) potential (mis-)interpretations of the terms: marine

[35] Bob Hunt, Amanda C. J. Vincent, Scale and Sustainability of Marine Bioprospecting for Pharmaceuticals, AMBIO: A J. of the Human Environment, 35(2): (2006) 57-64, see: Abstract at 57.
[36] *Ibid.*
[37] *Ibid.*

genetic 'resources' and marine genetic 'material', a further set of possible complications arise from exactly what type(s) of 'activities' being pursued in relation to 'access' to MGR in ABNJ will be covered by the Instrument that emerges from these international negotiations.

Definitionally, the revised draft Article 1(1) currently provides that:

'[1. "Access" means, in relation to marine genetic resources, the collection of marine genetic resources [, including marine genetic resources accessed *in situ*, *ex situ* [and *in silico*] [[and] [as digital sequence information] [as genetic sequence data]]].]'

The above provision is buttressed by the further provision in revised draft Article 8(3) as follows:

'[3. The provisions of this Agreement shall apply to marine genetic resources [collected] [accessed] *in situ,* [and] [accessed] *ex situ* [and *in silico*] [[and] [as digital sequence information] [as genetic sequence data]] [and their utilization] after its entry into force, including those resources [collected] [accessed] *in situ* before its entry into force, but accessed *ex situ* or [*in silico*] [[and] [as digital sequence information] [as genetic sequence data]] [or utilized] after it.]'

On the other hand, revised draft Article 8(2)(b) appears to directly contradict the above provisions, as follows:

'[2. The provisions of this [Part] [Agreement] shall *not* apply to: …
…
(b) Marine genetic resources accessed *ex situ* [or *in silico*] [[and] [as digital information] [as genetic sequence data]] [and their utilization];] …' *(emphasis added)*

Despite the apparently contradictory draft texts in Articles 8(2)(b) and Article 8(3) above, the very broad definition of 'access' under Article 1(1) covering collection of MGR *in situ* (on site) and *ex situ* (externally), as well as *in silico* (digitally rendered data), means that such 'access' arguably covers most, if not all types of forms in which MGRs might be found. However, both of the latter forms of 'access' to MGR, i.e., *ex situ* and *in silico* 'access' will presumably be dependent on the jurisdiction and regulation of the individual State in which these forms of (*ex situ* & *in silico)* MGR are to be accessed from. This leaves only 'access' to the MGR *in situ* within the ABNJ to be regulated by the BBNJ Agreement. In this regard, revised draft Article 9 lays conditions for all 'activities in relation to MGRs of the ABNJ', and Article 10 follows this by setting conditions for the 'collection of', or 'access to' such MGRs.

Thus, it is the nature of *in situ* MGR collection 'activities' within the ABNJ that becomes the focus here. Revised draft Article 9 is entitled: '*Activities* with respect to marine genetic resources of areas beyond national jurisdiction' *(emphasis added)*. But what does the term: 'activities' mean in this context, even if we are to accept that it is clearly referring to the collection of MGR in ABNJ meant to include? Specifically, are *all* types of 'activities' included here, including activities that are traditionally associated with marine scientific

research? Again, it seems important to reiterate here that revised draft Article 8(2) provides that: '[The provisions of this [Part] [Agreement] shall *not* apply to: … (d) Marine scientific research.]]' (*emphasis added*) This provision arguably places such 'activities' beyond the reach of regulation by the proposed BBNJ Agreement.

In this regard, 'exploring and exploiting' is the phrase traditionally used in relation to the exercise of sovereign rights and jurisdiction by coastal States to control *access to* all types of (non-living and living) natural resources in both the 200nm EEZ, and the continental shelf within and beyond 200nm. For example, Articles 56(1)(a) & 77(1) of Part V (EEZ) and Part VI (Continental Shelf) respectively provide as follows: In Article 56: '1. In the exclusive economic zone, the coastal State has: (a) sovereign rights for the purpose of *exploring and exploiting,* conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, …'; *(emphasis added)* and, in Article 77: '1. The coastal State exercises over the continental shelf sovereign rights for the purpose of *exploring it and exploiting its natural resources.*' *(emphasis added)*

However, it is possible to argue that the envisaged 'activities' in relation to MGR in ABNJ are much more akin to that of 'bio-prospecting' for specimens, or even samples from specimens, that are of interest for the application of biotechnology to their genetic material/ Unfortunately, the term 'bio-prospecting' is not included anywhere within the current revised draft text for the proposed BBNJ Agreement. Nevertheless, it is clearly one of the types of activities envisaged by the notion of *access* to MGR in the ABNJ under revised draft Article 9. Moreover, it is arguably the most closely descriptive activity related to the phrase: *collection* of MGRs, under Article 10. Both of these Articles will be considered in more detail below, but at this juncture, it suffices to observe that it is precisely this type of *activity* that is of most interest to economies with highly-developed biotechnology industries. Indeed, '(a)t least 14 biotechnology and other companies, predominantly based in North America and Europe, are known to be actively involved in product development and/or in collaboration with research institutions in search of new substances and compounds from deep sea organisms and genetic material.'[38]

Thus, can such 'bio-prospecting' operations be brought within the notion of 'activities' for the purposes of regulation by the proposed BBNJ Agreement? Here, a preliminary issue relates to the lack of (international) agreement on a settled notion of 'bio-prospecting' itself. It would appear to be the case that neither existing international instruments, nor commentators, have managed to formulate an adequate (legal) understanding of this phrase. Writing in 2008, Warner noted that: 'Although there is no internationally agreed definition of bioprospecting, a note prepared by the Convention on Biological Diversity Secretariat defines bioprospecting as 'the process of gathering information

[38] Eassom, A., Chiba, S., Fletcher, R., Scrimgeour, R. and Fletcher, S. *Horizon scan of pressures on Biodiversity Beyond National Jurisdiction*, UNEP-WCMC, Cambridge, UK (2016) 42pp. at 15, citing Kristina J. Gjerde (Ed.) *Ecosystems and Biodiversity in Deep Waters and High Seas*, UNEP Regional Seas Report and Studies No.178, Switzerland: UNEP (2006). Accessible at: https://www.unepwcmc.org/system/comfy/cms/files/files/000/000/874/original/Horizon_Scan_v14_Final.pdf

from the biosphere on the molecular composition of genetic resources for the development of new commercial products.'[39] More recently, Mossop has defined 'bioprospecting' similarly, as 'the process of identifying unique characteristics of marine organisms for the purpose of developing them into commercially valuable products', while arguing that the legal rules that apply to bioprospecting require further development.[40]

For example, within the Advisory Opinion of the Sea-bed Disputes Chamber on 'RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE AREA', the term 'Prospecting' is elaborated as follows: '"Prospecting", although mentioned in Annex III, article 2, of the Convention and in the Nodules Regulations and the Sulphides Regulations, is *not* included in the Convention's definition of "activities in the Area" because the Convention and the two Regulations distinguish it from "exploration" and from "exploitation". Moreover, under the Convention and related instruments, *prospecting does not require sponsorship*. In conformity with the questions submitted to it, which relate to "activities in the Area" and to sponsoring States, the Chamber will not address prospecting activities. However, considering that prospecting is often treated as *the preliminary phase of exploration* in mining practice and legislation, the Chamber considers it appropriate to observe that some aspects of the present Advisory Opinion may also apply to prospecting.'[41] *(emphasis added)*

Individual State practice has also begun to target the regulation of bio-prospecting activities within the continental shelf (seabed) area/zone beyond 200nm. For example, within the 2012 Joint Management Treaty between Mauritius and the Seychelles, Article 1, entitled: 'Definitions', in the Preliminary (Part 1) provides that: 'For the purposes of this Treaty: …

(b) *"bioprospecting"* means the examination of *biological resources* for features including but not limited to chemical compounds, genes and their products and physical properties that may be of value for commercial development; …' (emphasis added)

Moreover, Article 13. entitled: 'Biological Surveys and Bioprospecting', provides that: '(a) Each of the Contracting Parties has the right to carry out biological surveys for purposes of Article 12 of this Treaty and to engage in *bioprospecting* to identify and examine living *natural resources* that may be of value for commercial development in the JMA or of conservation significance. …' *(emphasis added)*

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[39] Robin M. Warner, 'Protecting the Diversity of the Depths: Environmental Regulation of Bioprospecting and Marine Scientific Research Beyond National Jurisdiction', *Ocean Yearbook*, Vol.22 (2008) 411-443, at 4xx, citing UNEP/CBD/SBSTTA/8/INF/3/Rev.1, para.68.

