

The integration of the ecosystem approach in the BBNJ agreement—An initial assessment of limits and opportunities

Vito De Lucia 

Norwegian Centre for the Law of the Sea,
Kvaløysletta, Norway

Correspondence

Vito De Lucia
Email: vito.delucia@uit.no

Funding information

Norsk Polarinstittutt, Grant/Award Number: 2551323; Norges Forskningsråd, Grant/Award Number: 316021

Abstract

This paper carries out an initial assessment of the integration of the ecosystem approach in the recently adopted agreement on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction (BBNJ). The analysis seeks to assess whether or not such integration is likely to be effective. In this respect, this paper follows up on earlier analyses offered *during* the negotiating process and aims at offering some initial considerations on, and reactions to, the final text of the BBNJ agreement, in order to map the limits of this integration and the opportunities it may offer, for an effective implementation of the ecosystem approach in the context of the BBNJ agreement, focussing especially on article 7 (on general principles and approaches), on part III (on area-based management tools, including marine protected areas) and part IV (on environmental impact assessments) with specific focus on strategic environmental assessment.

1 | INTRODUCTION

The ecosystem approach (EA) has become a key legal concept for addressing the conservation and sustainable use of biological diversity.¹ The approach has been integrated, in various forms and under various labels,² in many contexts and legal regimes, such as biodiversity, fisheries management, forest conservation and ocean governance. EA's success arguably reflects its promise to overcome the practical limitations of the traditionally fragmented environmental management model. The approach instead shifts focus to a holistic model. Not surprisingly, EA has been included in the list of general

principles and approaches for what is now the new 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 (BBNJ agreement).³

The adoption of the BBNJ agreement in June 2023 makes it possible to carry out an analysis of how EA has been integrated in the agreement and consider whether or not such integration is likely to be effective. In this respect, this paper follows up on earlier analyses offered *during* the negotiating process.⁴ It aims to offer some initial considerations on, and reactions to, the final text, seeking to identify limits and opportunities for an effective implementation of EA in the

¹See eg D Diz, *Fisheries Management in Areas beyond National Jurisdiction. The Impact of Ecosystem Based Law-making* (Brill 2013); V De Lucia, 'Competing Narratives and Complex Genealogies. The Ecosystem Approach in International Environmental Law' (2015) 27 *Journal of Environmental Law* 91; F Platjouw, *Environmental Law and the Ecosystem Approach. Maintaining Ecological Integrity through Consistency in Law* (Routledge 2016); V De Lucia, *The Ecosystem Approach in International Environmental Law. Genealogy and Biopolitics* (Routledge 2019).

²For a discussion of the various labels and of the semantic and operational scope of each see, eg De Lucia 2015 (n 1).

³Agreement 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, adopted 19 June 2023, C.N.203.2023.TREATIES-XXI.10 of 20 July 2023.

⁴V De Lucia, 'The Ecosystem Approach and the Negotiations towards a New Agreement on Marine Biodiversity in Areas beyond National Jurisdiction' (2022a) 2 *Nordic Journal of Environmental Law* 7; V De Lucia, 'The BBNJ Negotiations and Ecosystem Governance in the Arctic' (2022b) 142 *Marine Policy* 103756; V De Lucia, 'Rethinking the Conservation of Marine Biodiversity Beyond National Jurisdiction: From "Not Undermine" to Ecosystem-Based Governance' (2019) 8 *ESIL Reflection* 1.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Author(s). *Review of European, Comparative & International Environmental Law* (RECIEL) published by John Wiley & Sons Ltd.

context of the BBNJ agreement. The paper will first rehearse the various steps that led to the adoption of the BBNJ agreement (Section 2). Subsequently, it will outline the key elements of an EA to biodiversity conservation (Section 3). Section 4 will offer an overview of how the ecosystem approach has been integrated into the BBNJ agreement. It will first offer a brief analysis of article 7, where EA is listed as one of the general principles and approaches that shall guide Parties towards the achievement of the objectives of the BBNJ agreement. Subsequently, this Section will discuss some of the relevant elements that have been integrated in part III and part IV of the agreement, dedicated to area-based management tools (ABMTs), including marine protected areas (MPAs), and to environmental impact assessments (EIAs), respectively. These substantive elements, however, arguably need to be more firmly framed within the conceptual and operational context of EA, a question I will take up in Section 5, which will also offer a number of policy recommendations. Section 6 will offer some concluding remarks.

2 | THE BBNJ AGREEMENT: HOW DID WE GET HERE?

The process leading to the recent adoption of the BBNJ agreement has a rather long history with roots both in the oceans⁵ and biodiversity regimes.⁶ In 2004, the General Assembly of the United Nations (UNGA) established an Ad Hoc Open-Ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (BBNJ WG).⁷ The BBNJ WG produced a report in 2011, where it recommended that a ‘process be initiated’ by the UNGA that could include, among other options, the development of a multilateral agreement under United Nations Convention on the Law of the Sea (UNCLOS) on marine biodiversity in areas beyond national jurisdiction.⁸ The report also identified the so-called 2011 package, which included four substantive areas that would later become, ‘together and as a whole’,⁹ the basis for the BBNJ negotiations. These substantive areas are as follows: (1) marine genetic resources (MGRs), including questions on the sharing of benefits; (2) ABMTs, including MPAs; (3) EIA; and (4) capacity-building and the transfer of marine technology.¹⁰

The BBNJ WG submitted its final report in 2015.¹¹ On the basis of the recommendations contained in this report,¹² the UNGA decided to convene an intergovernmental process.¹³ The formal negotiation was however to be preceded by a preparatory committee (PREPCOM) to ‘make substantive recommendations [...] on the elements of a draft text of an international legally binding instrument’.¹⁴ The PREPCOM submitted its report in July 2017,¹⁵ and despite the lack of consensus on most key issues,¹⁶ it recommended that an intergovernmental conference (IGC) be convened.¹⁷ The UNGA followed this recommendation and launched the IGC on 24 December 2017,¹⁸ scheduling four substantive sessions and a preliminary organisational meeting.

Given the difficulties of reaching an agreement on many sticking points,¹⁹ an additional fifth session was necessary to conclude the negotiations.²⁰ This fifth session was, nevertheless, suspended and resumed twice, again due to being unable to bridge divergences. It was only at the very end of the first resumed session of IGC5 (IGC5.2), and after a 36-h stretch of negotiations past the stipulated end of the Friday negotiating session, that agreement could be reached on the final salient issues.²¹

The agreed final text of the agreement was then ‘frozen’, that is, ‘no reopening or discussions of substance’ was to take place.²² The final text of the agreement, enhanced, renumbered and corrected through technical editing, as well as translated into all six official UN languages, was subsequently formally adopted by the IGC at a further resumed fifth session on 19–20 June 2023²³ and opened for

⁵UNGA, ‘Resolution adopted by the General Assembly on 9 December 2013’ UN Doc A/RES/68/70 (9 December 2013) para 198.

⁶UNGA, ‘Letter dated 13 February 2015 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly’ UN Doc A/69/780 (13 February 2015) Annex, Section I ‘Recommendations’, para 1(e).

⁷UNGA, ‘Development of 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’ UN Doc A/RES/69/292 (19 June 2015).

⁸ibid.

⁹UNGA, ‘Report of the Preparatory Committee established by General Assembly resolution 69/292: Development of 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’ UN Doc A/AC.287/2017/PC.4/2 (10–21 July 2017).

¹⁰The Report expressly stated that ‘Sections A and B do not reflect consensus’, ibid para 28(a).

¹¹More precisely, the recommendation was to ‘take a decision, as soon as possible’ on convening an intergovernmental conference’, ibid para 38(b).

¹²UNGA, ‘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’ UN Doc A/RES/72/249 (24 December 2017).

¹³See eg E. Mendenhall and others, ‘Direction, not detail: Progress towards consensus at the fourth intergovernmental conference on biodiversity beyond national jurisdiction’ (2022) 146 *Marine Policy* 1.

¹⁴UNGA, ‘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’ UN doc A/76/L.46 (24 March 2022).

¹⁵UN, ‘The Ship Has Reached the Shore’, President Announces, as Intergovernmental Conference Concludes Historic New Maritime Biodiversity Agreement’ (SEA/21753 March 2023) <<https://press.un.org/en/2023/sea21753.doc.htm>>.

