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RECEIVED 08 March 2025

ACCEPTED 25 March 2025

PUBLISHED 16 April 2025

CITATION

Wang Y and Pan X (2025) Application of the environmental impact assessment provisions under the BBNJ Agreement in high seas marine protected area: challenges and suggestion.
Front. Mar. Sci. 12:1589936.
doi: 10.3389/fmars.2025.1589936

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Application of the environmental impact assessment provisions under the BBNJ Agreement in high seas marine protected area: challenges and suggestion

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Once the BBNJ Agreement enters into force, its environmental impact assessment (EIA) provisions will apply to high seas marine protected areas (MPAs). This paper examines current treaties and practices within four high seas MPAs and finds that the EIA provisions established by United Nations Convention on the Law of the Sea (UNCLOS) are ambiguous. The BBNJ Agreement, however, reflects a strong commitment to improving EIA laws and practices in Areas Beyond National Jurisdiction (ABNJ). Despite this progress, several challenges may arise in implementing the BBNJ Agreement's EIA provisions in high seas MPAs. These include potential fragmentation when members of the international frameworks or bodies (IFBs) of high seas MPAs do not ratify the agreement, uncertainties surrounding the "not undermine" proviso, and ambiguities in the "due regard" principle. Additionally, the Clearing-House Mechanism (CH-HM) under the BBNJ Agreement requires further development to cooperate with the institutions of high seas MPAs, and the fragmented EIA standards, subjects and procedures for high seas MPAs complicate the determination of equivalency with those under the BBNJ Agreement. Moreover, the EIA provisions for existing high seas MPAs appear limited. It is worth mentioning that the practices of the EIA in high seas MPAs may not be sufficient. This paper offers several recommendations for the above challenges: encouraging non-Parties to apply the EIA provisions under the BBNJ Agreement, putting forward a possible interpretation or understanding for the "not undermine" proviso and "due regard", developing the CH-HM through the BBNJ Secretariat, and developing EIA guidelines for high seas MPAs, supported by the Scientific and Technical Body set by the BBNJ Agreement. Furthermore, members of the IFBs of high seas MPAs should enhance their EIA practices to ensure effective application of the BBNJ Agreement's provisions in the future.

KEYWORDS

environmental impact assessment, marine protected areas, high seas, BBNJ agreement, conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction

1 Introduction

Environmental impact assessment (EIA) refers to “considering the likely environmental consequences of a proposed action and, in light of that knowledge, identifying possible responses” (Morgan, 1998). It typically involves several stages: screening to determine whether a proposed activity is likely to have significant environmental impacts; scoping to identify key issues relevant to the EIA; considering alternatives; establishing baseline environmental conditions, conducting EIAs, and taking mitigation measures; developing an environmental management plan; drafting the EIA report; facilitating public participation; finalizing the EIA report; reviewing the EIA report and making decisions; and informing the public of the final decision (Rathi, 2023).

EIA is the primary tool used by regulatory authorities in various countries to ensure that projects meet environmental protection objectives during the approval process (Morgan, 2012). It is also widely regarded as an essential tool for decision-making in most countries (Naser, 2015). Moreover, EIA is considered a process for implementing the obligations and principles of international environmental law, including the duty to prevent environmental harm and the duty to cooperate (Craik, 2020).

The 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), which was adopted in 2023, provides detailed provisions for the EIA. Article 1 of the BBNJ Agreement defines EIA as the procedure for identifying and assessing the potential effects of an activity to support decision-making. According to this definition, the EIA applies to proposed activities, with the purpose of assessing the extent of their environmental impacts and deciding whether to proceed with the activities based on the EIA reports. The EIA is of great significance for the protection of biodiversity in areas beyond national jurisdiction (ABNJ). As of March 2025, 111 countries have signed the BBNJ Agreement, and 18 countries have made ratification (United Nations Treaty Collection, 2025b). Given this, the entry into force of the BBNJ Agreement is highly probable rather than a mere pipe dream.

Article 3 of the BBNJ Agreement regulates that the BBNJ Agreement applies in the ABNJ. According to its article 1, the ABNJ include the high seas and the Area. Besides, this article prescribes the definition of the marine protected area (MPA). In the context of the BBNJ Agreement and its provisions for EIA, it is important to consider the role of high seas MPAs. These areas refer to MPAs established based on international treaties that have effects in the ABNJ (Wang and Pan, 2023). According to this definition, there are four high seas MPAs: the Pelagos Sanctuary, the North-East Atlantic MPAs (NEAMPA), the South Orkney Islands Southern Shelf MPA (SOISS MPA) in the Antarctic, and the Ross Sea Region MPA (RSr MPA) in the Antarctic (Wang and Pan, 2023). These high seas MPAs are playing an increasingly important role in ocean

governance (Scott, 2012). They have been established to preserve specific marine ecosystems, each with distinct conservation priorities. The Pelagos Sanctuary focuses on safeguarding marine mammals and their habitats in the Mediterranean Sea (Pelagos Agreement, 2025). The SOISS MPA is dedicated to protecting critical feeding habitats for species such as albatrosses, petrels, and penguins (Wang and Pan, 2023). The RSr MPA primarily implements conservation measures aimed at sustaining fishery resources (CCAMLR, 2021). The conservation objectives of the NEAMPA include maintaining the ecological stability of high seas water bodies (Wang and Pan, 2023). Therefore, the international frameworks or bodies (IFBs) of these high seas MPAs also impose obligations on members regarding EIA. Article 3 of the BBNJ Agreement stipulates that it applies to the ABNJ. Once it enters into force, its EIA provisions will extend to high seas MPAs. Scholars have examined the EIA provisions of the BBNJ Agreement from multiple perspectives. The internationalization of EIAs sparked intense debate among delegations during the BBNJ negotiations (Hassanali, 2021). The practices of international tribunals have notably influenced the law-making process, particularly regarding the thresholds for EIAs and certain procedural requirements (Song, 2022). Following the adoption of the BBNJ Agreement, its EIA provisions may have significant implications for the EIA procedures applied in the Arctic (Tanaka, 2024) and will play a crucial role in the establishment of MPAs (Duan and Shen, 2024). However, the internationalization of its EIA provisions is likely to encounter several challenges (Li and Zhang, 2024). Additionally, there is no detailed research analyzing the applicability of the BBNJ Agreement's EIA provisions to high seas MPAs. This paper's central argument is that while the BBNJ Agreement marks a significant step forward in improving the legal framework for EIAs in ABNJ, its successful implementation in high seas MPAs will depend on addressing several challenges. This paper seeks to analyze the challenges of the application of the BBNJ Agreement's EIA provisions to high seas MPAs and to propose recommendations for its improvement.

In terms of research methodology, this paper will use the doctrinal approach. It will analyze the provisions of the BBNJ Agreement and the existing international legal framework for EIA in high seas MPAs, integrating relevant theories of international law of the seas. Additionally, the authors will collect and analyze the practices of EIA in high seas MPAs. Specifically, we will search the official databases of high seas MPAs for records of EIAs and monitoring projects conducted within these MPAs, gathering information such as the timing, location, and participating countries of these projects.

This paper will be divided into three parts. The first part will provide an overview of the existing EIA system for high seas MPAs. The second part will analyze the challenges of applying the BBNJ Agreement's EIA provisions to high seas MPAs. The third part will offer recommendations to enhance the application of the BBNJ Agreement's EIA provisions to high seas MPAs once the BBNJ Agreement enters into force.

2 Main treaty provisions on EIA in high seas MPAs

2.1 EIA provisions in the law of the sea

2.1.1 United nations convention on the law of the sea

According to article 206 of UNCLOS, if a State has reasons to believe that activities planned within its jurisdiction or control could lead to substantial pollution or significant and harmful alterations in the marine environment, it must, to the extent possible, evaluate the potential impacts of those activities on the marine environment. Additionally, the results of these assessments should be reported as outlined in article 205 of UNCLOS (UNCLOS, 1982, Art 206). However, article 205 of UNCLOS is general, encompassing all aspects of the marine environment without specifying detailed methods or procedural requirements for EIA (Tanaka, 2024). The article also obliges States to publish reports to “competent international organizations” (UNCLOS, 1982, Art 205). However, it does not specify which organizations these are, nor does it provide a timetable for submitting the reports.

The concept of introducing the EIA emerged in the early stage of the negotiations of UNCLOS and seemed to face no significant opposition from any country (Nordquist et al., 1990). The early drafts of the EIA provisions required that if a State’s activities were likely to cause significant changes to the marine environment, an EIA had to be submitted to “relevant international organizations” (Nordquist et al., 1990). The draft provisions linked the preparation of the EIA with the obligation to consult with States which may be potentially affected, aiming to prevent harm to other interests and protect the environment from pollution. The final version of article 206 reflects the structure of the initial proposal but adds several important qualifications that provide the proposing State with a certain degree of discretion. First, it requires “reasonable grounds” to believe that the activity may cause significant harm to the marine environment. Second, it tempers the obligation by using the term “as far as practicable”.