[40] Joanna Mossop, 'Marine Bioprospecting, The Oxford Handbook of the Law of the Sea, edited by Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens, OUP (2015)

[41] See: Advisory Opinion of the Sea-bed Disputes Chamber on 'RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE AREA', 1 February, 2011) at para.98. (*emphasis added*)

Reverting to the 'Definitions' section of this 2012 Treaty, '... (l) *"natural resources"* means the mineral, petroleum and other non-living resources of the seabed and subsoil of the continental shelf together with living organisms belonging to sedentary species that are at the harvestable stage either immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or subsoil;

(m) *"natural resource activities"* means all activities authorised or contemplated under a contract, permit or licence that are undertaken to explore and exploit natural resources in the JMA including but not limited to development, initial processing, harvesting, production, transportation and marketing, as well as the planning and preparation for such activities; ... (n)...

(o) *"natural resources project"* means any *'natural resource activity'* taking place with the approval of the Designated Authority in a specified area of the JMA; ...'

These definitions are followed-up by provisions seeking to extend institutional authority over the regulation of 'natural resource activities', including 'bioprospecting' within the continental shelf area beyond 200nm that is part of the JMA. Thus, Article 3: Joint Management Area of PART 2: THE JOINT MANAGEMENT AREA, provides, *inter alia*, that: '... (c) *Natural resource activities* in the JMA shall be carried out under the direction of the Designated Authority, ...' Annex D under Article 4(d)(iv) of JMT, entitled: 'Powers and Functions of the Authority', then provides, *inter alia*, that: 'The powers and functions of the Authority shall include: '(a) day-to-day management and regulation of *natural resource activities* in accordance with this Treaty and any instruments made or entered into under this Treaty, including directions given by the Joint Commission; ...' *(emphasis added)* Therefore, through this Joint Management Authority, both Mauritius and the Seychelles appear to be appropriating for themselves the right to undertake bioprospecting surveys over 'natural resources' including sedentary species, but which may also include 'biological resources', as described (but not defined) in Article 1(b) of the 2012 Treaty (see above).

From this discussion, we can postulate that the proposed 'activities' to be undertaken or conducted with respect to MGR in ABNJ would include that of bio-prospecting 'activities', as well as the usual exploration and exploitation 'activities' over marine resources, all of which require *access to* MGR. This is notwithstanding the continuing uncertainties surrounding what constitutes 'bio-prospecting' in the first place.

The next section of our analysis therefore examines the attempt to balance the interests of developed and developing economies within the scope of the provisions allowing for *access to* MGR in ABNJ. Reverting to revised draft Articles 9 and 10 mentioned above, Article 9(1) first provides that: 'Activities with respect to marine genetic resources of areas beyond national jurisdiction may be carried out by all States Parties and their natural or juridical persons under the conditions laid down in this Agreement',[42] before laying down the

[42] See: revised draft Article 9(1) of the proposed BBNJ Agreement.

following *conditions* for such 'activities with respect to MGR' in the following (proposed) provisions under Article 9:

'[2. In cases where marine genetic resources of areas beyond national jurisdiction are also found in areas within national jurisdiction, activities with respect to those resources shall be conducted with *due regard* for the rights and legitimate interests of any coastal State under the jurisdiction of which such resources are found.]

[3. No State shall claim or exercise sovereignty or sovereign rights over marine genetic resources of areas beyond national jurisdiction [, nor shall any State or natural or juridical person appropriate any part thereof]. No such claim or exercise of sovereignty or sovereign rights [nor such appropriation] shall be recognized.]

[4. The utilization of marine genetic resources of areas beyond national jurisdiction shall be for the benefit of mankind as a whole, taking into consideration the interests and needs of developing States, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States and developing middle-income countries.]

[5. Activities with respect to marine genetic resources of areas beyond national jurisdiction shall be carried out exclusively for peaceful purposes.]' (*emphasis added)*

The proposed paragraph 4 of Article 9 within the revised text (above) is a clear attempt to introduce the principle of intra-generational *equity* within the provisions for MGR 'activities' in the ABNJ, in the same way that Article 140 of Part XI of the 1982 UNCLOS provides for this principle to be applied by the International Seabed Authority (ISA) in the deep seabed mining regime.[43]

Second, revised draft Article 10, entitled: '[Collection of] [and] [Access to] marine genetic resources of areas beyond national jurisdiction]' provides in paragraph/section 1, that: '[1. In situ [collection of] [access to] marine genetic resources within the scope of this Part shall be *subject to [Alt. 1. [prior] [and] [post-cruise] notification to the secretariat [, which shall include*

a) an indication of the location and date of [collection] [access],

b) the resources to be [collected] [accessed],

c) the purposes for which the resources will be utilized and

d) the entity that will [collect] [access] the resources] [of [collection of] [access to] marine genetic resources of areas beyond national jurisdiction].]' (*emphasis added)*

[43] For a recent discussion of how to apply this principle within the deep seabed mining regime, see: Vidar Ovesen, *et al*, Managing deep sea mining revenues for the public good - ensuring transparency and distribution equity, *Marine Policy* (2018)

Revised draft Article 10(2) then goes on to provide that: [2. States Parties shall take the necessary legislative, administrative or policy measures, as appropriate, to ensure that *in situ* [collection of] [access to] marine genetic resources within the scope of this Part shall be subject to:

(a) An indication of the geographical coordinates of the location where marine genetic resources were [collected] [accessed];

(b) Capacity-building;

(c) The transfer of marine technology;

(d) The deposit of samples, data and related information in open source platforms, such as databases, repositories or gene banks;

(e) Contributions to the special fund;

(f) Environmental impact assessments;

(g) Other relevant terms and conditions, as may be determined by the Conference of the Parties, ….' *(emphasis added)*

As noted above in relation to revised draft article 9(4) with regard to the equity principle, these (proposed) conditions to be attached to the access and collection of MGR *in situ* within the ABNJ within draft article 10(2) above, arguably represent the application of several of the governing principles enumerated in the Introductory section of this essay. For example, both the Article 10(2)(b) 'capacity-building' and Article 10(2)(c) 'transfer of technology' requirements represent particular applications of the common heritage of mankind (CHM) principle, whereas the Article 10(2)(d) provision on information 'transparency', and Article 10(2)(e) on 'special fund contributions', clearly relate to the principles of co-operation and equity (again) within the proposed BBNJ regime. Underpinning all of these principles however is the 'environmental impact assessment' (EIA) requirement under Article 10(2)(f) that confirms its status as the pre-eminent principle for environmental protection applicable to access and collection of MGRs in the ABNJ.

Even setting aside the fact that the phrases within these provisions (in articles 9 & 10, above) are still in brackets, and thus continuing to signify a lack of consensus between negotiators as to their possible inclusion within this text, uncertainties still abound as to the meanings of the words therein. As Rabone *et al,* have observed: 'Currently uncertainties surround the legal definition of Marine Genetic Resources (MGR) and scope of related benefit-sharing, against a background of regional and global governance gaps in ABNJ.' [44] The discussion above has exposed the former set of uncertainties, whereas the following analysis (in the section below) reveals the continuing uncertainties in

[44] Abstract, Muriel Rabone, *et al*, Access to Marine Genetic Resources (MGR): Raising Awareness of Best-Practice Through a New Agreement for Biodiversity Beyond National Jurisdiction (BBNJ), *New Frontiers of Marine Science*, 2019, 22pg, a

the relevant provisions of the revised draft articles on 'benefit-sharing' and 'intellectual property rights', respectively.