¹⁶For a narration of those last hours, see, eg J Marlow, ‘The Inside Story of the UN High Seas Treaty’ (The New Yorker, 8 March 2023).

¹⁷UNGA, ‘Draft report of the 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 at its fifth session’ UN Doc A/CONF.232/2023/L25 (7–18 March 2022) Advanced Unedited Version, <https://www.un.org/bbnj/sites/www.un.org/bbnj/files/20230627icg5reportfinalcirc.pdf>.

⁵UNGA, ‘Report of the Open-ended Informal Consultative Process on Oceans and the Law of the Sea’ UN Doc A/58/95 (26 June 2003) see esp. para 98ss. recognizing important legal and governance gaps related to marine biodiversity in areas beyond national jurisdiction.

⁶See eg AO Elferink, ‘Finding a Home for BBNJ – The CBD, the LOSC, and the General Assembly. Complementary Alternatives?’ in V De Lucia, A O Elferink and LN Nguyen (eds), *International Law and Marine Areas beyond National Jurisdiction: Reflections on Justice, Space, Knowledge and Power* (Brill 2022).

⁷UNGA, ‘Resolution adopted by the General Assembly on 17 November 2004’ UN Doc A/RES/59/24 (17 November 2004) para 73.

⁸UNGA, ‘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’ UN Doc A/66/119 (30 June 2011) Annex, Section I ‘Recommendations’, para 1(a).

⁹This expression indicates the goal of pursuing the negotiating agenda as a package deal, that is, either there is agreement on all the elements or no agreement at all.

¹⁰ibid para 1(b).

signature on 20 September 2024.²⁴ It is now time for a new beginning with respect to the conservation of marine biodiversity in areas beyond national jurisdiction.

The remainder of this article will seek to identify the limits and opportunities for an effective implementation of EA in the context of the BBNJ agreement. Before discussing the role and modalities of integration of EA in the BBNJ agreement, and especially in part II and part IV, a quick outline of EA will be useful.

2.1 | Key elements of the ecosystem approach²⁵

The EA is an increasingly central international legal concept for addressing the conservation and sustainable use of biological diversity. Endorsed in the mid-1990s as the ‘primary framework of action’ by the Convention of Biological Diversity,²⁶ the EA has subsequently gained traction in a variety of fields and contexts, including ocean governance,²⁷ fisheries management²⁸ and deep seabed mining.²⁹ Indeed, the EA has arguably played a ‘particularly strong’ role ‘in the context of marine management’,³⁰ particularly in relation to individual sectors of human activity, such as fisheries.³¹ Much of the thrust behind the adoption of EA across a variety of legal regimes lies arguably in its promise to overcome the traditionally fragmented management paradigm and instead shift focus to a holistic ecosystem governance model.³²

Prior to exploring the ways in which EA has been articulated in the BBNJ agreement, it will be useful to outline its key elements. A

good starting point is the Convention on Biological Diversity (CBD), which described the EA as a ‘strategy for the integrated management of land, water and living resources’.³³ The concept translates key ecological insights into law, and can be said to rest—despite a series of problematic aspects related to its inherent ambiguity³⁴—broadly speaking, on four interrelated elements: integration, integrity, information and iteration.³⁵

Integration reflects the ecological insight that ‘everything is connected with everything else’³⁶ and that any management plan or measure must heed this fact and take a holistic approach. By focussing on integration, the EA also challenges, through integrated decision-making, the traditionally fragmented approach of international law. The EA addresses this both substantively and procedurally, an important point that will be discussed in some details in Sections 4 and 5.³⁷ The EA therefore promises to integrate laws that regulate living resources with laws that regulate pollution and degradation of the physical environment. The concept aims to integrate, within a transverse ecosystem perspective, fragmented jurisdictional and political boundaries and social and the ecological dimensions into a single conceptual and operative framework. The EA, additionally, encourages epistemic integration by incorporating several important ecological principles into law and by drawing on multiple modes and sources of knowledge, including, as formulated in the BBNJ agreement, references to both the best available science and the traditional knowledge of Indigenous peoples and local communities.³⁸

Ecological—or ecosystem—*integrity* is in many ways the underlying goal of the ecosystem approach.³⁹ Whilst integrity is not always easy to concretely identify⁴⁰ or operationalise,⁴¹ maintaining ecological integrity means maintaining certain key functions, structural elements and the composition of ecosystems in order to ensure the conservation of biological diversity and the protection and preservation of the relevant ecosystems.⁴²

²⁴At the moment of writing there have been 91 signatures and 7 ratifications. See <https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtmsg_no=XXI-10&chapter=21&clang=en>.

²⁵This section is based on and further elaborates a similar section that appeared in De Lucia 2022a (n 4).

²⁶UNEP/CBD/COP, ‘Preliminary Consideration of Components of Biological Diversity Particularly Under Threat and Action Which Could Be Taken Under the Convention’ Decision II/8 (6–17 November 1995).

²⁷See e.g. UNGA, ‘Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its Seventh Meeting’ UN Doc A/61/156 (17 July 2006) (ICP-7 Report); Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) (adopted 22 September 1992, entered into force 25 March 1998) 2354 UNTS 67; OSPAR Commission, *The North-East Atlantic Environment Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010–2020*, OSPAR Agreement 2010-2013; Helsinki Commission and OSPAR Commission, ‘Statement on the Ecosystem Approach to the Management of Human Activities, “Towards An Ecosystem Approach To The Management Of Human Activities”’ (Bremen, 25–26 June 2003) Agenda item 6.

²⁸See e.g. FAO, *Fisheries Management: The Ecosystem Approach to Fisheries*, FAO Technical Guidelines for Responsible Fisheries 4(2) (FAO 2003).

²⁹EA is currently under discussion in the context of the International Seabed Authority negotiations for Draft Regulation 2.e.ii, see e.g. M Guilhon et al, ‘Ecosystem-based Management Through the Lenses of International Seabed Authority Stakeholders: Current Status, Implications, and Opportunities for the Deep-sea Mining Regime in the Area (2023) 10 *Frontiers in Marine Science* 1.

³⁰D Langlet and R Rayfuse, *The Ecosystem Approach in Ocean Planning and Governance. Perspectives from Europe and beyond* (Brill 2019) 2.

³¹See e.g. S Garcia et al, *The Ecosystem Approach to Fisheries: Issues, Terminology, Principles, Institutional Foundations, Implementation and Outlook* (FAO 2003) FAO Fisheries Technical Paper No 443.

³²For detailed analyses, see, e.g. Platjouw; and De Lucia 2022a (n 4). See also, however, De Oliveira who suggests that “no direct correlation between the factors ‘fewer jurisdictional borders’ and ‘healthier marine ecosystems’” can be found by mapping jurisdictional fragmentation against the Ocean Health Index, C Soares de Oliveira, ‘One Jurisdiction Away from a Healthier Ecosystem? The Impacts of Jurisdictional Zones on the Health of Large Marine Ecosystems’ (2023) 155 *Marine Policy* 1, 7.

³³UNEP/CBD/COP/DEC/V/6, ‘Ecosystem Approach’ COP Decision V/6 (15-26 May 2000).

³⁴De Lucia (2014) (n 1).

³⁵The discussion of these four elements is largely based on a similar section published in De Lucia 2022a (n 4).

³⁶B Commoner, *The Closing Circle: Nature, Man and Technology* (Alfred Knopf 1971) 16.

³⁷Integrated decision-making is one of the “agreed consensual elements” of EA listed in ICP-7 Report (n 24) para 6(i), 3.

³⁸BBNJ agreement (n 3) art 7(j).

³⁹Sometimes together with ecosystem health, though the difference between the two is not always entirely clear, V De Lucia, *The Ecosystem Approach in International Environmental Law. A Biopolitical Critique* (PhD Thesis, UiT The Arctic University of Norway 2016). Ecological integrity is considered central for EA by both natural scientists (e.g. R Grumbine, ‘What is Ecosystem Management?’ (1994) 8 *Conservation Biology* 27) and lawyers (e.g. A Trouwborst, ‘The Precautionary Principle and the Ecosystem Approach in International Law: Differences, Similarities and Linkages’ (2009) 18 *Review of Comparative, European and International Environmental Law* 465).