In practice, the proposing State may be granted some discretion in determining whether there are “reasonable grounds”, but this is not much different from the deference typically given to domestic agencies in deciding whether a significant impact is likely to occur (Craik, 2008). The second condition only arises once the threshold is met, meaning it does not exempt a state from the obligation to conduct an EIA but affects the level of detail required in the EIA. Additionally, article 206 does not use the term “EIA”, nor does it refer to an environmental impact statement as in the original draft provisions. Instead, by referring to the more ambiguous term “assessment”, article 206 does not mandate specific obligations respecting EIA but allows States to make such decisions based on their domestic legislation. International tribunals have already found this. In *Pulp Mills on the River Uruguay* (Argentina v. Uruguay) case, the International Court of Justice (ICJ) noted that general international law does not delineate the scope and content of EIA (International Court of Justice, 2010). The International

Tribunal for the Law of the Sea (ITLOS) goes further that article 206 of UNCLOS provides only limited guidance on the scope and content of EIAs (International Tribunal for the Law of the Sea, 2011). The vague language in respect of the obligation to conduct EIAs considers the capacity constraints of developing countries. At the time of UNCLOS’s negotiation, the capacity of developing countries to conduct EIAs was, in many cases, lower than that of developed countries (Craik, 2008). The gap in capacity between developed and developing countries persisted during the negotiations of the BBNJ Agreement. During these negotiations, some small island developing States of the Caribbean Community (CARICOM) still lacked the capacity and expertise to conduct projects in ABNJ (Hassanali, 2023). In fact, even some developed countries find it challenging to conduct EIAs in ABNJ (Sebuliba, 2024). During the negotiations of the BBNJ Agreement, some developed countries advocated for reduced procedural burdens in the EIA process and greater autonomy (Sebuliba, 2024). The vague language in UNCLOS appears to be reasonable to some extent because it still reflects the current realities of disparities in capacities among countries. However, the absence of detailed rules for steps and requirements for EIA obligations can lead to ambiguity, resulting in international disputes (Song, 2022). Although these disputes do not involve high seas MPAs, they reveal an important issue. International frameworks or bodies (IFBs) governing high seas MPAs must not overlook the ambiguous language regarding the obligation to conduct EIAs. Such ambiguity may lead to international disputes in the future.

2.1.2 The BBNJ agreement

In addition to the definition of the EIA provided in article 1, the provisions related to EIA are stipulated in articles 27 to 39 of the BBNJ Agreement.

Article 28 of the BBNJ Agreement establishes the obligation of Parties to conduct EIA. The subjects of the EIA are the Parties, and the objects of the assessment are activities planned to be conducted by the Parties under their jurisdiction or control in ABNJ. The timing of the EIA is before the planned activity is carried out. Article 30 of the BBNJ Agreement establishes a clear threshold for initiating a screening process. If a proposed activity is likely to have more than a “minor or transitory effect” on the marine environment, or if the potential effects are uncertain or not well understood, the Party responsible for the activity must carry out a screening process in accordance with article 31 of the BBNJ Agreement. This screening is to be guided by the criteria outlined in article 30 of the BBNJ Agreement.

It is noteworthy that the EIA provisions under the BBNJ Agreement may apply to fishing activities. Article 10(2) of the BBNJ Agreement specifies that the provisions in Part II of the BBNJ Agreement do not apply to fish or fisheries. However, this does not affect the applicability of the EIA provisions under the BBNJ Agreement to fish or fisheries, as the EIA requirements are outlined separately in Part IV of the BBNJ Agreement. Article 29 of the BBNJ Agreement establishes a series of mechanisms to better align the EIA provisions at the global, regional, sub-regional, and

sectoral levels. It is important to note that the EIA provisions under the BBNJ Agreement overlap with those for high seas MPAs. The conduct of certain activities requires EIA, and after activities are initiated, continued monitoring of the relevant activities is necessary (Duan and Shen, 2024). Parties are expected to encourage other IFBs to apply the EIA standards and guidelines established under article 38 of the BBNJ Agreement when they are formulated (BBNJ Agreement, 2023, Art 29(1)). Cooperation mechanisms should be established to coordinate with IFBs (BBNJ Agreement, 2023, Art 29(2)). When developing standards and guidelines based on article 38 of the BBNJ Agreement, collaboration with IFBs is essential (BBNJ Agreement, 2023, Art 29(3)). Information exchange is necessary for activities already assessed under existing EIA mechanisms (BBNJ Agreement, 2023, Art 29(5)). Part IV of the BBNJ Agreement requires Parties to promptly disclose and publish information on proposed activities and their potential environmental impacts. It also encourages other Parties to participate in discussions. However, the final decision-making authority remains with the State proposing the activities.

Compared to the provisions under UNCLOS, the EIA obligations under the BBNJ Agreement are clearer, more specific, and more explicit. Furthermore, the BBNJ Agreement dedicated a Scientific and Technical Body (STB) as an essential participant in the EIA process, thereby enhancing the legal and scientific integrity of EIA activities.

2.2 EIA provisions for existing high seas MPAs

According to article 26 of the VCLT, once a member of the IFBs of high seas MPAs ratifies the BBNJ Agreement, it becomes obligated to adhere to both the EIA rules already applicable to high seas MPAs and the EIA provisions established by the BBNJ Agreement. Therefore, it is necessary to introduce EIA provisions for these high seas MPAs.

2.2.1 The Pelagos Sanctuary

The Pelagos Sanctuary spans the territorial waters of three countries as well as a portion of the high seas, with more than half of its area situated in ABNJ (Wang and Pan, 2023). This paper will focus exclusively on its high seas area.

The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) serves as the primary instrument for Mediterranean countries in implementing the 1992 Convention on Biological Diversity (CBD), focusing on the sustainable *in-situ* management of coastal and marine biodiversity (SPA/RAC, 2024). Article 3(2) of the Protocol mandates that the Parties either directly or in cooperation with competent international organizations protect biodiversity. Additionally, paragraph 5 requires the Parties to monitor the components of biodiversity as described in paragraph 3 and to identify and monitor the processes and activities that cause or are

likely to cause “significant adverse impact on the conservation and sustainable use of biodiversity”. Regarding the coordination mechanism, article 6 obliges the Parties to enhance the application of other protocols related to the CBD and other relevant treaties to which they are parties.

Article 17 of the Protocol describes the EIA process, stating that during the planning phase of decisions related to industrial and other projects and activities that may have a substantial impact on protected areas, species, and their habitats, Parties must assess and consider the potential direct or indirect, immediate or long-term impacts, including cumulative effects of the proposed projects and activities. As one of the Specially Protected Areas of Mediterranean Importance (SPAMIs), the Pelagos Sanctuary is subject to these EIA provisions.

2.2.2 The NEAMPA

Within the NEAMPA regime, there are eight MPAs situated in ABNJ (OSPAR Commission, 2025). For the purposes of this paper, these high seas MPAs will be collectively referred to as “NEAMPA” since they are governed by the same convention and subject to identical EIA provisions.

The EIA provisions for the NEAMPA are written in Annex IV, Annex V, and Appendix 3 of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention). Article 1 of the Annex IV obliges Contracting Parties to oversee activities or natural and human-induced inputs that may impact the quality of the marine environment and the consequences of such activities and inputs. Article 3 of Annex IV outlines that the OSPAR Commission must (a) establish and implement joint monitoring and assessment programs, create codes of practice for participants in these monitoring programs, and endorse the presentation and interpretation of their outcomes; (b) conduct assessments considering the findings from relevant monitoring and research, alongside data on substance or energy inputs into the marine area provided under other Annexes of the OSPAR Convention, as well as any other pertinent information; (c) seek, when necessary, advice or support from competent regional and international organizations and bodies to integrate the latest scientific research; (d) collaborate with competent regional and international organizations in conducting quality status assessments. Appendix 3 sets forth the criteria for evaluating “human activities” as follows: a. the scope, intensity, and duration of the human activity in question; b. the existing and potential negative impacts of the activity on particular species, communities, and habitats; c. the existing and potential negative impacts of the activity on specific ecological processes; d. the irreversibility or persistence of these impacts. However, it is noteworthy that these criteria may not be comprehensive or equally significant when evaluating a specific activity according to Appendix 3.