V. Benefit-Sharing and Intellectual Property Rights in relation to MGRs Accessed from ABNJ: Developed and Developing Country Perspectives

To begin with, within PART II entitled: 'MARINE GENETIC RESOURCES, INCLUDING QUESTIONS ON THE SHARING OF BENEFITS', the revised draft Article 7, entitled: 'Objectives', provides that: 'The objectives of this Part are (*inter alia*) to: [(a) Promote the [fair and equitable] sharing of benefits arising from the [collection of] [access to] [utilization of] marine genetic resources of areas beyond national jurisdiction;] …' Within the same Part (II), revised draft Article 11, entitled: '[Fair and equitable] sharing of benefits]' then provides in Section 1, that:

'[1. States Parties, including their nationals, that have [collected] [accessed] [utilized] marine genetic resources of areas beyond national jurisdiction *[shall] [may]* share benefits arising therefrom [in a fair and equitable manner] with other States Parties, with consideration for the special requirements of developing States Parties, in particular least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States and developing middle-income countries [, in accordance with this Part].]' (*emphasis added*)

Perhaps the first point to note about this provision is that it attempts to introduce the principle of sharing the benefits obtained from any activities related to MGR in ABNJ in a fair and equitable manner, albeit without specifying whether this is an obligatory (*shall*) or merely hortatory (*may*) requirement. In any case, the application of this benefit-sharing principle to such activities in a fair and equitable manner is problematic. This is at least partly due to the fact that neither in this provision, nor anywhere else in the revised draft text, is the *source* of these 'benefits' either defined or otherwise specified? Revised draft Article 11(2) provides that: [2. Benefits [shall] [may] include [monetary and] non-monetary benefits.] This covers both forms that the benefits can take, although 'non-monetary' benefits are still undefined here. Ultimately, however, this provision fails to include the possible source(s) of both types of benefits envisaged to be shared here. For example, are these 'benefits' in the form of fees charged for access to, or collection of, MGRs from the ABNJ? Or, can such 'benefits' (to be shared) be derived from the monetization of intellectual property rights (IPRs), these in turn arising from the application of biotechnology to MGRs collected from the ABNJ to form patentable products? Some clues in relation to the latter possibility can be discerned from revised draft Article 11(3)(a) (below) where it is stated, *inter alia*, that monetary benefits shall/may be shared 'upon the commercialization of products that are based on marine genetic resources of areas beyond national jurisdiction [in the form of milestone payments].'

Again, however, it is possible to generally hold that there is insufficient clarity as to the source of such benefits – whether monetary or not, as well as the

method of collection and disbursement of such benefits, within these revised draft text provisions. Article 11(3) initially provides (the mainly *developed economy*) States with flexibility/discretion as to when and how these benefits are to be shared, as follows:

[3. Benefits arising from the [collection of] [access to] [utilization of] marine genetic resources of areas beyond national jurisdiction *[shall] [may] be shared at different stages,* in accordance with the following provisions:

[(a) *Monetary benefits* [shall] [may] be shared against an embargo period for [marine genetic resources in silico] [digital sequence information] [genetic sequence data] or upon the commercialization of products that are based on marine genetic resources of areas beyond national jurisdiction [in the form of milestone payments]. The rate of payments of monetary benefits shall be determined by the Conference of the Parties. [Payments shall be made to the special fund];]

[(b) *Non-monetary benefits* [, such as access to samples and sample collections, sharing of information, such as pre-cruise or pre-research information, post-cruise or post-research notification, transfer of technology and capacity building,] [shall] [may] be shared upon [collection of] [access to], [utilization] of marine genetic resources of areas beyond national jurisdiction. Samples, data and related information [shall] [may] be made available in open access [through the clearing-house mechanism [upon [collection] [access] [after [...] years]]]. [[Marine genetic resources in silico] [Digital sequence information] [Genetic sequence data] related to marine genetic resources of areas beyond national jurisdiction [shall] [may] be published and used taking into account current international practice in the field.]] *(emphasis added)*

However, paragraph 4 of this Article (11) then attempts to lay down several requirements on beneficiary States as to the use of any benefits provided to them, as follows:

'[4. Benefits shared in accordance with this Part *shall be used:*
[(a) To contribute to the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction;]
[(b) To promote scientific research and facilitate [the collection of] [access to] marine genetic resources of areas beyond national jurisdiction;]
[(c) To build capacity to [collect] [access] and utilize marine genetic resources of areas beyond national jurisdiction [, including through common funding or pool funding for research cruises and collaboration in sample collection and data access where adjacent coastal States [shall] [may] be invited to participate, taking into account the varying economic circumstances of States that wish to participate];]
[(d) To create and strengthen the capacity of States Parties to conserve and use sustainably marine biological diversity of areas beyond national jurisdiction, with a focus on small island developing States;]
[(e) To support the transfer of marine technology;]
[(f) To assist developing States Parties in attending the meetings of the Conference of the Parties.]]' *(emphasis added)*

This particular set of provisions appears to lay down fairly stringent restrictions on the use by States of any benefits but it is unclear whether these requirements are exclusive, in the sense that recipient States are not allowed to use these benefits for any other purpose than those listed above, or whether these are non-exhaustive requirements, meaning that States can still utilize any benefits obtained according to their respective individual, socio-economic (or other) needs. In contrast, the (mainly developed economy) States that stand to benefit from the privately-held intellectual property rights (IPR) associated with the application of biotechnology to MGRs accessed from ABNJ to develop commercially-saleable products, do not appear to have any restrictions as to the monetary (or non-monetary) benefits from their development of these products.

Moreover, when it comes to IPR, located within Article 12 of the revised draft text, it is notable that the language employed is less stringent in its wording, *i.e.,* 'shall cooperate to ensure' (below) rather than 'shall be used' (above):

Article 12: 'Intellectual Property Rights'

[1. States Parties shall cooperate to ensure that intellectual property rights are *supportive of and do not run counter to the objectives of this Agreement [, and that no action is taken in the context of intellectual property rights that would undermine benefit-sharing and the traceability of marine genetic resources of areas beyond national jurisdiction].]*

[2. [Marine genetic resources [collected] [accessed] [utilized] in accordance with this Agreement shall not be subject to patents except where such resources are modified by human intervention resulting in a product capable of industrial application.] [Unless otherwise stated in a patent application or other official filing or recognized public registry, *the origin of marine genetic resources utilized in patented applications shall be presumed to be of areas beyond national jurisdiction.]]*

While there is a clear attempt here to ensure that intellectual property rights (which are usually held in private ownership) do not undermine the principles of equity and CHM (noted earlier) that form a couple of the Governing Principles of this proposed BBNJ Agreement, this is (again) hardly a binding obligation on the part of developed economies that want to reward companies within their jurisdictions for enabling lucrative products to be developed from MGRs obtained from ABNJ. The lack of any specific obligation to share the public (or private) monetary benefits from the application of appropriate biotechnology, or other relevant innovative knowhow, to MGRs obtained from ABNJ, will also be at the expense of sharing these rewards with other (developing economy) States that neither possess, nor have access, to both the technology and technical resources (for example, in the form of trained human know-how) to exploit any MGR found, even if they have access to such MGR in the ABNJ. The lack of stringent application of these principles of equity and CHM to intellectual property rights (IPR) here arguably highlights the perceived imbalance between developed and developing economies as to the respective roles of the State and private enterprise in industry and business generally, and specifically, in the development of products from the raw

(marine genetic) material originally sourced from such MGR. In nutshell, governments in developed economies are usually better resourced both financially and technically (human know-how again) to assist private sector business development. This imbalance of resources in favour of developed economies places developing economies who lack such financial and human resources at a distinct disadvantage when trying to support new/innovative economic sectors, including the exploitation of new resources, such as MGR.

This problem is symptomatic of an even wider issue as to who exactly should benefit from public (State/government) support for private innovation. As Mazzucato brilliantly observes in her book on *The Entrepreneurial State*, 'by not admitting the State's role in such active risk taking, and pretending that the State only cheers on the side-lines while the private sector roars, we have ended up creating an 'innovation system' whereby the public sector socializes risks, while rewards are privatized.' [45] Mazzucato's insightful perspective is particularly apt for intellectual property rights arising from products derived from the application of biotechnology to MGRs in ABNJ, as in many, if not all cases, such biotechnology is first developed in State-funded institutions and laboratories within the developed world.