⁴⁰See in this respect G De Leo and S Levin, ‘The Multifaceted Aspects of Ecosystem Integrity’ (1997) 1 *Conservation Ecology* 3, and more recently G Steinhoff, ‘Ecological Integrity in Protected Areas: Two Interpretations’ (2013) 3 *Seattle Journal of Environmental Law* 155). There is however a significant literature that tries to do precisely that, primarily stemming from the work of the Global Ecological Integrity Group, see e.g. L Westra, ‘Ecological Integrity’, in C. Mitcham (ed.) *Encyclopedia of Science, Technology, and Ethics* (Macmillan Reference USA 2005, Vol. 2).

⁴¹For an attempt see R Kim and K Bosselmann ‘Operationalizing Sustainable Development: Ecological Integrity as a Grundnorm of International Law’ (2015) 24 *Review of European, Comparative & International Environmental Law* 194.

⁴²For a comprehensive presentation of the concept of ecological integrity and its relation to environmental law and governance see e.g. L Westra et al, *Ecological Integrity, Law and Governance* (Routledge, 2018).

Information refers to the crucial role that knowledge has for the implementation of EA. Detailed knowledge of ecosystem processes and of baseline conditions is paramount to understanding what the key stressors are and for assessing whether a measure or plan is working. Much work is being devoted for example to the development of integrated ecosystem assessments that can coordinate knowledge about multiple stressors in relation to multiple human activities along complex spatial and temporal coordinates.⁴³ Such assessments allow then map cumulative impacts for a particular geographical area and again map them against regulatory frameworks, with the view of exploring pathways to implement effectively ecosystem-based management regimes.⁴⁴

This last aspect links to the final element, *iteration*. Any ecosystem conservation and management measure needs to be iteratively assessed so as to respond to changes in existing conditions, to the variability of natural processes and to the responses of ecosystems to various stressors as well as to the conservation and management measures themselves.⁴⁵ This latter aspect is usually thought of in terms of adaptive management, one of the operational guidelines included in the Malawi Principles endorsed by the CBD under its programmes of work on EA.⁴⁶

To different degrees, each of these elements have been integrated in various provisions of the BBNJ agreement, and it is now time, after this very brief overview of the key elements of EA, to turn to the BBNJ agreement.

3 | THE ECOSYSTEM APPROACH IN THE BBNJ AGREEMENT

This section will discuss the modalities of inclusion of the EA in the BBNJ agreement. The focus will be on article 7 (which lists general principles and approaches that should guide the Parties in the achievement of the objective of the BBNJ agreement), on part III (which details the rules and principles for the adoption of ABMTs and MPAs) and part IV (which details the rules for undertaking environmental impact assessments in areas beyond national jurisdiction [ABNJ]).

3.1 | Article 7

Since the start of BBNJ negotiations, the EA has been included in the list of general principles and approaches that should frame and provide guidance to the parties towards the achievement of the objectives of the BBNJ agreement.⁴⁷ The EA is enshrined in what is now article 7 of the final text.⁴⁸ Article 7 does not offer direct behavioural guidance for parties on how they should act and thus corresponds to what Jean D'Aspremont would call the *soft negotium* part of an agreement.⁴⁹ Nevertheless, article 7 offers an important framing, with potentially significant implications for the interpretation, further elaboration and application of the agreement as a whole.

A systematic interpretation of this provision in the larger context of the BBNJ agreement is outside the scope of this article. It may be useful, however, to point to what is arguably a distinctive function of provisions such as article 7. The action and practice of the BBNJ bodies in fulfilling their mandate, particularly in carrying out the open-ended tasks assigned to them by various provisions, will need to be in accordance with guiding principles and approaches such as, precisely, EA. This may frame the ways in which such mandates or functions are interpreted⁵⁰ and carried out, for example in relation to the function of cooperation and coordination with other international agreements or bodies, that may be precisely understood within the normative and operational scope of EA, thus drawing out 'unexpressed norms' with operational implications.⁵¹

But even remaining more narrowly within the normative context of article 7, the inclusion of EA is buttressed and reinforced by other principles and approaches such as integrated approach to ocean management (article 7(g)), an approach that builds ecosystem resilience [...] and also maintains and restores ecosystem integrity, including the carbon cycling services that underpin the role of the ocean in climate (article 7(h)), the use of the best available science and scientific information (article 7(i)) and the use of relevant traditional knowledge of Indigenous Peoples and local communities (article 7(j)). Each of these reinforces one or several elements of EA as outlined in Section 3, whether ecological integrity, the role of knowledge and of epistemic integration and the holistic perspective that heeds cross-scale and cross-domain ecological interconnections, such as that between

⁴⁷For a brief history of this inclusion, see, e.g. De Lucia 2022a (n 4).

⁴⁸BBNJ agreement (n 3) art 7.

⁴⁹J D'Aspremont, 'Softness in International Law: A Self-Serving Quest for New Legal Materials' (2008) 19 *European Journal of International Law* 1075, 1081.

⁵⁰Here it is perhaps useful to point to an important distinction between interpretation *stricto sensu* and juridical construction. In extreme synthesis, while interpretation *stricto sensu* has a cognitive (and sometimes decisional) function aimed at establishing the meaning of a word or formulation, juridical construction has a variety of goals which include, importantly, filling normative gaps, elucidating unexpressed norms, balancing principles, and establishing axiological hierarchies. See generally R Guastini, 'Interpretare, Costruire, Argomentare' (Osservatorio sulle Fonti 2015) <[https://www.osservatoriosullefonti.it/archivi/archivio-saggi/813-osf-2-2015->](https://www.osservatoriosullefonti.it/archivi/archivio-saggi/813-osf-2-2015-) and D Canale, 'In Difesa della Distinzione tra Interpretazione e Costruzione Giuridica', in P Chiassoni, P Comanducci and G B Ratti (eds), *L'Arte della Distinzione: Scritti per Riccardo Guastini. Vol. II* (Marcial Pons 2019).

⁵¹Unexpressed norms may be derived by mobilizing a significant set of intellectual (e.g. theories) and normative (eg broader sets of relevant principles and rules) resources that may exceed, and significantly, the text of the relevant sources, and is precisely one of the key operations undertaken under the rubric of "juridical construction", as outlined in the previous footnote.

⁴³See e.g. CJ Harvey et al, 'Implementing "the IEA": Using Integrated Ecosystem Assessment Frameworks, Programs, and Applications in Support of Operationalizing Ecosystem-Based Management' (2017) 74 *ICES Journal of Marine Science*, 398; A Polejack, P Ramirez-Monsalve and M Wisz, 'What Does Integrated Ecosystem Assessment Mean to Policy-Makers and Scientists Working in the Atlantic? Implications for Ocean Science Diplomacy' (2023) 10 *Frontiers in Marine Science* 1.

⁴⁴This is what is being done for example in a series of interdisciplinary projects on ecosystem governance and Arctic sustainability funded by the High North Research Centre for Climate and the Environment (The Fram Centre). For more details on one such project see e.g. P Dodd et al, 'Sustainable Development of the Arctic Ocean' (FRAM FORUM 2024) <[https://framforum.com/2023/02/28/sustainable-development-of-the-arctic-ocean/>](https://framforum.com/2023/02/28/sustainable-development-of-the-arctic-ocean/).

⁴⁵Adaptive management is for example one of the four operational guidelines adopted within the context of the CBD as an annex to the Malawi Principles in Recommendation V/10 on 'Ecosystem approach: further conceptual elaboration' in UNEP/CBD/COP/V/10, Report of the Fifth Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice Montreal (31 January - 4 February 2000).

⁴⁶Malawi Principles, *ibid*.

oceans and climate, and thus arguably reinforces the role of EA as an operational guide for the achievement of the objectives of the BBNJ agreement.

Having briefly discussed the role of article 7, it is now time to turn to some of the relevant elements of EA that have been integrated in part III and part IV of the BBNJ agreement, respectively dedicated to ABMTs, including MPAs and EIAs.