2.2.3 The SOISS and RSr MPAs

Article 3 of the Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol) mandates that activities within

the Antarctic Treaty area must be planned and executed based on adequate information to enable prior evaluation and informed decisions regarding their potential effects on the Antarctic environment. A central feature of the EIA provisions for the SOISS and RSr MPAs is the “tiered approach” (Hassanali, 2021). Article 8 of the Madrid Protocol mandates that Parties conduct EIA of their Antarctic activities, specifying three levels of assessment based on the potential impacts of each activity. The EIA procedures are detailed in Annex I of the Madrid Protocol. If a proposed activity is determined to have less than minor or temporary impacts during the preliminary assessment phase, it may proceed. If an activity is found to have “a minor or transitory impact”, an Initial Environmental Evaluation (IEE) must be prepared (ANNEX I of the Madrid Protocol, 1991, Art 2). If the IEE or other method indicates a potential impact beyond minor or transitory, a Comprehensive Environmental Evaluation (CEE) must be conducted (ANNEX I of the Madrid Protocol, 1991, Art 3). The draft CEE is made public, reviewed by the Committee for Environmental Protection (CEP), and then recommended by the Antarctic Treaty Consultative Meeting (ATCM) (ANNEX I of the Madrid Protocol, 1991, Art 3). Comments from other Parties and the ATCM must be addressed in the final CEE, which forms the basis for decisions on whether and how to proceed with the activity (ANNEX I of the Madrid Protocol, 1991, Art 3). The preparation procedures for the assessment are described in the EIA Guidelines, with the latest version adopted by the 39th ATCM in Resolution 1 (2016) (Secretariat of the Antarctic Treaty, 2016).

As mentioned above, article 30 of the BBNJ Agreement sets a threshold that triggers an EIA screening if an activity may have “more than a minor or transitory effect” on the marine environment. This language is similar to that of the Madrid Protocol, but the BBNJ Agreement lacks the same tiered approach. Instead, if the threshold is met, a full EIA is required.

Currently, all CCAMLR members are Parties to the Madrid Protocol (Secretariat of the Antarctic Treaty, 2024). Given this, the EIA provisions apply to the SOISS and RSr MPAs. All activities in the Antarctic Treaty area, including those in high seas MPAs, are governed by these provisions, with the exceptions of fishing, seal hunting, whaling, and emergency actions, which are regulated by other international instruments (Warner, 2015).

3 Challenges concerning the application of the BBNJ Agreement’s EIA provisions to high seas MPAs

3.1 Non-parties to the BBNJ agreement are not obligated to apply the EIA provisions of the BBNJ agreement in high seas MPAs

According to article 26 of the Vienna Convention on the Law of Treaties (VCLT), once the BBNJ Agreement meets the conditions for entry into force as outlined in its article 68, Parties will be required to undertake the treaty obligation of conducting EIAs for proposed activities in ABNJ. Additionally, pursuant to article 26 of

the VCLT, members must comply with the EIA obligations established by the international legal instruments that created these high seas MPAs, as well as other relevant documents. Ideally, when the BBNJ Agreement comes into force, all members of the IFBs of high seas MPAs would also be the Parties to the BBNJ Agreement. In such a case, all countries would need to adhere to both the BBNJ Agreement and the IFBs of high seas MPAs provisions for EIAs, ensuring uniformity in practice. However, this ideal outcome may not be fully achieved.

According to the UN Treaty Section page, the status of the BBNJ Agreement’s signature and ratification by members of the IFBs of high seas MPAs varies (United Nations Treaty Collection, 2025b) (see Tables 1–3).

There are three distinct categories reflecting the status of the BBNJ Agreement among the members of the IFBs of high seas MPAs:

1. Members that have ratified the BBNJ Agreement.
2. Members that have signed the BBNJ Agreement but have not yet ratified it.
3. Members that have neither signed nor ratified the BBNJ Agreement.

As mentioned above, members in the first two categories are likely required to comply with the EIA obligations set by the BBNJ Agreement and the IFBs of high seas MPAs. Additionally, under article 18 of the VCLT, these members are prohibited from taking any actions that would undermine the objectives and purposes of the BBNJ Agreement prior to its entry into force, including those related to the EIA provisions. In comparison, members in the third category are only obligated to comply with the EIA obligations set by the IFBs of high seas MPAs. For example, if the situation concerning the SOISS and RSr MPAs continues, countries such as Japan, Namibia, Pakistan, Peru, Russia, South Africa and Ukraine, would likely have fewer EIA obligations compared to those that have signed or ratified the BBNJ Agreement. Among the four high seas MPAs, the Pelagos Sanctuary may be the only one where members are most likely to collectively become Parties to the BBNJ Agreement and adhere to the EIA provisions under both legal frameworks. However, similar to the other three high seas MPAs, the Pelagos Sanctuary must also account for the possibility that members may have signed the BBNJ Agreement but have not yet ratified it.

TABLE 1 The status of the signature and ratification of the BBNJ Agreement by member states of the Pelagos Sanctuary.

Number	States	Signature of the BBNJ Agreement	Remarks
1	France	<input checked="" type="checkbox"/>	Made ratification on 5 Feb 2025
2	Italy	<input checked="" type="checkbox"/>	
3	Monaco	<input checked="" type="checkbox"/>	Made ratification on 9 May 2024

The meaning of the check symbol is that these countries have signed the BBNJ Agreement.

TABLE 2 The status of the signature and ratification of the BBNJ Agreement by NEAMPA member states.

Number	States	Signature of the BBNJ Agreement	Remarks
1	Belgium	<input checked="" type="checkbox"/>	
2	Denmark	<input checked="" type="checkbox"/>	
3	European Union	<input checked="" type="checkbox"/>	
4	Finland	<input checked="" type="checkbox"/>	
5	France	<input checked="" type="checkbox"/>	Made ratification on 5 Feb 2025
6	Germany	<input checked="" type="checkbox"/>	
7	Iceland	<input checked="" type="checkbox"/>	
8	Ireland	<input checked="" type="checkbox"/>	
9	Luxembourg	<input checked="" type="checkbox"/>	
10	Netherlands	<input checked="" type="checkbox"/>	
11	Norway	<input checked="" type="checkbox"/>	
12	Portugal	<input checked="" type="checkbox"/>	
13	Spain	<input checked="" type="checkbox"/>	Made ratification on 4 Feb 2025
14	Sweden	<input checked="" type="checkbox"/>	
15	Switzerland	<input checked="" type="checkbox"/>	
16	United Kingdom	<input checked="" type="checkbox"/>	

The meaning of the check symbol is that these countries have signed the BBNJ Agreement.

3.2 Potential influence of the “not undermine” proviso

During the negotiation, delegates paid attention to the issue of how EIA requirements under other international legal instruments align with the BBNJ Agreement (Payne, 2022). Both the BBNJ Agreement and the aforementioned international legal instruments related to high seas MPAs impose EIA obligations to contracting states. Upon the BBNJ Agreement’s entry into force, conflicts may arise with existing IFBs. Article 30 of the VCLT addresses the “application of successive treaties relating to the same subject matter”. According to article 30(2) of the VCLT, if the BBNJ Agreement explicitly states that it should not be interpreted as incompatible with earlier or later treaties concerning high seas MPAs, those earlier or later treaties should enjoy priority in application. This principle is reflected in article 311 of UNCLOS, which seeks to clarify the relationship between UNCLOS and other international treaties. Article 311(1) of UNCLOS mandates that States that are contracting parties to both UNCLOS and the 1958 Geneva Conventions on the Law of the Sea must give precedence to the application of UNCLOS over the earlier conventions. Article

TABLE 3 The status of the signature and ratification of the BBNJ Agreement by SOISS and RSr MPAs member states.

Number	States	Signature of the BBNJ Agreement	Remarks
1	Australia	<input checked="" type="checkbox"/>	
2	Argentina	<input checked="" type="checkbox"/>	
3	Belgium	<input checked="" type="checkbox"/>	
4	Brazil	<input checked="" type="checkbox"/>	
5	Bulgaria	<input checked="" type="checkbox"/>	
6	Canada	<input checked="" type="checkbox"/>	
7	Chile	<input checked="" type="checkbox"/>	Made ratification on 20 Feb 2024
8	People’s Republic of China	<input checked="" type="checkbox"/>	
9	Cook Islands	<input checked="" type="checkbox"/>	
10	Ecuador	<input checked="" type="checkbox"/>	
11	European Community	<input checked="" type="checkbox"/>	
12	Finland	<input checked="" type="checkbox"/>	
13	France	<input checked="" type="checkbox"/>	Made ratification on 5 Feb 2025
14	Germany	<input checked="" type="checkbox"/>	
15	Greece	<input checked="" type="checkbox"/>	
16	India	<input checked="" type="checkbox"/>	
17	Italy	<input checked="" type="checkbox"/>	
18	Japan		
19	Republic of Korea	<input checked="" type="checkbox"/>	
20	Mauritius	<input checked="" type="checkbox"/>	Made ratification on 30 May 2024
21	Namibia		
22	Netherlands	<input checked="" type="checkbox"/>	
23	New Zealand	<input checked="" type="checkbox"/>	
24	Norway	<input checked="" type="checkbox"/>	
25	Pakistan, Islamic Republic of		
26	Panama	<input checked="" type="checkbox"/>	Made ratification on 23 Oct 2024
27	Peru		
28	Poland	<input checked="" type="checkbox"/>	

(Continued)

TABLE 3 Continued

Number	States	Signature of the BBNJ Agreement	Remarks
29	Russia		
30	South Africa		
31	Spain	☑	Made ratification on 4 Feb 2025
32	Sweden	☑	
33	Ukraine		
34	United Kingdom	☑	
35	United States of America	☑	
36	Uruguay	☑	
37	Vanuatu	☑	

The meaning of the check symbol is that these countries have signed the BBNJ Agreement.