VI. Application of the 'Environmental Impact Assessment' Principle to Proposed Activities within ABNJ

The set of legal issues arising from the application of the EIA principle to *all* types of resource collection activities within the ABNJ can be encapsulated into three related aspects, namely, the legal status of this principle under international law generally; the legal definition of what constitutes EIA; and the legal threshold at which EIA becomes a specific international obligation ln the State sponsoring (or otherwise authorising and/or supporting) the proposed activities concerned. This section first confirms the legal status of the international obligation to conduct Environmental Impact Assessment (EIA) for activities undertaken in Areas Beyond National Jurisdiction (ABNJ) as a matter of customary international law. In doing so, it will also establish this obligation as a corollary to the *due diligence* principle that is applicable under international law as an obligation of performance (or conduct), the failure of which would in turn invite consideration of possible State responsibility (and liability) for any harm arising from the inadequate performance of any EIA undertaken. The principle of due diligence as an abiding notion in public international law now has a particular resonance within the relentless rise in the importance of international environmental law. Where there is an international obligation of performance (or conduct), then due diligence is arguably the test that international law applies to gauge/measure whether such performance as required by the obligation has indeed been fulfilled.

Whether due diligence is notionally applicable to international obligations of result is arguably more contentious. In the first place, this assumes that international obligations tend to fall neatly within one of these two categories,

[45] Maria Mazzucato, *The Entrepreneurial State*, (20xx) at xxx.

either an obligation of result or performance.[46] A similar distinction can be discerned about the alleged differences between substantive, as opposed to procedural obligations. More generally, the differences between questions of law and fact arguably raise similar debates.[47] Within international (case) law, due diligence first came to prominence in the *Corfu Channel* case.[48] In that case, Albania's alleged omissions in relation to surveillance of her territorial waters (lying within the Corfu Channel) for the presence of mines was ultimately deemed sufficient to render Albania internationally responsible for damage sustained by British-flagged warships passing through this Channel. Albanian State responsibility for the mines was upheld despite the provocative nature of the British warships passage through Albanian territorial waters on the basis that the Corfu Channel was to be deemed an 'international strait', thereby allowing for so-called 'innocent passage' of such warships through the Channel. As the ICJ then pointed out in the *Pulp Mills* case, '… the principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. … A State is thus obliged to use all the means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State.'[49]

As the more recent Advisory Opinion of the Sea-bed Disputes Chamber observes in relation to the RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE (deep sea-bed) 'Area'[50], '(t)he content of "due diligence" obligations may not easily be described in precise terms. Among the factors that make such a description difficult is the fact that "due diligence" is a variable concept. It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge. It may also change in relation to the risks involved in the activity. As regards activities in the Area, it seems reasonable to state that prospecting is, generally speaking, less risky than exploration activities which, in turn, entail less risk than exploitation. Moreover, activities in the Area concerning different kinds of minerals, for example, polymetallic nodules on the one hand and polymetallic sulphides or cobalt rich ferromanganese crusts on the other, may require different standards of diligence. The standard of due diligence has to be more severe for the riskier activities.'[51]

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[46] For a general discussion of this distinction, especially in the context of the international law on State responsibility, see: Rüdiger Wolfrum, 'Obligation of Result Versus Obligation of Conduct: Some Thoughts About the Implementation of International Obligations', in Mahnoush H. Arsanjani, Jacob Cogan, Robert Sloane and Siegfried Wiessner, *Looking to the Future: Essays in honour of Michael Reisman*, Editors: Brill (2011) 363-83.

[47] See, for example, R Bilder, 'The Fact/Law Distinction in International Adjudication', in R B Lillich (ed), *Fact-Finding before International Tribunals: Eleventh Sokol* Colloquium (1991) 95.

[48] *Corfu Channel (UK v Albania)* case, Merits, Judgment, ICJ Rep (1949) p.22. Available at:

[49] *Pulp Mills (Argentina v Uruguay)* case, Merits, Judgment, ICJ Rep. (2010) at para.101. Available at:

[50] RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE AREA, Sea-bed Disputes Chamber, ADVISORY OPINION OF 1 FEBRUARY 2011. Accessible at:

[51] *Ibid.,* para.117.

Elaborating by reference to Article 153, paragraph 4, last sentence, the Convention states that the obligation of the sponsoring State in accordance with article 139 of the Convention entails 'taking all measures necessary to ensure' compliance by the sponsored contractor. Annex III, article 4, paragraph 4, of the Convention makes it clear that sponsoring States' 'responsibility to ensure' applies 'within their legal systems'. The latter provision is more specific as it requires the sponsoring State to adopt "laws and regulations" and to take "administrative measures which are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction". Further light on the expression "measures necessary to ensure" is shed by the Convention if one considers article 139, paragraph 2, last sentence, and Annex III, article 4, paragraph 4, last sentence, of the Convention. With these indications the Convention provides some elements concerning the content of the "due diligence" obligation to ensure. Necessary measures are required and these must be adopted within the legal system of the sponsoring State. The description of the measures to be taken by that State may also be used to clarify its "due diligence" obligation. The Chamber concludes that: 'The main purpose of these provisions is to exempt sponsoring States that have taken certain measures from liability for damage.'[52]

However, given the growing acceptance that environmental unknowns, vulnerabilities and costs appear to be among the greatest of the many challenges associated with deep-seabed mining, [53] it may legitimately be queried as to whether 'due diligence' should only be utilised as a test to allow relevant actors (whether States and/or their licensed/permitted agents) to escape responsibility and liability for their activities, especially when these activities are shown to be causally connected to incidents of pollution, or otherwise harm the marine environment, in ABNJ. Certainly, the polluter-pays principle, particularly when coupled with the precautionary principle/ approach, as advocated for application in the BBNJ Agreement,[54] would hold that neither of these State actors and/or their agents should be released from their overarching obligation to ensure marine ecosystem protection and resilience in ABNJ,[55] simply because they may be deemed to have fulfilled their notional due diligence requirements in relation to their activities. This 'sliding-scale' view of the due diligence standard or test, differentiated according to the potential severity of its non-fulfilment, especially in relation to natural environmental harm, would appear to accord with McDonald's argument that there is ultimately no general due diligence *standard* (as opposed to *rule or duty* of due diligence) under international law, but rather that any due diligence performance requirement is always linked to the specificity of the international obligation itself.[56] Whether this heightened due diligence requirement on all matters environmental is translated into an equally stringent burden of proof

[52] *Ibid.* at paras.118 & 119.

[53] Lisa A. Levin, Diva J. Amon, and Hannah Lily, 'Challenges to the sustainability of deep-seabed mining', *Nature Sustainability,* Vol.3 (October, 2020) 784–794, at 786. Accessible at: www.nature.com/natsustain

[54] See: Article 5(b) and 5(e) of the revised draft text, respectively.

[55] This is also consistent with the general obligation to protect and preserve the marine environment under Article 192 of the 1982 UNCLOS.

[56] See: Neil McDonald, THE ROLE OF DUE DILIGENCE IN INTERNATIONAL LAW, ICLQ, Vol.68, Issue 4, Vol.68, Issue 4 (October 2019) 1041-1054.

on States to show their performance of this requirement before international courts and tribunals is a further issue for consideration,[57] albeit not elaborated here due to space constraints.