3.2 | Part III: ABMTs and MPAs

Part III of the BBNJ is dedicated to ABMTs and MPAs. This part is indeed a crucial part of the BBNJ agreement and was the key initial topic motivating the commencement of the BBNJ process early on, in the context of both the CBD and the law of the sea.⁵² Importantly, MPAs are generally considered an important element for the implementation of the EA.⁵³ Conversely, as was made clear in the context of the CBD, the EA ‘provides a framework within which the relationship of protected areas to the wider landscape and seascape can be understood, and the goods and services flowing from protected areas can be valued’.⁵⁴ Indeed, the CBD Conference of the Parties, Seventh Meeting (COP7) decision on protected areas emphasises that ‘[m]ultiple-use protected areas’ are best ‘applied in an ecosystem approach context’.⁵⁵ Relatedly, CBD COP Decision VIII/24 on Protected Areas further specifies the central role of the EA in relation to the establishment of MPAs, particularly in areas beyond national jurisdiction.⁵⁶ Protected areas are considered ‘complementary to measures to achieve conservation and sustainable use of biodiversity outside protected areas in accordance with CBD guidelines such as the Malawi and Addis Ababa Principles’.⁵⁷ In fact, some commentators consider that MPAs, with their ‘explicit geographical boundaries and multiple management objectives’, to be ‘the nearest developed manifestation’ of EA.⁵⁸

In this respect, article 17 of the BBNJ is an important textual hook to ground part III in an ecosystemic perspective. Article 17 sets out in fact the objectives of the entire part III and explicitly mentions ‘a [spatially] *comprehensive* system of area-based management tools,

with ecologically representative and *well-connected* networks of marine protected areas’.⁵⁹ Each individual measure should thus be one element in a more comprehensive conservation strategy understood and implemented within the broader conceptual framework of EA, inevitably given a guidance role through article 7.

Additionally, article 17(c) sets out as another objective of part III to ‘[p]rotect, preserve, restore and maintain biological diversity and ecosystems, including with a view to enhancing their productivity and health, and strengthen resilience to stressors’. Such objective aligns well on the one hand with the idea, mentioned in Section 3, that ecological *integrity* is the key goal of EA, and on the other that EA includes in its purview socio-economic aspects, in light of the *integration* of humans and/in nature.⁶⁰ The ‘integrity of ocean ecosystems’ is also explicitly mentioned in recital 11 of the Preamble of the BBNJ agreement, in relation to the ‘desire [of the Parties to the agreement] to act as stewards’ of the oceans that States laid out therein, and—more importantly—in article 7(h), where the restoration of ecosystem integrity is recognised as crucial, in what can be arguably understood as a more detailed, climate-oriented, articulation of EA.

Whilst article 18 sets clear spatial and jurisdictional boundaries for the area of application of ABMTs and MPAs adopted under the BBNJ agreement, this dis-integrative thrust—which falls evidently short of promoting *integration* across the key jurisdictional boundaries that delineate areas within and beyond national jurisdiction—is counterbalanced by article 17(b), which sets out that one of the objectives of part III is to ‘[s]trengthen cooperation and coordination in the use of area-based management tools, including marine protected areas, among States, relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies’. Here the key distinction is between the competence (or, crucially, the lack thereof) to adopt measures and the objective to promote coordination, a distinction that permeates the entire text of the agreement, across all jurisdictional tensions, as captured by the key, yet still ambiguous concept of not undermining.⁶¹

Furthermore, both article 19, which regulates proposals, and article 26, which regulates monitoring and review, set out that the EA should be taken into account. One way to take the EA into account, particularly in light of the guiding role given to it by article 7, is to ensure that decisions related to the adoption of measures, as well as the parameters utilised for the monitoring and review of adopted measures, should be consistent with the goals and elements of the EA. This means that each proposal should be assessed against the larger ecosystemic context within which it would be embedded, or alternatively that the ‘geographic or spatial description of the area that is the subject of the proposal’ should respond not only to the

⁵²AO Elferink and B Kerr, ‘Finding a Home for BBNJ – The CBD, the LOSC and the General Assembly. Complementary Alternatives’ in V De Lucia, A Oude Elferink and LN Nguyen (eds) *International Law and Marine Areas beyond National Jurisdiction: Reflections on Justice, Space, Knowledge and Power* (Brill 2022).

⁵³See eg HI Browman and KI Stergiou ‘Perspectives on Eco-System-Based Approaches to the Management of Marine Resources’ (2004) 274 *Marine Ecology Progress Series* 269, 274, 271–272; B Halpern et al, ‘Placing Marine Protected Areas onto the Ecosystem-Based Management Seascape’ (2010) 107 *PNAS* 18312.

⁵⁴CBD, ‘Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at its Seventh Meeting, VII/28, Protected areas (Articles 8 (a) to (e))’ UNEP/CBD/COP/DEC/VII/28 (9–20 and 27 February 2004) 7.

⁵⁵*ibid.*

⁵⁶CBD, ‘Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at its Eight Meeting, VIII/24, Protected Areas’ UNEP/CBD/COP/DEC/VIII/24 (20–31 March 2006).

⁵⁷N Dudley (ed.) *Guidelines for Applying Protected Area Management Categories* (IUCN 2008) 2.

⁵⁸B Hatcher and R Bradbury, ‘Marine Ecosystem Management. Is the Whole Greater than the Sum of the Parts?’ in D Rothwell and D VanderZwaag (eds) *Towards Principled Ocean Governance: Australian and Canadian Approaches and Challenges* (Routledge, 2013) 224. The authors speak more specifically of ‘marine ecosystem-based management’.

⁵⁹BBNJ agreement (n 3) art 17(a) emphasis mine.

⁶⁰Aspects present in both the Malawi Principles under the CBD and in the ‘agreed consensual elements indicated in ICP-7 Report (n 25).

⁶¹For a sustained analysis of the meaning of not undermining in the context of Part III of the BBN agreement see V De Lucia, ‘After the Dust Settles. Selected Considerations about the New Treaty on Marine Biodiversity in Areas beyond National Jurisdiction with Respect to ABMTs and MPAs’ (2014) *Ocean Development & International Law* 1. For an early analysis, see e.g. Z Scanlon, ‘The Art of ‘Not Undermining’: Possibilities Within Existing Architecture to Improve Environmental Protections in Areas Beyond National Jurisdiction’ (2018) 75 *ICES Journal of Marine Science* 405.

indicative criteria set out in Annex I,⁶² but also to robust ecosystem maps. Indeed, this would reflect the key elements of EA as outlined in Section 3, anchoring the implementation of EA in the context of the BBNJ agreement to each of the four elements: ecological integrity, integrated knowledge and decision-making and iterative processes (through monitoring and review).⁶³ It is in this respect that part III and part IV may be usefully connected as two elements of a wider EA that (should) permeate and orient the interpretation and application of the BBNJ agreement, as the next section will show.

Finally, article 22, on the establishment of ABMTs and MPAs, may play an important role with regard to the understanding and carrying out of the mandate of the COP in relation to the implementation of EA. Paragraph 3 of article 22 sets out that the COP ‘shall make arrangements for regular consultations to enhance cooperation and coordination with and among relevant’ instrument, frameworks and bodies (IFBs) at global regional, subregional and sectoral level. The rule also requires coordination ‘with regard to related measures adopted under such instruments and frameworks and by such bodies’. Reading this provision in light of article 7, and with the understanding, outlined above that article 7, in providing guidance to, among others, the operations of the BBNJ bodies, may well entail that the BBNJ COP will need to actively seek to fulfil the mandate outlined in article 22(3). This in turn may indicate that the BBNJ COP should take a leading role with regards the integrated management of all human activities in marine areas beyond national jurisdiction. It is unclear how this will work in practice. Nevertheless, the role of the BBNJ agreement in a broader framework of cooperation and coordination across all relevant human activities—and institutional frameworks—in marine areas beyond national jurisdiction seems to be taken seriously by relevant IFBs. Indeed, International Commission for the Conservation of Atlantic Tunas (ICCAT)⁶⁴ and International Seabed Authority (ISA)⁶⁵ have both proceeded to outline their respective role towards the implementation of the BBNJ agreement. That they have done so, even prior to the entry into force of the BBNJ agreement, may indicate that there will be opportunities for streamlining the coherent and uniform implementation of EA across different domains and institutional regimes in marine areas beyond national jurisdiction and around the coordinating pivot of the BBNJ agreement.⁶⁶ Indeed, as some commentators have already pointed to, the BBNJ agreement may have the ‘capacity to orchestrate incumbent IFBs and forge a new polycentric order centered around its treaty objectives’.⁶⁷

⁶²BBNJ Agreement (n 3) art 19(4)(a).