311(2) specifies that UNCLOS does not modify the rights and duties of States that stem from other agreements, provided these agreements align with UNCLOS and do not interfere with other States' rights or obligations under UNCLOS (Payne, 2022). Article 5 of the BBNJ Agreement establishes the “not undermine” proviso, which states that the interpretation and application of the BBNJ Agreement should not undermine relevant IFBs and should promote coherence and coordination with these IFBs (BBNJ Agreement, 2023 Art 5(2)). Additionally, the BBNJ Agreement does not affect the legal status of non-Parties to UNCLOS or any other relevant international legal instruments. Such a provision, commonly known as a “conflict clause”, is intended to prevent conflicts between treaties from undermining their effectiveness (Villiger, 2009). It aims to harmonize existing and complex international legal frameworks for high seas environmental governance with the BBNJ Agreement (Langlet and Vadrot, 2023). It is also related to international cooperation prescribed in article 8 of the BBNJ Agreement (Tang, 2024). Article 8(1) of the BBNJ Agreement mandates that Parties not only collaborate with IFBs but also encourage cooperation among them. Cooperation with these institutions is a fundamental aspect of the BBNJ Agreement, as the Agreement significantly depends on IFBs to achieve its objectives (Kim, 2024). Additionally, article 8(2) imposes a duty on Parties to promote the objectives of the BBNJ Agreement, where appropriate, when participating in decision-making processes within other relevant IFBs. Leveraging the capabilities of existing IFBs to further the BBNJ Agreement's objectives is a notable innovation in the design of multilateral environmental treaties (Kim, 2024). The “not undermine” proviso applies to the existing high seas MPAs (Duan, 2024). It plays a crucial role in this context. If the BBNJ Agreement is applied or interpreted in a way that weakens the role of IFBs, this could affect cooperation and hinder the achievement of its goals. However, the language of the proviso remains quite general. The precise interpretation of “not undermine” remains unclear (Tang et al., 2021). Under different

interpretations, this proviso could either enhance or limit the effectiveness of the BBNJ Agreement (Gjerde et al., 2021). Wright and others suggest referring to the interpretation of “undermine” in the 1995 Fish Stocks Agreement (1995 UNFSA) to understand the BBNJ Agreement's proviso. In that Agreement, “undermine” refers to harming or diminishing effectiveness, specifically regarding measures, stocks, and the effectiveness of the 1995 UNFSA within areas under national jurisdiction (Wright et al., 2016). However, this understanding has limitations. The 1995 UNFSA addresses conservation and management of transboundary and highly migratory fish stocks, while the BBNJ Agreement covers a broader and more integrated scope. Moreover, this term is used in a different context in the 1995 UNFSA compared to its use in United Nations General Assembly Resolution 69/292, and therefore cannot be directly applied to interpret the provisions of the BBNJ Agreement (Marciniak, 2017).

Scanlon proposes two interpretations of “not undermine”. The first interpretation suggests that any new instrument should not undermine the authority or tasks of existing institutions or measures outlined in current instruments (Scanlon, 2018), thereby allowing these institutions to continue operating within the existing legal frameworks (Scanlon, 2018). The second interpretation envisions the creation of a new global system capable of more effectively implementing existing international legal instruments, based on the goal of strengthening rather than weakening the existing legal frameworks (Scanlon, 2018). These differing interpretations may arise from the complexity of applying the “not undermine” proviso: focusing on the application to an institution may lead to the first interpretation due to existing authority and decision-making powers, while focusing on the legal framework may favor the latter interpretation, emphasizing the goals and principles supporting the framework (Scanlon, 2018).

Nevertheless, understanding this proviso should be context-specific and consider the subject matter (Scanlon, 2018). As a specific subject within the BBNJ Agreement, EIA has its distinct context. The “not undermine” proviso should be supported by an authoritative interpretation that takes this specific context into account. Unfortunately, there is no authoritative interpretation currently. This ambiguity in the “not undermine” proviso may lead to difficulties in effectively applying the BBNJ Agreement's EIA provisions and reconciling conflicts with the EIA provisions for high seas MPAs.

3.3 Potential impact of the ambiguity of “due regard”

The core activities encompassed by the EIA include evaluating the proposed activity and conducting research to prepare the EIA report. To assess the impact of a proposed activity within high seas MPAs on the high seas environment and to conduct long-term monitoring, scientific research may serve as a fundamental basis (Jarvis and Young, 2023). Research and monitoring plans are crucial for MPAs as they facilitate the identification of methods for evaluating and monitoring these areas (Grorud-Colvert et al., 2021). These activities are likely to be considered scientific research. Consequently, the freedom of the high seas, particularly freedom of

scientific research, serves as a key international legal basis for conducting EIA activities within high seas MPAs. However, freedom of scientific research is subject to restrictions. These include not only the restrictions imposed by the IFBs of high seas MPAs but also those imposed by the principles of the freedom of the high seas under UNCLOS.

States conducting scientific research for EIA must adhere to the restrictions outlined in Part VI and Part XIII of UNCLOS, as well as the “due regard” obligation prescribed in article 87(2). Part VI of UNCLOS mandates that States conducting scientific research respect the rights of coastal States over their continental shelves. Part XIII of UNCLOS provides detailed regulations concerning scientific research that States must follow when conducting EIAs. In addition, Parties to the BBNJ Agreement should pay “due regard” in other respects. For instance, article 11(3) of the BBNJ Agreement states that the *in situ* collection of marine genetic resources from ABNJ “shall be carried out with due regard for the rights and legitimate interests of coastal States” within their national jurisdiction, as well as the interests of other States in ABNJ, in line with UNCLOS. Similarly, article 22(5) of the BBNJ Agreement specifies that decisions and recommendations made by the Conference of the Parties (COP) in accordance with Part III of the BBNJ Agreement “shall not undermine the effectiveness of measures” enacted for areas within national jurisdiction and “shall be made with due regard for the rights and duties of all States”, consistent with UNCLOS. However, the “due regard” is more contentious than the aforementioned Parts due to its ambiguity. Some argue that “due regard” under UNCLOS should not be considered a legal obligation (Vicuña, 1999). Even if it constitutes an international legal duty, its application to scientific research conducted for EIA purposes on the high seas remains unclear. For instance, when a State’s freedom of scientific research conflicts with other States’ freedom of navigation or fishing, the criteria for the “due regard” are ambiguous. It is uncertain whether “due regard” requires a State to avoid significantly impacting other States’ freedom of the high seas or to balance all other States’ freedom equally (Wang and Pan, 2023). Furthermore, the “due regard” obligation does not clarify whether there is a prioritization issue when the freedom of the high seas enjoyed by one State conflicts with the high seas freedom of other States during the conduct of EIA. Additionally, the regulations of the IFBs of high seas MPAs operate independently of UNCLOS, and their provisions may not be able to interpret “due regard”. In summary, the ambiguity of “due regard” may influence the implementation of EIAs within high seas MPAs.

3.4 The potential limitations of BBNJ Agreement’s clearing-house mechanism regarding EIAs

Article 51 of the BBNJ Agreement establishes CL-HM, which is described in paragraph 3 as a central platform for Parties to “access, provide and disseminate” information related to EIAs. The purpose of the CL-HM is to enhance transparency and access to information (Blanchard, 2022). It plays a critical role in the EIA procedures outlined in the BBNJ Agreement. Parties that have conducted EIAs

and generated EIA reports are required to submit these reports and any relevant monitoring reports to the CL-HM (BBNJ Agreement, 2023, Arts 28, 29 and 36). Parties proposing activities in ABNJ are expected to publish information through the CL-HM, allowing all stakeholders to participate in the EIA process for the proposed activities (BBNJ Agreement, 2023, Art 32). When a Party determines that there is no need to conduct an EIA, it shall disclose this through the CL-HM, with disclosures of comments of other Parties and recommendations from the STB (BBNJ Agreement, 2023, Art 31). Following the completion of EIA activities, Parties are obligated to publish their EIA reports and decision documents through the CL-HM (BBNJ Agreement, 2023, Arts 33 and 34).

However, the CL-HM outlined in the BBNJ Agreement may face challenges in application to high seas MPAs. Firstly, it remains unclear how to facilitate the participation of members of the IFBs of high seas MPAs that are non-Parties to the BBNJ Agreement in the CL-HM. According to article 51 of the BBNJ Agreement, the CL-HM is intended to facilitate Parties’ acquisition, provision, and dissemination of information related to EIAs. Thus, the CL-HM should assist these Parties in obtaining information related to EIAs conducted within high seas MPAs. However, the approaches for acquiring information pertinent to high seas MPAs’ EIAs have not been established. During the negotiation of the BBNJ Agreement, there were suggestions on the CL-HM that it should have broad functions, ranging from serving as a repository of information (such as EIA reports or guidelines and technical methodologies) to functioning as a forum for international cooperation and transparency (Blanchard, 2019). Yet, it is uncertain whether data held by other countries or IFBs can be accessed through the CL-HM (Blanchard, 2019). Without treaty obligations, the administrative bodies of high seas MPAs may choose whether or not to cooperate with the BBNJ Agreement’s administrative bodies. Additionally, members of the IFBs of high seas MPAs that have not joined the BBNJ Agreement are not obligated to provide information about EIAs conducted in relevant high seas MPAs.