Acceptance that the obligation to conduct an EIA is one of *performance or conduct,* rather than one of *result*, also has implications as to when exactly it can be judged that the EIA concerned has *not* been undertaken in such a way as to amount to a breach of the *due diligence* standard under international law. In particular, what if an EIA is undertaken but somehow fails to either discern a potentially adverse (or otherwise negative) environmental impact, or having discerned a potentially negative environmental impact, then fails to address the issue by way of issuing recommendations to resolve (or at least mitigate) such a potentially adverse environmental impact. As we shall see below, these specific issues are yet to be resolved, either in public international law generally, or within the revised draft text for the proposed BBNJ Agreement. All of these concerns necessarily raise the issue of the threshold of harm required to trigger the EIA requirement in the first place, to be discussed in the next section of this paper. However, the prominence of EIA within the overall due diligence test or standard can be noted from the following statement by the ICJ in *Pulp Mills*: 'Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works.'[58]

Returning to the legal status of the international obligation to conduct EIA in general, the ICJ statement in its Judgment on the Merits of the *Pulp Mills* case is authoritative, as follows: '… it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.' [59] For our purposes here in terms of examining the specific application of this EIA duty to activities within ABNJ, it is important to note that this paragraph (204) of the ICJ judgment in the *Pulp Mills* case was cited with approval barely a year later by the Seabed Disputes Chamber of the ITLOS in its Advisory Opinion on the 'Responsibilities and Obligations of States with respect to Activities in the (Deep seabed) Area'.[60] Indeed, the Chamber states unequivocally that: 'It should be stressed that the obligation to conduct an environmental impact assessment is a direct obligation under the Convention and a general obligation under customary international law'.[61] What is also significant here is that the Seabed Disputes Chamber confirms the 'customary international law' status of this obligation to undertake an EIA within the ABNJ

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[57] See, for example, Foster, Caroline E., Burden of Proof in International Courts and Tribunals Vol.29 *Australian Year Book of International Law*, 2010, 27-86. Available on the SSRN, at: https://ssrn.com/abstract=2047578

[58] *Pulp Mills on the River Uruguay* (Arg v Uruguay) Merits, ICJ (2010) at para.204.

[59] *Ibid.*

[60] RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE AREA, Sea-bed Disputes Chamber of the ITLOS, ADVISORY OPINION OF 1 FEBRUARY 2011,

[61] *Ibid.,* at para.145.

itself.[62] Although, the Chamber does go on to state that: 'It must, however, be observed that, in the view of the ICJ, general international law does not "specify the scope and content of an environmental impact assessment" (paragraph 205 of the Judgment in *Pulp Mills on the River Uruguay*). While article 206 of the Convention gives only few indications of this scope and content, the indications in the Regulations, and especially in the Recommendations referred to in paragraph 144, add precision and specificity to the obligation as it applies in the context of activities in the Area.'[63]

Ma *et al* observe that although EIA has been widely accepted and implemented by the international community, as one of management tools to protect marine biodiversity in ABNJ,[64] the biggest challenge is how to effectively implement EIA in ABNJ. Accordingly, they explore the impacts of anthropogenic activities in ABNJ on marine ecosystems, review the existing legal regime for EIA in ABNJ and then discuss possible measures to strengthen the implementation of EIA in ABNJ.[65] …

Moving on to the definitions of 'environmental impact assessment' (EIA) within the draft text, several definitional and threshold issues arise. The former, 'definitional' set of issues will be considered here, whereas the latter, 'threshold' issues will be considered below. In relation to the definition of EIA, Article 1(7) of the draft text proffers two alternative definitions, as follows:

[7. Alt.1. "Environmental impact assessment" means a process to evaluate the environmental impact of an activity [to be carried out in areas beyond national jurisdiction [, with an effect on areas within or beyond national jurisdiction]] [, taking into account [, inter alia,] interrelated [socioeconomic] [social and economic], cultural and human health impacts, both beneficial and adverse].]

[7. Alt. 2. "Environmental impact assessment" means a process for assessing the potential effects of planned activities, carried out in areas beyond national jurisdiction, under the jurisdiction or control of States Parties that may cause substantial pollution of or significant and harmful changes to the marine environment.]

The first, alternative (Alt.1) Article 1(7) definition of 'Environmental Impact Assessment' (EIA) is arguably too vague, especially in relation to the phrase: 'an activity [*with an effect* on areas within or beyond national jurisdiction]…' (emphasis added) If this phrase is interpreted literally to require an EIA for activities having *any* effect on areas within or beyond national jurisdiction, whether beneficial or adverse, then this would ensure comprehensive coverage of all types of activities that may have negative effects in areas beyond national jurisdiction (ABNJ). However, the concern here is that States will take advantage of such vague wording to allow almost any kind of activity to be allowed in ABNJ, as this provision does not specify a threshold of harm/damage

[62] *Ibid.,* at para.147.
[63] *Ibid.,* at para.149.
[64] Deqiang Ma, Qinhua Fang, and Song Guan, 'Current legal regime for environmental impact assessment in areas beyond national jurisdiction and its future approaches', *Environmental Impact Assessment Review*, Vol.56 (January, 2016) 23-30, at 23.
[65] *Ibid.*

that needs to be met in order to require an EIA to be undertaken. Nor does it specify that it is the duty/obligation of the State party that has jurisdiction and/or (legally) permits/controls the proposed activity to ensure an EIA is undertaken.

The second, alternative Article 1(7) definition of EIA on the other hand, suffers from the fact that the threshold of harm/damage that needs to be met before an EIA is required (substantial pollution of, or significant and harmful changes to, the marine environment) is too high. In other words, according to this (too) high threshold, only projects/activities that are likely to cause substantial pollution or significant and harmful changes will require an EIA.

VII. Legal Threshold Issues for the Application of EIA to Proposed Activities in the ABNJ

A recent contribution by Tiller *et al* highlights the main question arising from the application of the EIA principle namely, 'to ensure the [long-term] conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, *i.e.* the general objective of the proposed BBNJ Agreement, as provided in Article 2 of the revised draft text. The question they pose is as follows: 'Should EIA be required any time an activity takes place in the ABNJ in general, or just when activities have a high risk for environmental harm? Parties at the negotiations struggled to define this during the negotiations, and there was no obvious consensus.'[66] Given

The specific set of issues raised by this question thus moves away from the legal status and definitional aspects of EIA (discussed above) and towards finding the appropriate legal threshold(s) to be applied for an EIA to be undertaken for proposed activities related to BBNJ. Before we commence this discussion on the appropriate legal threshold(s) for an EIA, it should be noted that, as an *a priori* requirement for the *in situ* collection of, or access to marine genetic resources, that Article 10(2)(f) of revised draft text already includes provision for 'environmental impact assessments' to be conducted, either as a necessary legislative, administrative or policy measure, and/or as a term and condition for any permit (or licence) issued. Nevertheless, this set of threshold issues will be examined in this section, especially with respect to the elaboration of the EIA obligation under Articles 22 to 24 of the revised draft text.

However, before we can begin this discussion (on the EIA threshold issue), a treaty law-related contextual problem asserts itself, mainly arising from revised draft Article 4 on the 'Relationship between this Agreement and the Convention and relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies' which specifically provides, *inter alia*, that, 'This Agreement shall be interpreted and applied in the context of and in a manner consistent with the Convention'[67] and also that 'This Agreement shall be interpreted and applied in a manner that [respects the competences of and]

[66] Tiller *et al*, 'The once and future treaty: Towards a new regime for biodiversity in areas beyond national jurisdiction', *Marine Policy* (2019) 239-242, at 240.
[67] See: Article 4(1) of the revised draft text.

does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies.'[68] (emphasis added) As Oude Elferink has previously observed, 'these existing frameworks will have to be taken into account if it were to be decided to develop a global instrument on EIA for all activities in ABNJ.'[69]

However, the difficulty these provisions give rise to can be summarised as follows: Is it possible for there to be a different legal threshold for triggering an EIA in relation to proposed activities in the ABNJ, that nevertheless can be regarded as a consistent interpretation and application of the EIA obligation, as it is provided in the 1982 UNCLOS? Here it is significant to note that within the 1982 Convention itself, the environmental *impact* assessment (EIA) principle is not specifically provided. Instead, the EIA obligation can be discerned from provisions under Articles 204 to 206 of UNCLOS in Section 4 of Part XII: 'MONITORING AND ENVIRONMENTAL ASSESSMENT'. Analytically speaking, it is arguably better to approach these provisions in a 'back-to-front' manner, as follows: first, Article 206, followed by Article 205 and ending with Article 204.

Thus, Article 206: 'Assessment of potential effects of activities' provides as follows: 'When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause *substantial pollution of* or *significant and harmful changes to the marine environment,* they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.' *(emphasis added)* Then, under Article 205: 'Publication of reports', there is an obligation that: 'States shall publish reports of the results obtained pursuant to article 204 or provide such reports at appropriate intervals to the competent international organizations, which should make them available to all States.' Finally, under, section 2 of Article 204 entitled: 'Monitoring of the risks or effects of pollution' provides: 'In particular, States shall keep under surveillance the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment.'