⁶³Monitoring and review are regulated by Article 26 of the BBNJ agreement (n 3).

⁶⁴ICCAT, ‘Resolution by ICCAT on the Implementation of Biodiversity Conservation Instruments’ 23/23 Res. 2023.

⁶⁵ISA, ‘A review of the contribution of ISA to the objectives of the 2023 Agreement under UNCLOS on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdictions’ (ISA 2024).

⁶⁶There are of course several legal and institutional regimes that provide, in some form, for an ecosystem approach to conservation, including, for example, in the context of the ISA. See e.g. Guilhon et al, ‘Recognition of Ecosystem-Based Management Principles in Key Documents of the Seabed Mining Regime: Implications and Further Recommendations’ (2020) 78 ICES Journal of Marine Science 884; S Christiansen et al, ‘Towards an Ecosystem Approach to Management in Areas Beyond National Jurisdiction: REMPs for Deep Seabed Mining and the Proposed BBNJ Instrument’ (2022) 9 Frontiers in Marine Science, 1; Guilhon et al (n 27).

⁶⁷R Kim, ‘The Likely Impact of the BBNJ Agreement on the Architecture of Ocean Governance’ (2024) 165 Marine Policy 1.

3.3 | Part IV on EIAs: The role of strategic environmental assessment (SEA)

Part IV on EIAs has many objectives, but for our immediate purposes, in the context of this paper, three can be explicitly mentioned: ensuring that human activities in Areas Beyond National Jurisdiction ‘are assessed and conducted to prevent, mitigate and manage significant adverse impacts’ on the marine environment,⁶⁸ considering ‘cumulative impacts and impacts in areas within national jurisdiction’⁶⁹ and conducting strategic environmental assessments.⁷⁰ These objectives are clearly aligned with an EA to conservation.

Addressing cumulative impacts, in particular, are a central concern of the EA, in relation to the key goal of integrating temporally and spatially within the same management regime all relevant impacts and pressures on a specific ecosystem, ensuring its sustainable management.⁷¹ Cumulative impacts (or effects) are generally understood to be changes to ecosystems that, whilst individually of little significance, extend over time and may combine to inflict significant impacts on an ecosystem.⁷² The integration of cumulative impacts into ecosystem-based conservation is an innovative element of such approaches.⁷³ Additionally, cumulative impacts also interact with the precautionary principle⁷⁴ as they may have a significant effect in the calculation of relevant legal thresholds.⁷⁵ This interaction is an important consideration given that precaution is also included in article 7⁷⁶ and is intimately linked with the ecosystem approach.⁷⁷ In this latter respect, article 24, which regulates emergency measures, may also function as an important hinge between EA and precautionary action, given that emergency measures are area-based measures that may be adopted ‘when a natural phenomenon or human-caused disaster has caused, or is likely to cause, serious or irreversible harm to marine biological diversity of areas beyond national jurisdiction, to ensure that the serious or irreversible harm is not exacerbated’.⁷⁸ The key opportunity, however, to articulate a concrete link between the general and

⁶⁸BBNJ agreement (n 3) art 27(b).

⁶⁹ibid art 27(c).

⁷⁰ibid art 27(d).

⁷¹See e.g. L Hammar et al, ‘Cumulative Impact Assessment for Ecosystem-based Marine Spatial Planning’ (2020) 734 Science of the Total Environment 1 and J Blakley and D Franks (eds) *Handbook of Cumulative Impact Assessment* (Edward Elgar 2021).

⁷²European Commission, ‘Integrating environment concerns into development and economic cooperation’ (Draft version 1.0. 1999) <<http://glossary.eea.europa.eu/EEAGlossary>>.

⁷³K McLeod et al., *Scientific Consensus Statement on Marine Ecosystem-Based Management* (2005) 1. The statement was signed by 219 scientists and policy experts, and published by the Communication Partnership for Science and the Sea.

⁷⁴Or approach, as the case may be. Indeed in Article 7 of the BBNJ agreement (n 3), reference to precaution is made via the following formulation: “the precautionary principle or precautionary approach, as appropriate”, Article 7(e).

⁷⁵The link is premised on the notion that in a cumulative context, precautionary actions may be triggered even with regards to an action or event that considered in isolation would not pose significant risk of harm. See e.g. B Sage, ‘Precautionary Coastal States’ Jurisdiction’ (2006) 37 Ocean Development and International Law 359, 370.

⁷⁶Regardless of the awkward formulation: “The precautionary principle or precautionary approach, as appropriate”, BBNJ agreement (n 3) art 7(e).

⁷⁷See e.g. E Morgera and J Razzaque (eds) ‘*The Ecosystem Approach and the Precautionary Principle*’ in *Elgar Encyclopedia of Environmental Law. Volume III* (Edward Elgar Publishing 2017) 70–80.

⁷⁸BBNJ agreement (n 3) art 24(1). Note that emergency measures may entail precautionary action, but also reactionary action, in cases where the indicated harm to the marine environment has already occurred due to a natural phenomenon or to a human-cause disaster.

generic normative framing intended with the inclusion of EA among general principles and approaches, and the operative parts in both part III and part IV, is offered by the provision on SEA.⁷⁹

SEAs have been an important element in the discussions within the context of the topic of EIAs since early in the BBNJ process.⁸⁰ There have been divergences of views throughout the negotiations as to the very inclusion of SEA in the text,⁸¹ the level of details of its inclusion⁸² and whether or not there should be a definition of SEA in the text.⁸³ However, in the final text of the BBNJ agreement, SEA has been included as one of the objectives of part IV, both in and of itself⁸⁴ and in relation to the duties of the BBNJ bodies to '[b]uild and strengthen the capacity of Parties [and especially of disadvantaged parties]⁸⁵ to prepare, conduct and evaluate environmental impact assessments and strategic environmental assessments in support of the objectives of this Agreement'.⁸⁶

The definition of SEA was eventually included under article 1, and the negotiators landed on including SEA in article 39, with references to it in the list of objectives under article 27, as mentioned, and in relation to the tasks of the Scientific and Technical Body (STB). The latter, in fact, 'shall develop standards or guidelines'⁸⁷ in relation to, among other things, the conduct of SEAs.⁸⁸ This is an important opening for the further work of the BBNJ bodies, namely the COP and the

STB, which I will return to in Section 5. However, the key substantive provision on SEA is article 39, which provides that

Parties shall, individually or in cooperation with other Parties, consider conducting strategic environmental assessments for plans and programmes relating to activities under their jurisdiction or control, to be conducted in areas beyond national jurisdiction, in order to assess the potential effects of such plans or programmes, as well as of alternatives, on the marine environment.⁸⁹

It is important to note that the wording 'shall consider' creates an obligation to (only) give consideration to whether or not to conduct an SEA for relevant 'plans and programmes'. There is, however, the potential additional question as to whether an obligation to 'consider' requires States to produce evidence which shows that they have considered the question. Clearly, parties are obliged to *consider* the question, but perhaps they may also be obliged to indicate the reasons for not conducting an SEA. The scope of such plans and programmes remains unclear. As the language of article 39 is consistent with the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo),⁹⁰ the latter may offer useful guidance. Article 39 of the BBNJ agreement may then be understood to entail plans and programmes that 'set the framework' for future projects, sector by sector.⁹¹ This sectoral division, however, may not be equally relevant in relation to the BBNJ agreement as it is within a domestic jurisdiction, unless appropriately grounded at an ecosystem level (and in fact the same questions may be raised in relation to the domestic context). Thus, in the context of EA, plans and programme would need to be grounded within a particular geographical scope, which is arguably a crucial anchoring of an effective EA.