Secondly, there is a lack of clarity regarding the scope and the competent authorities of the CL-HM. Even if members of the IFBs of high seas MPAs, or those of MPAs not parties to the BBNJ Agreement, agree to engage in information exchange, it remains unclear which institutions should be involved in the information exchange mechanisms and the extent of their authority regarding the disclosure of information related to high seas MPAs. When the IFBs of high seas MPAs or their members who are non-Parties to the BBNJ Agreement agree to exchange information, uncertainty remains. It is unclear which institutions the CL-HM should involve and how much authority these institutions have over disclosing information related to high seas MPAs. This uncertainty could prevent the CL-HM from facilitating international cooperation as stipulated in article 51(3) of the BBNJ Agreement. Moreover, article 51(3) of the BBNJ Agreement stipulates that the CL-HM is not only for EIAs but also for other area-based management tools such as MPAs. Thus, this issue cannot be overlooked.

The effectiveness of the CL-HM depends on its utilization and the level of engagement of the IFBs in sharing information (Vierros and Harden-Davies, 2020). However, as discussed, the CL-HM

related to EIAs in high seas MPAs under the BBNJ Agreement still requires development. Otherwise, it could impact the efficiency of the participation of members of the IFBs of high seas MPAs regarding the information exchange. This may hinder the efficiency of the BBNJ Agreement's EIA provisions within high seas MPAs.

3.5 Determination of the equivalency among the fragmented standard of the EIA in high seas MPAs

Article 29(4) of the BBNJ Agreement provides exceptions for Parties that are both Parties to the BBNJ Agreement and members of the IFBs from screening or EIAs. First, the “potential impacts of the planned activity or category of activity” have already been evaluated according to the standards set by IFBs. This provision may ensure that the EIA obligations under the BBNJ Agreement do not have retroactive effects, thereby preserving the validity of previous EIAs to allow Parties to rely on existing assessments rather than duplicating efforts. Second, the previously conducted assessment must meet the criteria required under the BBNJ Agreement. This can occur in two ways. One possibility is that the assessment performed for the planned activity is equivalent to that mandated by the BBNJ Agreement, and its findings must be considered in decision-making. Alternatively, the regulations or standards resulting from the assessment under the IFBs are sufficient to ensure that potential impacts are prevented, mitigated, or managed below the thresholds that would necessitate an EIA as specified in the BBNJ Agreement. However, in ABNJ, the standards and procedures for conducting EIAs are fragmented, with significant differences among sectors, regions, and sometimes within sectors themselves (Hassanali, 2023). In some instances, the obligation to conduct an EIA and the methodologies for EIAs have not yet been considered (Oude Elferink, 2012). This fragmentation is also reflected in the EIA provisions for high seas MPAs. While the IFBs of high seas MPAs have imposed EIA obligations to members, the standards, subjects and procedures of these obligations vary.

In terms of the standards, the Pelagos Sanctuary requires members to focus on activities “which have or are likely to have a significant adverse impact” (The SPA/BD Protocol, 1995, Art 3(5)). The NEAMPA requires an assessment of “actual and potential adverse effects” on “specific species, communities, and habitats” (OSPAR Convention APPENDIX 3, 1998). Additionally, Appendix 3 of the OSPAR Convention emphasizes that these standards may be adjusted case by case. In comparison, the SOISS and RSr MPAs require an EIA for proposed activities that may cause “a minor or transitory impact” (the Madrid Protocol, 1991, Art 8(1)). The standards of the SOISS and RSr MPAs appear higher than those of the Pelagos Sanctuary and the NEAMPA. Concerning the BBNJ Agreement, it requires Parties to screen proposed activities for impacts that might be “more than minor or transitory” (BBNJ

Agreement, 2023, Art 30). If a Party has reasonable grounds to believe that an activity may cause “substantial pollution of or significant and harmful changes to the marine environment”, an EIA must be conducted (BBNJ Agreement, 2023, Art 30). However, establishing equivalency remains challenging. For example, only three EIAs have been conducted in the SOISS and RSr MPAs. Additionally, no CEEs have been carried out in these areas. This suggests that the existing EIA practices in the SOISS and RSr MPAs are insufficient to provide the necessary information regarding practices of threshold or standard for determining equivalency.

In summary, the standards, subjects and procedures for conducting EIAs in high seas MPAs differ and do not align with those specified in the BBNJ Agreement. These standards need to be further assessed for equivalence to the BBNJ Agreement's standards. However, there is currently no related assessment. This situation may hinder states that are both Parties to the BBNJ Agreement and members of the IFBs from applying article 29 of the BBNJ Agreement effectively or assuming that they have conducted EIAs which meet BBNJ Agreement standards. This could result in the need for redundant EIAs, increasing both economic and administrative burdens. However, it is necessary to admit that the requirement for EIAs in areas where they were previously not mandated is a positive development.

3.6 Limitation of the EIA provisions for existing high seas MPAs

The EIA provisions for existing high seas MPAs appear limited. For example, the EIA mechanism for the Pelagos Sanctuary is based on article 17 of the SPA/BD Protocol. The EIA provisions of the SPA/BD Protocol apply to all SPAMIs instead of applying to the Pelagos Sanctuary exclusively. A large number of these SPAMIs are located in areas within national jurisdiction. Besides, the SPA/BD Protocol mentions conducting an EIA but does not provide a detailed process. The procedural steps for conducting EIAs are not elaborated. Implementation of the EIA provisions relies on the cooperation of the parties and the competent international organizations, with a focus on monitoring and reporting. However, the mechanisms for enforcing compliance with EIA obligations are not clearly defined. In contrast, the BBNJ Agreement sets up a more structured compliance mechanism. It includes provisions for monitoring (BBNJ Agreement, 2023, Art 35), reporting (BBNJ Agreement, 2023, Art 36), and review of authorized activities (BBNJ Agreement, 2023, Art 37).

For another example, activities in the NEAMPA are governed by the OSPAR Convention and relevant Annexes. These international legal instruments apply both within and beyond national jurisdiction. Article 2 of Annex IV of the OSPAR Convention requires Contracting Parties to consider scientific advancements. These may come from international research programs or initiatives led by the European Economic Community and other regional organizations. However, it does

not strongly emphasize global participation. In comparison, guided by the principle of international cooperation set in article 8, the BBNJ Agreement manages to set up a global mechanism to engage as many Parties as possible to conduct EIAs in the ABNJ.

Additionally, according to article 1 of the Madrid Protocol, the EIA provisions in the Madrid Protocol apply to the Antarctic Treaty area including part of the high seas in the Antarctic. Nonetheless, there are no dedicated EIA provisions specifically for SOISS and RSr MPAs. For instance, CCAMLR's CM 91-04 conservation measure requires Members to establish research and conservation mechanisms for each MPA. The establishment of the SOISS MPA predates the adoption of CM91-04, and although CCAMLR has discussed coordination issues between the core documents CM91-03 and CM91-04, CM91-04 may not be applicable to the SOISS MPA (Nocito and Brooks, 2023). Regarding specific documentation, a draft research and monitoring plan for the SOISS MPA was proposed to CCAMLR in 2014 but was not adopted due to a lack of consensus (Scott, 2021). In 2018, the revised draft of the research and monitoring plan was still not approved due to objections from two Members (Trathan and Grant, 2020). In contrast, the draft research and monitoring plan for the RSr MPA was approved by the Scientific Committee in 2017 (CCAMLR, 2017). However, this draft also failed to gain approval due to a lack of consensus, with political factors being the primary obstacles (Nocito and Brooks, 2023). Fortunately, although these plans were not adopted, some aspects of them have been partially implemented (Nocito et al., 2022). By contrast, according to article 19 and article 26 of the BBNJ Agreement, it is possible for Parties to draft EIA provisions for specific high seas MPAs when establishing them as area-based management tools.

3.7 The insufficiency in EIA Practices in high seas MPAs

When an EIA is conducted only based on EIA provisions set by the IFBs of high seas MPAs, the EIA report and the effectiveness of the results will be determined by the regulations set by the IFBs of high seas MPAs. However, if a member of the IFB of high seas MPA becomes a Party to the BBNJ Agreement, its EIA practices must comply with the requirements established by relevant IFB without impeding the objectives of the BBNJ Agreement. Nevertheless, current EIA practices in high seas MPAs appear not sufficient to achieve the objective set in article 2 of the BBNJ Agreement.