Additionally, in its 2011 Advisory Opinion,[70] the Seabed Disputes Chamber has also confirmed EIA to be a specific requirement for the fulfilment of the due diligence obligation of States in relation to their operators within the deep sea-bed mining regime under Part XI of UNCLOS, as amended by the 1994 Implementation Agreement. Referring to the ICJ Judgment of the *Pulp Mills* case between Uruguay and Argentina, the Chamber goes on to state: 'Although aimed at the specific situation under discussion by the Court, the language used seems broad enough to cover activities in the Area even beyond the scope of the Regulations. *The Court's reasoning in a trans-boundary context may also apply to activities with an impact on the environment in an area beyond the*

[68] Article 4(3) ibid.
[69] Alex G. Oude Elferink, 'Environmental Impact Assessment in Areas beyond National Jurisdiction', *International Journal of Marine & Coastal Law*, Vol.27 (2012) 449–480, at 449.
[70] See: RESPONSIBILITIES AND OBLIGATIONS OF STATES WITH RESPECT TO ACTIVITIES IN THE AREA, Sea-bed Disputes Chamber, ADVISORY OPINION OF 1 FEBRUARY 2011, at paras.141-144.

limits of national jurisdiction; and the Court's references to "shared resources" may also apply to resources that are the common heritage of mankind. Thus, in light of the customary rule mentioned by the ICJ, it may be considered that *environmental impact assessments should be included in the system of consultations and prior notifications set out in article 142 of the Convention with respect to "resource deposits in the Area which lie across limits of national jurisdiction".*[71] *(emphasis added)* Concluding this analysis of the scope of the application of the EIA obligation under international law, the Chamber noted that: 'In light of the above, the Chamber is of the view that the obligations of the contractors and of the sponsoring States concerning environmental impact assessments extend beyond the scope of application of specific provisions of the Regulations.'[72]

Within Part IV of the revised draft text of the BBNJ Agreement, encompassing draft Articles 22 to 24, entitled: 'ENVIRONMENTAL IMPACT ASSESSMENTS', paragraph 1 of draft Article 22 first confirms the 'Obligation to conduct environmental impact assessments', before explicitly linking this obligation to the relevant UNCLOS Articles by providing that:

'States Parties shall [as far as practicable] assess the potential effects of planned activities under their jurisdiction or control [on the marine environment] [in accordance with their obligations under articles 204 to 206 of the Convention].'

As noted above, an immediate source of concern from an environmental law perspective relates to whether the explicit links to the rather generally-worded articulation of the EIA obligation in the relevant UNCLOS provisions are also designed to act as a constraint against the imposition of a stricter EIA requirement, based on a lower threshold of harm than what is provided under UNCLOS. In this regard, as Warner has presciently noted even prior to the present IGC process: 'A key plank of the rationale for including EIA elements is to capture activities occurring in ABNJ that are not already subject to sectoral EIA processes, in effect, to provide a default EIA system for activities such as bio-prospecting and marine geo-engineering.'[73] Moreover, she then highlights the need for this EIA process to apply 'international best practice', as follows: 'Another reason for including EIA elements is to provide best practice standards for EIA in ABNJ where scientific knowledge of marine biodiversity is still nascent. Developing best practice standards for EIA in ABNJ may entail the incorporation of new elements into the generally accepted components of the EIA process. Rather than perpetuating a situation where EIA is simply a procedural hurdle for the proponents of a particular activity, a best practice standard could require a process that is biodiversity inclusive, transparent and subject to international scrutiny with associated powers to impose conditions in the interest of mitigating adverse impacts on the marine environment or to disallow the activity where there is the potential for substantial harm to the marine environment.'[74] On the other hand, when Warner proposes that the

[71] *Ibid.,* at para.148.
[72] *Ibid.,* at para.150.
[73] Robin Warner, 'Conserving marine biodiversity in areas beyond national jurisdiction: co-evolution and interaction with the law of the sea', *Frontiers in Marine Science*, 20 May 2014, at 8. https://doi.org/10.3389/fmars.2014.00006
[74] *Ibid.,* 8-9.

biodiversity conservation elements within the proposed BBNJ regime should be designed to implement the spirit and intent of Part XII provisions of the (UNCLOS), rather than radically changing the basic principles and inherent balance of the law of the sea,[75] it is difficult to see how the former (biodiversity conservation) can be advanced without some re-consideration of the so-called 'freedom(s) of the high sea' currently embodied in Part VII of UNCLOS, especially in the context of marine scientific research, which is also regulated in Part XIII, both Parts of which show little explicit consideration for biodiversity conservation.

Article 21bis then states that: 'The objectives of this Part are to:

[(a) Operationalize the provisions of the Convention on environmental impact assessment by establishing processes, thresholds and guidelines for conducting and reporting assessments by States;]

[(b) Enable the consideration of cumulative impacts;]

[(c) Provide for strategic environmental assessments;]

[(d) Achieve a coherent environmental impact assessment framework for activities in areas beyond national jurisdiction.]

Article 22 then re-iterates the '(o)bligation to conduct environmental impact assessments', by reference to Articles 204-206 of the 1982 Convention. Paragraph 2 of the present draft Article 22 then raises the threshold issue by requiring States to take the necessary measures to require that any planned activity falling under its jurisdiction or control to conduct an environmental impact assessment for an activity that meets the threshold requirement for such an assessment, as set out in this Part,[76] whereas paragraph 3 limits this EIA requirement only to activities conducted in ABNJ or (in the alternative) activities that have an impact in ABNJ.[77] Draft Article 23 on the 'Relationship between this Agreement and environmental impact assessment processes under other [existing] relevant legal instruments and frameworks and relevant

[75] Robin Warner, 'Conserving Biodiversity in Areas beyond National jurisdiction: Co-Evolution and Interaction with the Law of the Sea', in *Oxford Handbook of the Law of the Sea,* edited by Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens, OUP (2015)

[76] Draft Article 22.2. On the basis of articles 204 to 206 of the Convention, States Parties shall take the necessary legal, administrative or policy measures, as appropriate, to implement the provisions [of this Part] [and any further measures [on the conduct of environmental impact assessments] decided by the Conference of the Parties [, including, but not limited to, requiring any proponent of a planned activity falling under its jurisdiction or control to conduct an environmental impact assessment for an activity that meets the threshold requirement for such an assessment, as set out in this Part]].

[77] Draft Article 22.3. The requirement in this Part to conduct an environmental impact assessment applies [only to activities conducted in areas beyond national jurisdiction] [to all activities that have an impact in areas beyond national jurisdiction].

global, regional and sectoral bodies', then explicitly links EIA in ABNJ with EIA in the Convention, as follows:

'1. The conduct of environmental impact assessments pursuant to this Agreement shall be consistent with the obligations under the Convention.'

2. The environmental impact assessment process set out in this Agreement shall not undermine existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies. [To that end, the provisions of this Agreement shall be interpreted in such a manner as to respect the obligations under other [existing] relevant legal instruments and frameworks and relevant global, regional and sectoral bodies, and be mutually supportive, in order to achieve a coherent environmental impact assessment framework for activities in areas beyond national jurisdiction.]

[3. Alt. 1. The Scientific and Technical [Body] [Network] shall consult and/or coordinate with [existing] relevant legal instruments and frameworks and relevant global, regional and sectoral bodies with a mandate to regulate activities [with impacts] in areas beyond national jurisdiction or to protect the marine environment. [Procedures for consultation and/or coordination shall include the establishment of an ad hoc interagency working group or the participation of representatives of the scientific and technical bodies of those organizations in meetings of the Scientific and Technical [Body] [Network].]
[3. Alt. 2. States shall cooperate in promoting the use of environmental impact assessments in relevant legal instruments and frameworks and relevant global, regional and sectoral bodies for planned activities that meet or exceed the threshold contained in this Agreement.]

[4. Alt. 1. [Global minimum standards] [and] [guidelines] for the conduct of environmental impact assessments [under [existing] relevant legal instruments and frameworks and relevant global, regional and sectoral bodies] shall be developed [by the Scientific and Technical [Body] [Network]] [through consultation or collaboration with [existing] relevant legal instruments and frameworks and relevant global, regional and sectoral bodies]]. [These [global minimum standards] [and] [guidelines] shall be set out in an annex to this Agreement and shall be updated periodically].] [
4. Alt. 2. The provisions of this Part constitute global minimum standards for environmental impact assessments for areas beyond national jurisdiction.]'