It is useful, at this point, to note how the question of the geographical scope of an ecosystem is not necessarily straightforward. Ecosystems may or may not have a given ontological basis or fixed spatial coordinates. In the context of the CBD, for example, the spatial scope of an ecosystem is determined functionally, by the problem to be addressed. This means that, in the context of the CBD, 'the term "ecosystem [...] can refer to any functioning unit at any scale", in turn entailing that "the scale of analysis and action should be determined by the problem being addressed". It could, for example, be a grain of soil, a pond, a forest, a biome or the entire biosphere'.⁹² However, ontologically determinate and spatially fixed ecosystems are generally accepted as a necessary grounding for the implementation of the

⁷⁹For an earlier, preliminary and much shorter analysis, and with reference to the further refreshed text, see V De Lucia, 'Operationalizing the Ecosystem Approach in the BBNJ agreement' (NCLOS Blog 2022) <https://site.uit.no/nclos/wp-content/uploads/sites/179/2022/10/Vito-de-Lucia_181022_NCLOS-Blog.pdf>; this section is in some parts based on that blog post.

⁸⁰See e.g. M Doelle and G Sander, 'Next Generation Environmental Assessment in the Emerging High Seas Regime? An Evaluation of the State of the Negotiations' (2020) 35 *The International Journal of Marine and Coastal Law* 498.

⁸¹The Republic of Korea for example suggested ahead of IGC4 the deletion of article 28 of the draft text (the location of SEA then), see UNGA, 'Textual proposals submitted by delegations by 20 February 2020, for consideration at the fourth session of the 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 (the Conference), in response to the invitation by the President of the Conference in her Note of 18 November 2019 (A/CONF.232/2020/3) Article-by-article compilation' UN Doc A/CONF.232/2022/INF.1 (2022) 254.

⁸²*ibid.*; see also UNGA, 'Report of the 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' UN Doc A/CONF.232/2022/4 (2022) 15.

⁸³See e.g. UNGA, 'Compilation of outcomes of small group work submitted after the issuance of the Refreshed 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 (A/CONF.232/2022/CRP.12) and Ending point of the Facilitators-led discussions held on 26 August 2022 on measures such as area-based management tools, including marine protected areas, and on environmental impact assessments' UN Doc A/CONF.232/2023/INF.2(2023) 470 (UNGA, "Compilation of outcomes of small group work submitted after the issuance of the Refreshed draft"), where it was made clear that "not having a definition would be helpful in moving us" towards a landing zone on the substantive inclusion of SEA in Part IV. Indeed, the small group, led by the UK, reported at the outset that "We propose that there is no definition of 'strategic environmental assessments (SEA)' in Part I", *ibid.*

⁸⁴BBNJ agreement (n 3) art 27(d).

⁸⁵*i.e.* "particularly developing States Parties, in particular the least developed countries, landlocked developing countries, geographically disadvantaged States, small island developing States, coastal African States, archipelagic States and developing middle-income countries," BBNJ agreement, art 27(f).

⁸⁶BBNJ agreement (n 3) art 27(f).

⁸⁷*ibid* art 38.

⁸⁸*ibid* art 38(g).

⁸⁹*ibid* art 39(1).

⁹⁰Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (adopted 21 May 2003, entered into force 11 July 2010) 2658 UNTS 140, art 4.

⁹¹*ibid* art 4(2).

⁹²CBD, 'Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity at its Fifth Meeting, V/6 The Ecosystem Approach' UNEP/CBD/COP/5/23, Section A, para 3. It must be noted, however, that protected areas remain a central tool not only for the achievement of the objectives of the CBD, but also for the operationalization of EA.

EA. In a marine context, it is the concept of large marine ecosystems (LMEs) that represents perhaps the key spatial grounding for the operationalisation of the EA.⁹³ LMEs are indeed a well-accepted spatial and ecological concept in both scientific and policy literature.⁹⁴

This is where a second pathway to SEA, included in article 39(2) of the BBNJ agreement, comes in. The BBNJ COP, in fact, alternatively and additionally to the previous scenario, ‘may conduct a strategic environmental assessment of an area or region to collate and synthesize the best available information about the area or region, assess current and potential future impacts and identify data gaps and research priorities’.⁹⁵

It is unclear whether this COP-led regional SEA would have any legal implication for the SEAs States may decide to conduct, individually or cooperatively, for plans or programmes—say, in case of discrepant outcomes—and what mechanisms of coordination the COP may decide to develop. There is no mention of any such mechanism in the text of article 39, but it seems reasonable that such mechanisms would be necessary to avoid or handle potential conflicts between the two types of SEA. It also stands to reason that these regional SEAs would necessarily provide a context within which individual or joint SEAs assessing plans and programmes, need to be located and calibrated. Furthermore, a regional SEA would need to set the framework and operational constraints for individual EIAs States may need to conduct for activities subject to the obligation of either screening⁹⁶ or full EIA.⁹⁷ An additional question relates to how an SEA may fit within the context of both article 5 and article 29. These articles regulate the relationship between the BBNJ agreement and other IFBs and, respectively, the relationship between EIAs under part IV of the BBNJ agreement and EIA processes under other relevant IFBs. SEA is not specifically mentioned in article 29, and questions could be raised as to whether it falls under its scope. It is conceivable that SEA is included under article 29(1), as one of the standards and/or guidelines to be developed by the STB pursuant to article 38.⁹⁸ Alternatively, it could be included under article 29(2), as one element to be included in the mechanism the COP ‘shall develop’ to facilitate collaboration between the STB and other relevant IFBs. The collaboration in

question is a duty of the STB under article 29(3). It is possible to speculate as to whether some of the provisions regarding EIAs may be applicable analogically to SEA, but that would exceed the scope of this paper.

What is certain, however, is that under article 5, which sets out that the BBNJ agreement shall be interpreted and applied in a way that, whilst not undermining other relevant IFBs, also ‘promotes coherence and coordination’ with such IFBs. The promotion of coherence and coordination, also across relevant legal regimes, seems precisely to be the overall goal of undertaking an SEA.

Regardless, and considering how regional SEA is a crucial mechanism to ensure a comprehensive ecosystem-based conservation approach to BBNJ, a much clearer framing of the relationship between the regional and the plan- or programme-oriented SEA would have been useful and will probably be left to the COP to draw out and articulate.

4 | TOWARDS EFFECTIVE IMPLEMENTATION OF THE ECOSYSTEM APPROACH IN THE BBNJ AGREEMENT

This section will draw out some reflections based on the preceding analysis that may help shape the concrete and effective implementation of the EA in the context of the BBNJ agreement. This analysis shall consider several important points that remain in the text and that will need to be operationalised once the treaty bodies start their work. The analysis will focus primarily on SEA and on its potential role to establish an ecosystem-based framework within which the BBNJ bodies may develop and coordinate EA in the context of ecologically sound spatial coordinates.

SEA constitutes arguably a crucial element for the effective implementation of the EA in ABNJ, to the extent that it offers the opportunity to ground the work to be carried out under the BBNJ agreement in a systemic context through, for example, a set of regional ecosystem maps that will help map, as it were, not only the potential cumulative impacts of human activities in areas beyond national jurisdiction, but also relevant responses such as the adoption of ABMTs and MPAs, both as individual measures and as networks.

SEAs could have certainly been articulated more explicitly as an integral element for the operationalisation of EA, for example by way of establishing a direct textual link between article 7 and article 39, to ground EA in the operative part of the agreement text. However, at this point, the implementation phase is a critical consideration. Further, how the BBNJ agreement bodies will carry out their mandate and fill the room opened by possible productive ambiguities in the text is a further important consideration. In this respect, as we have seen, drawing out ‘unexpressed norms’ through a systematic interpretation of the BBNJ agreement in light of article 7 may play an important role. The STB, thus, in discharging its mandate to develop standards or guidelines for the conduct of SEAs, could, and should, take the opportunity to prepare a map of LMEs to form the basis for SEAs. This should be done by establishing mechanisms for

⁹³LME LEARN, ‘The Large Marine Ecosystem Approach: An Engine for Achieving SDG 14’ (2017) <https://www.undp.org/sites/g/files/zskgke326/files/publications/Large_Marine_Ecosystem_Approach_22062017.pdf>.