One significant monitoring program in the SOISS and RSr MPAs is the CCAMLR Ecosystem Monitoring Program (CEMP), which began in 1985 (Miller, 2011). The CEMP has two primary objectives: to detect and record significant changes in key components of the Antarctic marine ecosystem within the Convention Area, and to distinguish changes caused by commercial species harvesting from those resulting from physical and biological environmental variability (CCAMLR, 2013). To ensure comparability between sites, the CCAMLR has established a set of standard methods for the CEMP, including detailed information on data collection, submission formats to the

Secretariat, and data analysis procedures (CCAMLR, 2013). However, the number of the CEMP monitoring stations appears insufficient in high seas MPAs. In the RSr MPA, there are only three monitoring stations: one established by New Zealand on Ross Island, one by Italy at Edmondson Point, and one by South Korea at Cape Hallett (CCAMLR, 2024). No CEMP monitoring stations are located within the SOISS MPA (see Figures 1, 2).

It should also be noted that CCAMLR's CEMP is applicable to fisheries within the SOISS and RSr MPAs, while EIA provisions of the BBNJ Agreement cover more matters. Additionally, the indicator species used in the CEMP program are limited to eight species (CCAMLR, 2013). Some species that rely on krill, such as the *Lobodon carcinophagus*, although believed to potentially respond to changes in krill availability, are not monitored due to their reliance on ice-covered habitats, making them unsuitable for monitoring (CCAMLR, 2013). This scope of monitoring appears narrower than that set by the BBNJ Agreement.

Moreover, there are no EIA projects for the SOISS MPA, and only five EIA projects exist for the RSr MPA, of which only three were initiated by Russia and New Zealand after excluding projects conducted before the creation of the protected area (see Table 4).

The first project done by New Zealand focuses on the restoration of historic huts located at Cape Adare, which are significant cultural heritage sites within the RSr. The type of EIA conducted for this initiative is classified as an IEE. The duration of the project extends from 2012 to 2021, reflecting New Zealand's commitment to preserving historical assets while ensuring minimal environmental impact in this ecologically sensitive area. The second project conducted by New Zealand focuses on cruise tourism within the Antarctic region, aiming to balance tourist activities with environmental conservation. The type of EIA for this program is classified as an IEE. The duration of this project was set from 2017 to 2020, during which two vessels operated for eight weeks each season. The Russian Federation has initiated the "Antarctic Circumnavigation Expedition onboard RV 'Akademik Tryoshnikov'". The assessment performed is also categorized as an IEE. The timeframe for this project spanned from January 27 to February 17, 2017.

Regarding the Pelagos Sanctuary, we have not yet identified any specific EIA practices conducted in the ABNJ. The environmental impact monitoring projects carried out under the Mediterranean Action Plan (MAP) have not established any EIA practice in ABNJ of the Pelagos Sanctuary. Most of the MPAs covered by the MAP are located in coastal regions or waters shallower than 50 meters rather than ABNJ (UNEPMAP, 2020). Moreover, as an important monitoring project within MAP, the Integrated Monitoring and Assessment Programme of the Mediterranean Sea (IMAP) currently does not include projects assessing the ABNJ in the Pelagos Sanctuary, either (INFO/RAC, 2022).

For NEAMPA, the OSPAR Commission has introduced the Coordinated Environmental Monitoring Programme (CEMP), which aims to provide comparable data from across the OSPAR maritime region for assessment to address specific issues identified in the Joint Assessment and Monitoring Programme (JAMP) (OSPAR Commission, 2024d). The CEMP includes six themes (OSPAR

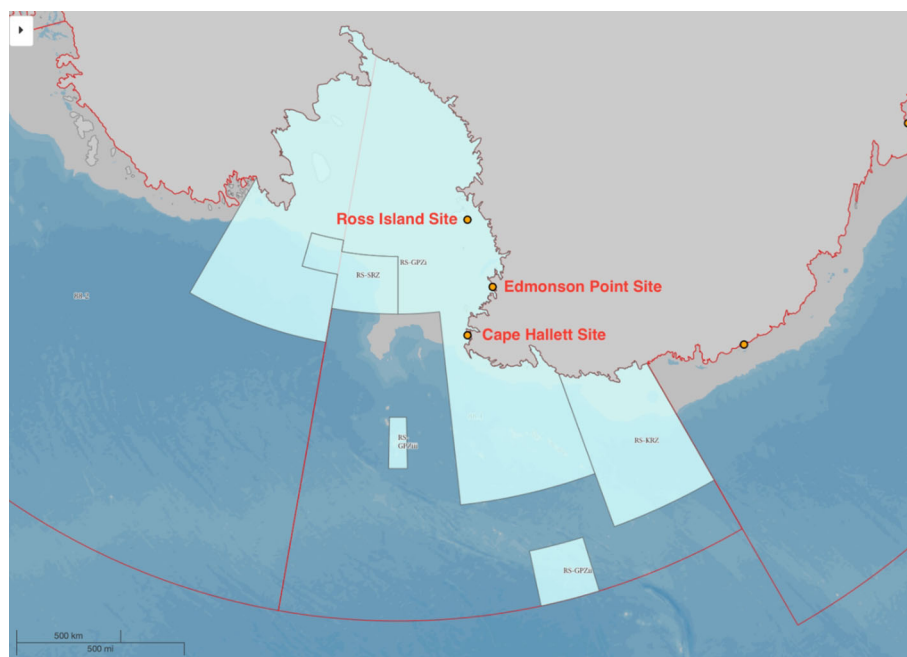


FIGURE 1

An overview of CEMP sites in the SOISS and RSr MPAs (sources: CCAMLR. 2023. Geographical data layer: CCAMLR Ecosystem Monitoring Program Sites. Version 0.9, URL: https://github.com/ccamlr/data/tree/main/geographical_data/cemp/versions/v0.9. licensed under a CC0 license; CCAMLR. 2022. Geographical data layer: CCAMLR Marine Protected Areas. Version 0.9, URL: https://github.com/ccamlr/data/tree/main/geographical_data/mpa/versions/v0.9. licensed under a CC0 license).

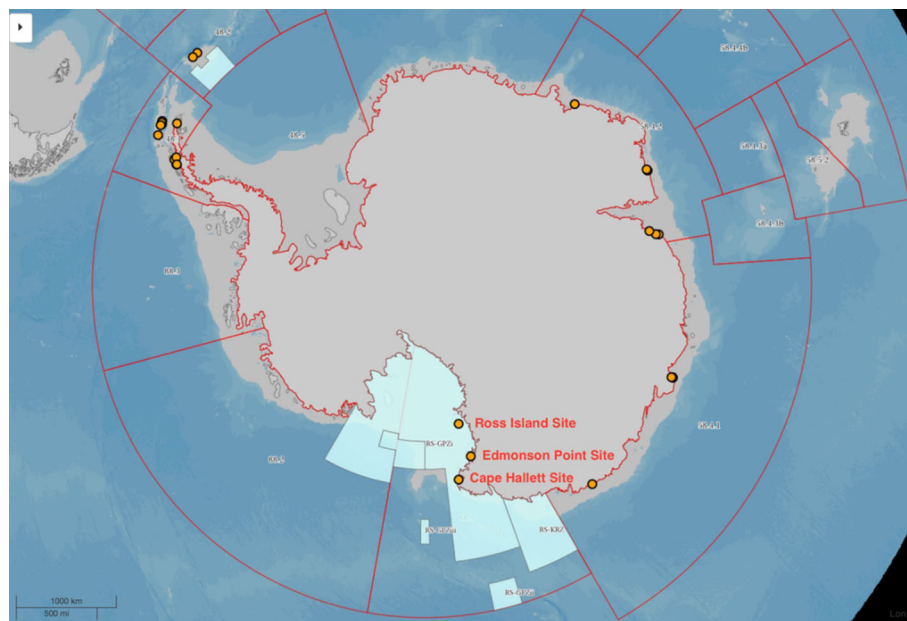


FIGURE 2

The status of CEMP sites in the RSr MPA (sources: CCAMLR. 2023. Geographical data layer: CCAMLR Ecosystem Monitoring Program Sites. Version 0.9, URL: https://github.com/ccamlr/data/tree/main/geographical_data/cemp/versions/v0.9. licensed under a CC0 license; CCAMLR. 2022. Geographical data layer: CCAMLR Marine Protected Areas. Version 0.9, URL: https://github.com/ccamlr/data/tree/main/geographical_data/mpa/versions/v0.9. licensed under a CC0 license).

TABLE 4 EIAs in SOISS and RSr MPAs.

Number	Member State	Project	Activity	Type of the EIA	Period/length of the activity
1	New Zealand	2012-2021 Initial Environmental Evaluation for the Ross Sea Heritage Restoration Project for the Historic Huts at Cape Adare, Antarctica	Ross Sea Heritage Restoration Project for the Historic Huts at Cape Adare; Antarctica	IEE	2012-2021
2	Russian Federation	Antarctic Circumnavigation Expedition onboard RV “Akademik Tryoshnikov”	Research activities	IEE	From 27 January 2017 to 17 February 2017
3	New Zealand	Initial Environmental Evaluation 2016/17 - 2019/20 Antarctic Cruise Programmes	Cruise tourism	IEE	2017 - 2020 (2 vessels for a period of 8 weeks each season)

Commission, 2024a). However, this program focuses little on the high seas, let alone high seas MPAs. There are a total of forty-nine projects within this program, with only two projects relevant to or applicable to high seas, representing just 4% of the total (see Table 5).