Article 24 then elaborates on the specific '(t)hresholds and criteria for environmental impact assessments', as follows:

'[Alt.1 When States have reasonable grounds for believing that planned activities under their jurisdiction or control [may cause substantial pollution of or significant and harmful changes to] [are likely to have more than a minor or transitory effect on] the marine environment [in areas beyond national jurisdiction], they shall, [individually or collectively,] as far as practicable, [assess the potential effects of such activities on the marine environment] [ensure that the potential effects of such activities on the marine environment are assessed].]

[Alt.2 1. When States Parties have reasonable grounds for believing that planned activities under their jurisdiction or control are likely to have more than a minor or transitory effect on the marine environment, they shall conduct a[n] [initial] [simplified] environmental impact assessment on the potential effects of such activities on the marine environment in the manner provided in this Part.

Alt.2.2. When States Parties have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall [conduct] [ensure that] a [full] [comprehensive] environmental impact assessment [is conducted] on the potential effects of such activities on the marine environment [and ecosystems] and shall [communicate] [submit] the results of such assessments [for technical review] in the manner provided in this Part.]

[Alt.3 Environmental impact assessments shall be conducted in accordance with the threshold and criteria [set out in this Part and as further elaborated upon pursuant to the procedure set out in paragraph [...] [, which shall be developed by the [Scientific and Technical [Body] [Network]]].'

Structurally, it can be argued that the fact that both the obligation to conduct an EIA and the threshold at which this obligation is triggered is specified separately in Article 24 rather than included in the EIA definition under Article 1(7) (discussed above) may become a problem. This is because if the (lower) threshold for an EIA to be undertaken is not included in the definition of EIA at all, then certain activities with impacts that are deemed (by the licensing or permitting State) *not* to meet the (higher) threshold for EIA as included in its definition, may then be deemed not to require an EIA at all. The threshold for when an EIA must be undertaken needs to be included in the EIA definition in Art.1(7) before being elaborated in Articles 22 to 24. By contrast, the threshold for the conduct of an EIA within the relevant 2014 EU Directive is much lower (and thereby more stringent), as Article 3.1. provides: 'The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project.'[78] In this regard, it is important to note that the EU Directive threshold is triggered by direct/indirect significant effects, and therefore does not even require any pollution or harm to be envisaged to trigger the requirement for an EIA.

As the current state of the marine environment in the ABNJ is less well-documented than the marine environment within national jurisdictions and therefore clearly more fragile, it is therefore becomes at least an arguable proposition that the EIA obligation and procedure within the proposed BBNJ Agreement needs to adopt a more robust application of the precautionary

[78] See: DIRECTIVE 2014/52/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

principle/approach,[79] as proposed by Article 5(e) of the revised draft text. This proposition in turn supports the argument that the threshold by which an EIA must be undertaken for activities in the ABNJ must be correspondingly *lower* than the relatively high threshold standard provided in UNCLOS Article 206, which appears to require an EIA only when 'States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause *substantial pollution* of or *significant and harmful* changes to the marine environment, …' (emphasis added)

Unfortunately, this threshold of *significant harm* also appears to be the standard applied by the International Seabed Authority (ISA) – the UNCLOS-based international institution charged with regulating mineral resource development in the 'Area', comprising the seabed beyond national jurisdiction. This is despite Article 145 of UNCLOS, entitled: 'Protection of the marine environment' providing as follows: 'Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from *harmful effects* which may arise from such activities. To this end the Authority shall adopt appropriate rules, regulations and procedures for, *inter alia*, …(b) *the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment*.' (emphasis added)

The above provision appears to introduce a lower threshold of '*harmful effects*' as the trigger for necessary measures (such as an EIA) to be introduced for protection of natural resources, flora and fauna in the marine environment of the Area. This appears to be the case, for example, in the 'recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area', issued by the Legal and Technical Commission of the ISA, paragraph 8 provides that: 'After approval of the plan of work for exploration in the form of a contract and prior to the commencement of exploration activities, the contractor is required to submit to the Authority: (a) An impact assessment of the potential effects on the marine environment of all proposed activities, excluding those activities considered by the Legal and Technical Commission to have no potential for causing *harmful effects* on the marine environment; …' (emphasis added) Following on from this paragraph (8), however, paragraph 32 then reinstates the higher threshold of (serious/significant) harm, stating that: 'On the basis of available information, a list containing a variety of technologies currently used in exploration are considered to have no potential for causing *serious harm* to the marine environment and thus do not require environmental impact assessment.'[80] (emphasis added)

On the other hand, the scope for such environmental impact assessment in relation to proposed mineral resource development activities for the 'Area' is

[79] See, for example, Arianna Broggiato, Exploration and Exploitation of Marine Genetic Resources in Areas Beyond National Jurisdiction and Environmental Impact Assessment, *European Journal of Risk Regulation*, Vol. 4, No. 2, Special Issue on Transnational Risks and Multilevel Regulation (2013) 247-251.

[80] Adopted at the Twenty-fifth session, Legal and Technical Commission session, part I, Kingston, Jamaica, 4–15 March 2019. ISBA/25/LTC/6/Rev.1, 30 March 2020.

expanded on the basis that: 'Environmental impacts are expected to be at the sea floor and also may occur at any discharge depth (if applicable) in the water column. The impact assessment should address impacts on benthic, benthic boundary layer and pelagic environments. The impact assessment should address not only areas directly affected by the activity but also the wider region impacted by seabed-disturbance plumes, the discharge plume and any materials that may be released by transporting the minerals to the ocean surface, which will depend on the technology used. An environmental impact assessment is required to assess whether there would be environmental changes from the discharge plume resulting in the alteration of food chains with the potential to disturb vertical and other migrations and lead to changes in the geochemistry of an oxygen-minimum zone, if present or applicable.'[81]

In the 2019 ISA's draft regulations on exploitation of mineral resources in the Area, the Executive Summary of Annex IV on the Environmental Impact Statement provides that: 'A key item that should be included is a previous risk assessment that evaluates activities classified as low risk (and therefore should receive less emphasis), compared with high-risk activities, which should be the focus of this Environmental Impact Statement (EIS).'[82] While this apparent distinction between low and high risk activities for EIS purposes is not elaborated within these draft regulations, when we revert to the ISA's 'guidance for contractors', among the activities listed as '*not* requiring environmental impact assessment during exploration', apparently because they 'are considered to have no potential for causing *serious harm* to the marine environment' include, *inter alia*, '... (c) Water, biotic, sediment and rock sampling for environmental baseline study, including: (i) Sampling of small quantities of water, sediment and biota (e.g. from remotely operated vehicles);...'[83] *(emphasis added)* But it is submitted here that it is exactly such small quantities of biota that are arguably sufficient for the collection of 'marine genetic resources', and the biotechnological extraction of their 'marine genetic material' and/or bio-chemical properties that may be of 'actual or potential value', as defined in draft Article 1(8) & 1(9) of the current revised text of the proposed BBNJ Agreement. Therefore, there is a clear risk that such sampling of small quantities of biota will not be deemed to fall within the category of 'collection activities' possibly requiring prior EIA.