⁹⁴See e.g. K Sherman, ‘A modular strategy for recovery and management of biomass yields in large marine ecosystems’ in E Levner, I Linkov, and J-M Proth (eds) *Strategic Management of Marine Ecosystems* (Springer 2005); A Duda, ‘Strengthening global governance of Large Marine Ecosystems by incorporating coastal management and Marine Protected Areas’ (2016) 17 *Environment and Development* 249; LME LEARN ‘Transboundary LME Governance: The Importance of Political Commitment for Large Marine Ecosystem Management’ (2020) <<https://iwlearn.net/resolveuid/58b4f8bb-42dd-4ca6-9450-7546190e0f43>>; K Sherman, ‘Large marine ecosystems’ in J K Cochran, J H Bokuniewicz, and P L Yager (eds) *Encyclopaedia of Ocean Sciences* (3rd edn, Elsevier 2019); N Degger et al, ‘Navigating the Complexity of Regional Ocean Governance Through the Large Marine Ecosystems Approach’ (2021) 8 *Frontiers of Marine Science* 1.

⁹⁵BBNJ agreement, art 39(2), emphasis mine. There had been significant back and forth on the specific language to use to frame the obligation of the COP in relation to SEA, with various alternatives having been included in brackets up to IGC5 (e.g. may/shall/shall consider), see (UNGA, ‘Compilation of outcomes of small group work submitted after the issuance of the Refreshed draft’ (n 80) 4.

⁹⁶BBNJ agreement (n 3) art 30(1).

⁹⁷ibid art 28.

⁹⁸Which states that the STB ‘shall develop standards or guidelines’ on, among other things ‘strategic environmental assessment’, BBNJ agreement, art 38(1)(g).

cooperation with relevant global and regional scientific advice bodies and institutions, as well as through cooperative arrangements with relevant expert societies and scientific and academic bodies and institutions. Such a map would form the geographical and ecological basis for developing regional SEAs. With the view of preparing one such map, the STB would also need to consider, as appropriate, relevant local, traditional and Indigenous knowledge, an important element in the BBNJ agreement across all of the four topics,⁹⁹ and also more in general.¹⁰⁰ Any such standard or guideline developed would then need to be considered and subsequently adopted by the COP, as stipulated in article 38(2) and, once adopted, would set the ecosystemic and spatial framework for any SEA to be carried out through one of the two pathways set out in article 39, that is by either the initiative of one or more Parties, or of the COP.

The reason for these considerations is that as SEAs are key tools for the effective implementation of the EA, there should be a concrete anchoring in relation to the *spatial* coordinates within which the EA should be implemented. LMEs, as mentioned, represent the current frontier of the EA in an oceanic context.¹⁰¹ Interestingly, the very idea of LMEs—understood as ‘regional units for the conservation of living marine resources’¹⁰²—was developed having in mind an EA to conservation, which some authors have found already, if implicitly, contained in UNCLOS.¹⁰³ Whilst most LMEs are located in coastal areas and thus are within national jurisdiction,¹⁰⁴ there are cases where LMEs are at least in part located in areas beyond national jurisdiction—and regardless, the conservation of biodiversity in areas beyond national jurisdiction will arguably require, for an appropriate EA, a map of LMEs in areas beyond national jurisdiction. The Arctic Council, to mention a regional example, has introduced LMEs in its guidelines for the implementation of EA in an arctic context.¹⁰⁵ Whilst recognising the variable spatial scales at which EA must be implemented, the Arctic Council has indeed developed its own set of LMEs, following the principle that EA ‘is place-based’.¹⁰⁶ These fixed geographical areas,

which should form the spatial basis of ecosystem-based conservation, include, importantly, marine areas beyond national jurisdiction.¹⁰⁷

Against this—admittedly brief—background, it stands thus to reason that LMEs be introduced as the key spatial tool for implementing the EA in an effective manner in the BBNJ agreement. The reason is that the spatial delineation of ecosystems is ‘fundamental to implementing EA’ as it is crucial to know and delineate the ‘geographic scope over which the negative consequences of human activities are to be identified, assessed, and addressed’.¹⁰⁸ In this sense, utilising LMEs as the spatial framework for the development of SEAs would also go a long way to adhere to the duty to rely on the best available science included throughout the text of the BBNJ agreement.¹⁰⁹

One such broad and ecosystem-based regional outlook would also facilitate cooperation and coordination with IFBs in each region and would thus be an important element towards the achievement of coordinated ecosystem-based governance, for example, by way of the consultation mechanism provided for in article 22(a), discussed in Section 4.2. These consultations might give new energy to initiatives, such as the Collective Arrangement,¹¹⁰ and may also be an important mechanism to coordinate with scientific advice bodies—ICES, or the Arctic Council, for example—on the basis that such bodies can offer crucial knowledge required for an effective implementation of the EA, which again in turn would ensure that the application of the BBNJ agreement reflects the duty of basing conservation decisions on the best available science.¹¹¹

The consultation mechanism in article 22(a), whilst facilitating this important global and regional coordination role for the BBNJ bodies, would additionally facilitate ecosystem-based coordination *among* IFBs that otherwise operate in a jurisdictionally fragmented ocean space.¹¹² This coordination would be relevant with regard to both the adoption of ABMTs and MPAs and the coordination between those adopted under the BBNJ agreement and those adopted under other IFBs, and with regard to EIA, whereby EIAs carried out under other IFBs could be usefully grounded in a broader regional SEA framework. To achieve this result, an ecosystem-based SEA is indeed a crucial tool, also *vis-à-vis* sectoral and regional IFBs, some of which already include EA as one of the key conservation approaches.¹¹³

⁹⁹For example under arts 13, 19(3), 19(4)(j), 24, 31, 37 and 44 of the BBNJ agreement (n 3).

¹⁰⁰For example under art 7(j) of the BBNJ agreement (n 3).

¹⁰¹See especially K Sherman, ‘The Large Marine Ecosystem Concept: Research and Management Strategy for Living Marine Resources’ (1991) 1 *Ecological Applications* 349–360 and K Sherman, ‘Achieving Regional Cooperation in the Management of Marine Ecosystems: The Use of the Large Marine Ecosystem Approach’ (1995) 29 *Ocean & Coastal Management* 165, 168; see also, for recent applications of the concept of LMEs, K Gjerde and S Yadav, ‘Polycentricity and Regional Ocean Governance: Implications for the Emerging UN Agreement on Marine Biodiversity Beyond National Jurisdiction’ (2021) 8 *Frontiers in Marine Science* 1; A Westholm and G Argüello, ‘Dynamic Ocean Management in Areas Beyond National Jurisdiction’ (2023) 54 *Ocean Development & International Law* 448.

¹⁰²Sherman 1991 (n 99) 349.

¹⁰³Sherman 1991 (n 99) 350. See also, on the implicit inclusion of EA in UNCLOS provisions, especially by way of articles 192, 194(5) and 197, M Belsky, ‘Using Legal Principles to Promote the “Health” of an Ecosystem’ (1995) 3 *Tulsa Journal of Comparative and International Law* 183, and more broadly, De Lucia 2022a (n 4). But see also Guilhon et al (n 64).

¹⁰⁴Indeed, Sherman’s focusing on living marine resources, and esp. fisheries, observes how “Nearly 95% of the usable annual global biomass yield” is produced within the EEZ of coastal States, Sherman 1991 (n 99) 350.

¹⁰⁵PAME, ‘Large Marine Ecosystems (LMEs) of the Arctic area. Revision of the Arctic LME Map’ (PAME 2013) <https://www.pame.is/images/03_Projects/EA/LMEs/LME_revised.pdf> (PAME, ‘LMEs of the Arctic area’).

¹⁰⁶Arctic Council Ecosystem Based Management Expert Group, ‘Definitions and Principles for EBM in the Arctic’ (ACSAO-SE03 Haparanda, Doc 3.7a, 2012) 5, 8.

¹⁰⁷PAME, ‘LMEs of the Arctic area’ 1.

¹⁰⁸*Ibid.*

¹⁰⁹See generally art 7(i) of the BBNJ agreement (n 3), but also throughout, and especially arts 19(3) and 24(3) under Part III and 31 and 37 under Part IV.

¹¹⁰NEAFC and OSPAR, ‘Collective Arrangement between Competent International Organisations on Cooperation and Coordination regarding Selected Areas in Areas beyond National Jurisdiction in the North-East Atlantic’ (OSPAR Agreement 2014-09 (Update 2018 Annex 2, 2021 Annex 1b, 2023 Annex 1a and 1b)). The Collective Arrangement is aimed at facilitating “cooperation and coordination on area based management” in the region, <<https://www.ospar.org/about/international-cooperation/collective-arrangement>>.