Both of these projects are categorized in “Theme B- under the management of BDC”. One is “BB10 - Plankton lifeforms (PH-1/FW-5)”, whose participants are the United Kingdom, Sweden and France. The other is “BB11 - Plankton biomass and/or abundance

(PH2)”, which includes contributions from Denmark, France, Sweden, and the United Kingdom. Furthermore, the number of participating countries in these two projects is limited, with only 3 and 4 countries involved, respectively. This represents only 18.8% and 25% of the total 15 OSPAR member countries plus the European Union.

In addition, the NEAMPA includes Committee Assessments, which evaluate five categories in OSPAR regions (OSPAR

TABLE 5 Application of the OSPAR CEMP projects to the NEAMPA.

Theme A - Cross-Cutting Components		
Number	Project	Applicability to ABNJ
1	A1 - Ocean Acidification; Inorganic carbon system parameters in seawater	No
Theme B - Biodiversity and Ecosystems		
Under the management of BDC		
Number	Project	Applicability to ABNJ
1	BB1 - Abundance and distribution of seals (M3)	No
2	BB2 - Cetacean abundance and distribution (M4)	No
3	BB3 - Grey seal pup production (M5)	No
4	BB4 - Marine bird abundance (B1)	No
5	BB5 - Marine Bird Breeding Productivity (B3)	No
6	BB6 - Fish abundance (FC-1)	No
7	BB7 - Proportion of large fish (FC2)	No
8	BB8 - Condition of benthic habitat defining communities (MMI) (BH2)	No
9	BB10 - Plankton lifeforms (PH-1/FW-5)	Yes
10	BB11 - Plankton biomass and/or abundance (PH2)	Yes
11	BB12 - Plankton diversity index (PH3)	No
12	BB13 - Trends in arrival of new non-indigenous species	No
13	BB15 - Size composition in fish communities (FW3)	No
14	BB16 - Changes in average trophic level of marine predators (FW4)	No
15	BB18 - Marine mammal bycatch (M6)	No
16	BB19 - Mean maximum length of demersal fish and elasmobranchs (FC3)	No

(Continued)

TABLE 5 Continued

Theme B - Biodiversity and Ecosystems		
Under the management of EIHA		
Number	Project	Applicability to ABNJ
1	BE1 - Marine litter on beaches	No
2	BE2 - Marine Litter on the Seafloor	No
3	BE3 - Monitoring of plastic particles in stomachs of fulmars	No
4	BE4 - Impulsive noise	No
5	BE5 - Encounters with dumped chemical and conventional weapons	No
6	BE6 - Offshore Renewable Energy Developments	No
7	BE7 - Dumping and placement of wastes or other matter at sea	No
8	BE8 - Litter ingested by sea turtles	No
9	BE9 - Ambient noise	No
Theme E - Eutrophication		
Theme E components		
Number	Project	Applicability to ABNJ
1	E1 - Nutrient concentrations in seawater (*DIN *DIP)	No
2	E2 - Direct and indirect eutrophication effects including chlorophyll, water transparency, abundance of macrophytes, benthic species shift, phytoplankton species shift and oxygen	No
Inputs of Nutrients		
Number	Project	Applicability to ABNJ
1	RID - Nutrient Inputs From Land-Based (Diffuse and Point) Sources	No
2	CAMP - Nutrient Inputs via the Atmosphere	No
Theme H - Hazardous Substances		
Inputs of Contaminants		
Number	Project	Applicability to ABNJ
1	RID - Contaminant Inputs From Land-Based (Diffuse and Point) Sources	No
2	CAMP - Contaminant Inputs via the Atmosphere	No
Theme H components: Components of the pre-CEMP		
Number	Project	Applicability to ABNJ
1	H6 - Planar PCBs in sediment and biota	No
2	H7 - Alkylated PAHs in sediment and biota	No
3	H8 - PFOS in sediment, biota and seawater	No
4	H9 - Polychlorinated dibenzodioxins and furans in sediment and biota	No
5	H10 - PAH and metal-specific relevant Biological Effects	No
6	H11 - General Biological Effects (Whole sediment bioassays, Sediment Pore-Water and Elutriate Bioassays, Water Bioassays, CYP1a, Lysosomal Stability, Liver Histopathology/Macroscopic liver neoplasms, Externally Visible Fish Diseases, Reproductive Success in Fish)	No

(Continued)

TABLE 5 Continued

Theme H - Hazardous Substances		
Theme H components: Marine environmental quality CEMP components		
Number	Project	Applicability to ABNJ
1	H1 - Metal concentrations in sediment and biota	No
2	H2 - PCB Concentrations in sediment and biota	No
3	H3 - PAH concentrations in sediment and biota	No
4	H4 - Organotins concentrations and biological effects	No
5	H5 - Brominated Flame Retardants concentrations in sediment and biota	No
6	H8 - PFOS in sediment (primary matrix), biota and seawater (secondary matrices)	No
Theme O - Offshore Oil and Gas Industry		
Number	Project	Applicability to ABNJ
1	O1 - Discharges, spills and emissions associated with the offshore oil and gas industry	No
Theme R - Radioactive Substances		
Number	Project	Applicability to ABNJ
1	R1 - Environmental concentrations of radionuclides associated with the nuclear sector	No
2	R2 - Environmental concentrations of radionuclides associated with the offshore oil and gas non-nuclear sector	No
3	R3 - Liquid Discharges from Nuclear Installations (nuclear sector)	No
4	R4 - Discharges of Radionuclides from the non-nuclear sector	No

Commission, 2024c). We have compiled statistics on the Committee Assessments relevant to the NEAMPA (OSPAR Commission, 2024e) (see Table 6). Of a total of fifty-five projects, twenty are applicable or potentially applicable to high seas MPAs, accounting for 36.4% (see Table 7).

Compared to CEMP, it seems that there are more projects relevant to high seas MPAs. However, among these, 19 projects focus on “Biodiversity and Ecosystems”, while only 1 project addresses “Hazardous Substances and Eutrophication”. The projects related to “Biodiversity and Ecosystems” specifically

TABLE 6 The applicability of the OSPAR Committee Assessment to the NEAMPA.

Biodiversity and Ecosystem			
Number	Project	Applicability to ABNJ MPAs	Remarks
1	Allis shad	No	
2	Angel shark	No	
3	Atlantic salmon	No	
4	Balearic shearwater	No	
5	Basking shark	Yes	
6	Black-legged Kittiwake	Yes	status unknown or insufficient information available
7	Blue Whale	Yes	
8	Bowhead Whale	No	
9	Carbonate Mounds	Yes	
10	Common skate	Yes	status unknown or insufficient information available

(Continued)

TABLE 6 Continued

Biodiversity and Ecosystem			
Number	Project	Applicability to ABNJ MPAs	Remarks
11	Coral Gardens	Yes	
12	Deep-sea sponge aggregations	Yes	
13	European Sturgeon	No	
14	European eel	No	
15	European flat oyster and <i>Ostrea edulis</i> beds	No	
16	Gulper Shark	Yes	status unknown or insufficient information available
17	Iberian guillemot	No	
18	Intertidal Mudflats	No	
19	Intertidal <i>Mytilus Edulis</i> Beds on Mixed and Sandy Sediments	No	
20	Leafscale gulper shark	Yes	
21	Leatherback turtle	Yes	status unknown or insufficient information available
22	Lesser black-backed gull	No	
23	Loggerhead turtle	Yes	status unknown or insufficient information available
24	<i>Lophelia pertusa</i> reefs	Yes	
25	Maerl beds	No	
26	Oceanic Ridges with hydrothermal vents	Yes	
27	Porbeagle	Yes	status unknown or insufficient information available
28	Portuguese dogfish	Yes	
29	North Atlantic Right Whale	Yes	
30	Sea lamprey	No	
31	Sea-pen and Burrowing Megafauna Communities	No	
32	Seamounts	Yes	
33	Spotted ray	No	
34	Spurdog	Yes	
35	Thick-billed murre or Brünnich's guillemot	No	
36	Thornback ray	Yes	status unknown or insufficient information available
37	White skate	No	
38	Zostera beds	No	
Environmental Impacts of Human Activities			
Number	Project	Applicability to ABNJ MPAs	Remarks
1	Offshore Renewable Energy Developments	No	
2	Dumping and Placement of Wastes or Other Matter at Sea	No	
3	Distribution of Reported Impulsive Sounds in the Sea	No	
4	Beach Litter Monitoring	No	

(Continued)