On the other hand, the draft regulations for EIS, to be implemented by the Authority (ISA), sponsoring States and Contractors, (again) appear to adopt the lower threshold of 'harmful effects' [84] when planning, modifying and implementing 'measures necessary for ensuring effective protection for the marine environment'[85] in the deep sea-bed 'Area'. To this end, the Authority, sponsoring States and Contractors shall, *inter alia*:

'(a) Apply the precautionary approach, as reflected in principle 15 of the Rio Declaration on Environment and Development, to the assessment and

[81] *Ibid.,* at para.36.
[82] See: Agenda item 11 of the Twenty-fifth session, ISA Council session, part II, Kingston, 15–19 July 2019. Prepared by the Legal and Technical Commission, ISBA/25/C/WP.1
[83] See: para.32 of Guidance (2019), *op. cit.*
[84] This is consonant with the text of Article 145 of UNCLOS, quoted above.
[85] See: draft (ISA) Regulation 44, entitled: 'General obligations', *ibid.*

management of risk of harm to the Marine Environment from Exploitation in the Area;

(b) Apply the Best Available Techniques and Best Environmental Practices in carrying out such measures;

(c) Integrate Best Available Scientific Evidence in environmental decision-making, including all risk assessments and management undertaken in connection with environmental assessments, …'[86]

Moreover, draft Regulation 47 on the 'Environmental Impact Statement' provides, *inter alia*, that:

'1. The purpose of the Environmental Impact Statement is to document and report the results of the environmental impact assessment (EIA). The environmental impact assessment:

(a) Identifies, predicts, evaluates and mitigates the biophysical, social and other relevant effects of the proposed mining operation;

(b) Includes at the outset a screening and scoping process, which identifies and prioritizes the main activities and impacts associated with the potential mining operation, in order to focus the Environmental Impact Statement on the key environmental issues. The environmental impact assessment should include an environmental risk assessment; …'[87]

It is submitted here that in any case, 'international best practice'[88] would dictate that the threshold to be applied for EIA in the ABNJ should be the threshold standard under general (or customary) international law, as articulated for example, in the *Pulp Mills* case (2010),[89] where the ICJ held that the obligation 'to protect and preserve to protect and preserve the water and its ecological balance,' under Article 41 (a) of the relevant Statute (between Argentina and Uruguay), 'has to be interpreted in accordance with a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a *significant adverse impact* in a transboundary context, in particular, on a shared resource.'[90] (*emphasis added*)
Here it is submitted that the term/phrase: 'significant adverse impact' provides a lower (and thereby more stringent and relevant) threshold for an EIA to be undertaken for MGR collection activities, than the threshold requiring 'significant and harmful changes' may be caused by activities before an EIA is required of a coastal State under Article 206 of UNCLOS, 1982. The conjoined *Costa Rica v Nicaragua* case(s) before the ICJ (2015) initially confirms the ICJ Judgment in the *Pulp Mills* case between Argentina and Uruguay on the

[86] See: Draft (ISA) Regulations, *ibid.*
[87] *Ibid.*
[88] As advocated by Warner (2014) *op. cit.*
[89] See: *Pulp Mills* case (Argentina v Uruguay) ICJ (2010)
[90] *Ibid.,* at para.204, on p.83 of Judgment.

legal threshold to be applied for EIAs under general international law, as follows: 'Although the Court's statement in the *Pulp Mills* case refers to industrial activities, the underlying principle applies generally to proposed activities which may have a *significant adverse impact in a transboundary context*. Thus, to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of *significant transboundary harm*, which would trigger the requirement to carry out an environmental impact assessment.'[91] It would therefore appear to be the case that when applying the transboundary EIA principle to the (joined) *Nicaragua v Costa Rica* case(s), the ICJ to have perhaps initially modified the required legal threshold risk of harm for triggering an EIA, from risk of *significant transboundary harm,* to the risk of *significant adverse impact in a transboundary context*. The question that arises here is as to whether this change of wording, from 'adverse impact', to 'transboundary harm', significantly changes the legal threshold at which an EIA becomes an imperative requirement?

Conclusions: A Tale of Missed Opportunities (So Far…)

It is of course an invidious exercise to try to predict the outcome of the current BBNJ Agreement negotiations. Any conclusions at this stage of the ongoing (albeit presently suspended) proceedings is likely to be undermined by the precise terms finally agreed and adopted by the negotiating parties. Nevertheless, it is arguably already possible to chart certain established patterns and trends in the revised draft negotiating text that are unlikely to depart too much from their present course during the rest of these negotiations. A distinct pattern of reversion and reliance on UNCLOS terms wherever possible is discernible. While this practice is understandable from the perspective of continuity and certainty of successive legal texts within the broad sphere of ocean governance law, the scope for applying new understandings and innovative provisions that ensure deep sea ecosystem protection and enhance its resilience is thereby diminished, arguably to the detriment of the health of the oceans as a whole.

In short, the current, revised draft BBNJ Agreement text is arguably too wedded to the 1982 UNCLOS, both from its conception and within the current Inter-Governmental Conference (IGC) negotiations. Consequently, this close linkage of proposed BBNJ Agreement provisions to that of UNCLOS has rendered the application of certain provisions inflexible due to being tied to an increasingly (out)dated instrument, namely, the 1982 Convention. On the other hand, there has arguably been insufficient institutional co-ordination of efforts with the International Seabed Authority (ISA) over proposed deep seabed mining activities in the 'Area', particularly where these seabed mining activities might overlap considerably with 'marine genetic resources' (MGR) collection

[91] Full titles of these two joined cases as follows: CERTAIN ACTIVITIES CARRIED OUT BY NICARAGUA IN THE BORDER AREA (COSTA RICA v. NICARAGUA) and CONSTRUCTION OF A ROAD IN COSTA RICA ALONG THE SAN JUAN RIVER (NICARAGUA v. COSTA RICA) ICJ (MERITS) JUDGMENT OF 16 DECEMBER 2015, at para.104, *emphasis added*.

activities in both the high seas water column and seabed of the 'areas beyond national jurisdiction' (ABNJ).

Crucial terms and phrases are either not specifically defined, or defined in an inadequate fashion, so as to render them unequal to the task that they are required to fulfil. Significant relationships between previous (UNCLOS) and new (BBNJ) phrases and terms are also not elaborated sufficiently well to inspire certainty. Examples of these phrases/terms and their relationships are as follows:

1) Geographically, the spatial definition of 'areas beyond national jurisdiction' (ABNJ) as provided in Article 1(4) and Article 3 of the current, revised draft text for a BBNJ Agreement is arguably inadequate in the face of underlying (seabed) areas of continental shelf beyond 200nm that inhere to many coastal States. This potential overlap of national and international jurisdictions which will require significant international co-ordination between coastal State and flag State authorities in the interface between the national (continental shelf) and international (BBNJ Agreement) legal regimes;

2) Materially too, the potentially overlapping definitions of 'sedentary species' under Article 77(4) of UNCLOS and 'marine genetic resources' (MGR) under Alternatives 1 & 2 of Article 1(9) of the revised draft text will need to be better aligned and subject to co-ordination between States and the relevant international institutions established by the BBNJ Agreement, in order to achieve the general objective of this Agreement, currently expressed in Article 2 as seeking 'to ensure the [long-term] conservation and sustainable use of marine biological diversity of ABNJ';

3) Even within the revised draft text itself, the relationship between the proposed definitions for MGR and 'marine genetic material' under Article 1(8) are arguably mis-aligned, with the latter apparently confined to genetic material containing 'functional units of heredity', whereas an alternative version of the former phrase/term (MGR) arguably expands this term (functional units of heredity) to include the 'bio-chemical properties' of such genetic material as a potentially separate resource, where 'bio-chemical properties' can be shown to have actual or potential value;

4) The lack of inclusion or provision for 'bio-prospecting' as part of MGR collection activities to be regulated by the BBNJ Agreement is simply perplexing, unless it is assumed that any and all collection activities (including 'bio-prospecting') are included within the all-encompassing meaning of the term: 'access', under Article 1(1), Article 8 which apparently oscillates between applying the proposed Agreement to *in situ* and *ex situ* collection of MGR with draft provisions that *both* include and exclude the latter (*ex situ* collection), as well as Article 10(1), which simply subjects *all* '*in situ* [collection of] [access to] marine genetic resources' to its provisions;

5) Notwithstanding the provisions for material and non-material benefit-sharing there is a continuing lack of clarity in revised draft Article xx as to whether and how the sharing of any benefits from the commercialization of Intellectual Property Rights (IPR) in relation to collected MGRs

6) And last but certainly not least, the lack of clarity around the definition, and especially, the legal *threshold* for triggering the imposition of Environmental Impact Assessment (EIA) under Article 2x? for MGR collection activities under Article 8 of the revised draft text.

To be sure, all of these concerns may well be addressed by the time the final text of the BBNJ Agreement is adopted by the negotiating parties. Should this be the case, then global ocean governance will finally be 'fit for purpose', arguably to ensure the survival of earth itself.