¹¹¹The potential role of “learning” through “collaboration with organizations already familiar with” the EA was specifically pointed out, in relation to the integration of EA in the ISA Regulation, by Guilhon et al (n 27).

¹¹²But see de Oliveira (n 30).

¹¹³Several RFMOs have integrated EA in their legal basis or in their practice. OSPAR also aims at achieving its objectives through an ecosystem-based approach, and to that purpose has tried to develop a regional framework comprised of all relevant global and regional sectoral bodies that have competence within the competence area of OSPAR, through the so-called Collective Arrangement.

Another final consideration, and one which can be illustrated by the existing maps of LMEs produced by the Arctic Council, is that an EA to conservation, precisely because it aims at achieving particular conservation goals for specific ecosystems and ocean spaces regardless of jurisdictional fragmentation, points to a necessary and unavoidable coordination of conservation measures and governance arrangements both beyond and *within* national jurisdiction. This inter-connection, and the related need for active participation of coastal States in decision-making, as noted by Mossop and Schofield, was singled out during discussions in the course of the BBNJ negotiations.¹¹⁴ Indeed, adjacency has been utilised by coastal States to claim preferential rights or responsibilities in areas beyond national jurisdiction that are adjacent to their exclusive economic zone.¹¹⁵

It stands to reason that adjacency should be considered the basis for special obligations, and not only preferential rights. This would entail modelling the relation between measures to be adopted for areas beyond national jurisdictions and measures to be adopted in areas within national jurisdiction on the basis of *mutual* compatibility and not only of the interests of adjacent coastal states to safeguard their interests vis-à-vis a measures adopted under the BBNJ agreement. Such a notion is already contained in the Fish Stocks Agreement, and more precisely in its article 7, and is also a general corollary of being party (or even signatory) to a treaty, thus being required not to act in a manner that may defeat the object and purpose of such treaty. As discussed elsewhere, 'compatibility helps focus on an integrated and ecosystem-oriented legal framework that reflects contemporary ecological concepts, such as ocean connectivity, rather than an outdated and fragmented approach to ocean governance'.¹¹⁶

Ultimately, to achieve the goals of an EA to biodiversity conservation, it is necessary to integrate ecological considerations and jurisdictional competences so as to ensure a coherent and comprehensive legal framework that can facilitate the adoption of coherent and harmonised measures for a given region or ecosystem. It is also important that such considerations underpin the work of the COP. Maintaining the *integrity* of ecosystems requires the *integration* of jurisdictionally fragmented spaces on the basis of the best available science and scientific *information*. This will facilitate giving effect to the key concepts underpinning EA, as outlined in Section 3. Provisions such as article 39 on SEA may offer to do just that, by way of facilitating an ecosystem-based framework for adopting individual measures within well-defined and ecologically sound spatial coordinates.

5 | CONCLUSIONS

The new BBNJ agreement was finally adopted in June 2023 and was recently opened for signature. The response so far has been

important, with over 80 countries having signed within 48 h from the opening and a total of 104 signatures and 13 ratifications to date.¹¹⁷ Whilst the signatures are 'simple signatures', and as such do not constitute a promise nor engender a legal duty to ratify the agreement, they do carry certain interim obligations, codified in article 18 of the Vienna Convention on the Law of Treaties.¹¹⁸ These obligations include the duty not to defeat the object and purpose of the treaty until either the treaty enters into force, or 'until it shall have made its intention clear not to become a party to the treaty'.¹¹⁹

The adoption of the BBNJ agreement also means, importantly, that now that the text is finalised, there is the opportunity to explore and evaluate the Agreement's contents and assess whether some key objectives have been achieved, and to what extent. This paper has focused on the EA, its integration in the text of the treaty and the limits and possibilities of such inclusion.

The paper, after outlining in brief the notion of EA, started its analysis from the inclusion of EA as a guiding principle of the entire BBNJ agreement (article 7). Subsequently, the paper has reviewed the inclusion of relevant provisions for the operationalisation of EA in the other relevant parts of the agreement, namely parts III and IV, dedicated to ABMTs and MPAs and EIAs, respectively.

As there exists a multiplicity of understandings of the EA¹²⁰ and of its operational and normative implications,¹²¹ it is crucial to assess the concrete operational potential disseminated in the BBNJ agreement. The potential role of the inclusion in article 7 in terms of interpretive guidance in fact, can only be assessed against the integration of EA in the text of the agreement. The current text, this paper has shown, includes some crucial elements for the effective implementation of EA. Importantly, the text remains open for further operationalisation, so long as the EA is fully and comprehensively taken into consideration at every step of the way during the interpretation, application of the BBNJ agreement and, crucially, the implementation phase, particularly through the work of the BBNJ bodies. Article 7 can thus be mobilised in concrete ways to interpret and apply key formulations of the BBNJ agreement, under both part III and part IV. Here, a crucial role can be played by articles 38 and 39, dealing with SEA.

Whilst there remains scope for a broader and deeper analysis, the paper highlighted some areas where productive potential can be already recognised, particularly in relation to the development of SEAs as spatial tools to anchor the conservation of biodiversity in BBNJ on an ecosystem basis. SEA may indeed serve as a regional framework for the adoption of networks of MPAs both under the BBNJ agreement and under relevant IFBs.

Indeed, it will be to a significant extent up to the BBNJ bodies to develop mechanisms and operationalise provisions that, whilst

¹¹⁷As of 7 October 2024. For current status see the relevant UN Treaty Collection page: <https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtsg_no=XXI-10&chapter=21&clang=en>.

¹¹⁸Vienna Convention on the Law of Treaties (adopted 23 May 1960, entered into force 27 January 1980) 1155 UNTS 331.

¹¹⁹Vienna Convention on the Law of Treaties, art 18(a). See also A Rydberg, *The Duty to Safeguard the Object and Purpose of Pending Treaties. A Closer Examination of Article 18 VCLT*, (Brill 2024).

¹²⁰De Lucia (n 1).

¹²¹De Lucia 2022a (n 4).

¹¹⁴J Mossop and C Schofield, 'Adjacency and Due Regard: The Role of Coastal States in the BBNJ agreement' (2020) 122 *Marine Policy* 1.

¹¹⁵ibid; see also J Su, 'The Adjacency Doctrine in the Negotiation of BBNJ: Creeping Jurisdiction or Legitimate Claim?' (2021) 52 *Ocean Development and International Law* 41.

¹¹⁶De Lucia 2022a (n 4).

not entirely articulating a comprehensive framework for an EA of marine biodiversity in areas beyond national jurisdiction, offer greater potential than that immediately available in the single provisions. This paper offered some recommendations, largely embedded in the analysis. MPAs can become within an LME context a crucial tool for the implementation of the EA, but only to the extent that they are considered not singularly but from a comprehensive ecosystem perspective and across jurisdictional boundaries. In this sense, regional SEAs, developed under the guidance of the STB pursuant to articles 38 and 39, could become a major contribution of the new BBNJ agreement towards a coordinated, holistic, ecosystem-based biodiversity governance in areas beyond national jurisdiction, in this way also addressing the problems that 'lack of consensus' about what EA is and how to implement it may impact, negatively, its operationalisation.¹²² Indeed, it could be the mechanism through which organising and coordinating not only human activities and their cumulative impacts but also spatial measures under part III.

DATA AVAILABILITY STATEMENT

The author confirms that the data supporting the findings of this study are available within the article.

ORCID

Vito De Lucia  <https://orcid.org/0000-0002-8099-0029>

AUTHOR BIOGRAPHY

Vito De Lucia is a full professor of (international) law at the Faculty of Law at UiT (The Arctic University of Tromsø) and the director of the Norwegian Centre for the Law of the Sea (NCLOS). His most immediate research interests are located at the intersection of (critical) legal theory, international law and ecology. His current research agenda focusses on ocean commons, on the conservation of marine biodiversity in areas beyond national jurisdiction and on Arctic governance.

How to cite this article: De Lucia V. The integration of the ecosystem approach in the BBNJ agreement—An initial assessment of limits and opportunities. *RECIEL*. 2024;33(3): 554-564. doi:[10.1111/reel.12576](https://doi.org/10.1111/reel.12576)

¹²²Guilhon et al (n 27).