TABLE 6 Continued

Environmental Impacts of Human Activities			
Number	Project	Applicability to ABNJ MPAs	Remarks
5	Plastic particles in fulmar stomachs in the North Sea	No	
Hazardous Substances and Eutrophication			
Number	Project	Applicability to ABNJ MPAs	Remarks
1	Mercury losses from the chlor-alkali industry	No	
2	Intersessional Correspondence Group on Eutrophication	No	
3	Working Group on Inputs to the Marine Environment-Comprehensive Atmospheric Monitoring Programme-Deposition of air pollutants around the North Sea and North-East Atlantic	No	
4	Working Group on Inputs to the Marine Environment-Atmospheric Nitrogen Deposition-Atmospheric Deposition of Nitrogen to the OSPAR Maritime Area in the period 1990-2020	No	
5	Working Group on Inputs to the Marine Environment-Atmospheric Deposition of Heavy Metals-Assessment of Atmospheric Lead, Cadmium and Mercury Pollution to the OSPAR Maritime Area in 2020	Yes	
6	Working Group on Monitoring and on Trends and Effects of Substances in the Marine Environment-Levels and trends in marine contaminants and their biological effects	No	
Offshore Industry			
Number	Project	Applicability to ABNJ MPAs	Remarks
1	Offshore Installations-2015 Update of the Inventory of Oil and Gas Offshore Installations in the OSPAR Maritime Area	No	
2	Offshore Installations-Assessment of the disturbance of drill cuttings during decommissioning	No	
3	Discharges, Spills and Emissions	No	
Radioactive Substances			
Number	Project	Applicability to ABNJ MPAs	Remarks
1	Liquid Discharges from Nuclear Installations in 2022	No	
2	Discharges from the Non-Nuclear Sector	No	
3	Periodic Evaluations of Progress towards the Objective of the Radioactive Substances Strategy	No	

monitor and assess individual species, including the Common skate, Loggerhead turtle, and Oceanic Ridges with hydrothermal vents, with one project dedicated to each species. Monitoring and assessing only 19 species in high seas MPAs seems insufficient. The “Hazardous Substances and Eutrophication” project monitors atmospheric lead, cadmium, and mercury pollution. Although such monitoring can cover high seas MPAs, the monitoring scope remains primarily within national jurisdictions. It is also noteworthy that Committee Assessment monitoring reports rarely disclose which Contracting Parties are responsible. For example, the assessment report on Portuguese dogfish is based on International Council for the Exploration of the Sea (ICES) population assessments, peer-reviewed literatures, and expert opinions but does not disclose the information about the monitoring countries involved ([OSPAR Assessment Portal, 2024](#)).

4 Recommendations

4.1 Encourage non-Parties to the BBNJ Agreement to apply its EIA Provisions in high seas MPAs

As previously discussed, members of the IFBs of high seas MPAs will not be obligated to adhere to the BBNJ Agreement’s EIA requirements if they are not Parties to the BBNJ Agreement. However, high seas MPAs play important roles in protecting the environment of the high seas ([Scovazzi, 2004](#)). Given that the BBNJ Agreement set a specific part for EIA which may enhance the EIA practices in the ABNJ ([Li and Zhang, 2024](#)), it may be necessary for high seas MPAs and their members to apply BBNJ Agreement’s EIA provisions or guidelines for better participation in the governance

TABLE 7 The applicability of the OSPAR Committee Assessment projects to the NEAMPA (concise version).

Biodiversity and Ecosystem		
Number	Project	Remarks
1	Basking shark	
2	Black-legged Kittiwake	status unknown or insufficient information available
3	Blue Whale	
4	Carbonate Mounds	
5	Common skate	status unknown or insufficient information available
6	Coral Gardens	
7	Deep-sea sponge aggregations	
8	Gulper Shark	status unknown or insufficient information available
9	Leafscale gulper shark	
10	Leatherback turtle	status unknown or insufficient information available
11	Loggerhead turtle	status unknown or insufficient information available
12	Lophelia pertusa reefs	
13	Oceanic Ridges with hydrothermal vents	
14	Porbeagle	status unknown or insufficient information available
15	Portuguese dogfish	
16	North Atlantic Right Whale	
17	Seamounts	
18	Spurdog	
19	Thornback ray	status unknown or insufficient information available
Hazardous Substances and Eutrophication		
Number	Project	
1	Working Group on Inputs to the Marine Environment- Atmospheric Deposition of Heavy Metals-Assessment of Atmospheric Lead, Cadmium and Mercury Pollution to the OSPAR Maritime Area in 2020	

of the ABNJ. We recommend promoting the application of the BBNJ Agreement's EIA provisions by non-Parties in high seas MPAs. Specifically, two approaches are worth considering.

First, it is advisable to encourage non-Parties to the BBNJ Agreement to consider applying the BBNJ Agreement's EIA standards. There are precedents for advocating non-Parties to high seas MPAs to adopt such provisions. For instance, the CCAMLR has introduced encouragement without legally binding

force for non-Parties, encouraging all fishing vessels entering the areas to notify the CCAMLR Secretariat in advance with details such as flag state, vessel size, IMO number, and intended route in the SOISS and RSR MPAs (CCAMLR, 2009, 2016). The IFBs of high seas MPAs could adopt similar voluntary provisions for their members which are non-Parties to the BBNJ Agreement, encouraging their implementation of the EIA standards of the BBNJ Agreement. Since members of the IFBs of high seas MPAs are required to follow the conservation measures and regulations of these MPAs, such encouragement may exert a greater impact on non-Parties to the BBNJ Agreement that are members of the IFBs of high seas MPAs. This impact is likely to be greater than the effect of similar encouragement on States that are not members of the IFBs.

Second, members of the IFBs of high seas MPAs that are non-Parties to the BBNJ Agreement may be encouraged to refer to or apply the EIA provisions under the BBNJ Agreement under a number of circumstances. For example, when the members need to consult with other States that are both members of the IFBs of high seas MPAs and Parties to the BBNJ Agreement regarding concerns about proposed activities or environmental impact monitoring cooperation, the EIA provisions under the BBNJ Agreement may be taken into consideration. As previously mentioned, States that are both members of the IFBs of high seas MPAs and Parties to the BBNJ Agreement must fulfil the obligations of both international instruments. Appropriate application of the provisions under the BBNJ Agreement may facilitate consensus among States, promote international cooperation, and avoid conflicts or disputes. However, it is important to respect the autonomy of members that are non-Parties to the BBNJ Agreement in choosing whether to apply the standards of the BBNJ Agreement. This is in accordance with "*pacta sunt servanda*" and is a significant aspect of countries' discretion in EIA systems.

4.2 Possible interpretation of "not undermine" proviso in the context of the EIA

During the negotiations of the BBNJ Agreement, delegates had to balance designing a treaty politically advantageous to a sufficient number of states (thus capable of ratification) with creating a framework that could effectively achieve the conservation of biodiversity in ABNJ (Mendenhall et al., 2022). The "not undermine" proviso played a significant role in this stage. Some states used this proviso to prevent the BBNJ Agreement's provisions from adversely affecting the IFBs they have joined, and to promote their own positions regarding specific BBNJ Agreement's provisions, particularly those related to IFBs (Beringen et al., 2022). Since the BBNJ Agreement is formally adopted, it appears necessary to interpret this proviso to facilitate the application of the BBNJ Agreement. First, the "not undermine" proviso in the context of the EIA provisions of the BBNJ Agreement should include not undermining the effectiveness of decisions made by relevant IFBs. Article 2 of the BBNJ Agreement prescribes that international cooperation and coordination are important approaches to

fulfilling the objectives of the BBNJ Agreement. As an integral part of the BBNJ Agreement, the EIA provisions should ensure international cooperation and coordination and achieve the objectives established by the BBNJ Agreement. Additionally, the “not undermine” proviso may be significant for implementing article 8 of the BBNJ Agreement as mentioned above. Undermining the effectiveness of decisions made by relevant IFBs may hinder international cooperation and coordination. Moreover, article 31(1) of the VCLT requires States to interpret treaties in good faith according to their ordinary meaning in context. Ensuring that the effectiveness of the IFBs of high seas MPAs is not undermined aligns with the purpose of article 29(4) of the BBNJ Agreement, which exempts members from further screening or EIA if they have already assessed the potential impacts of planned activities in high seas MPAs.

Second, it should not be assumed that the EIA provisions under the BBNJ Agreement shall supersede or replace the EIA provisions set by the IFBs of high seas MPAs. This is also reflected in article 29 of the BBNJ Agreement, which respects existing IFBs.

Third, it should not be assumed that a state can modify the EIA obligations set by the IFBs of high seas MPAs by invoking the BBNJ Agreement to reinterpret these obligations. Expanding the interpretation of obligations in one international legal instrument by using provisions from another may be inappropriate, and greater attention should be given to the precise meaning of the provisions to be interpreted (Craig, 2008). This is not only supported by article 26 of the VCLT but also by international arbitration cases. In the MOX Plant case, the tribunal rejected Ireland’s argument that the information access provisions of the OSPAR Convention should be interpreted in light of the broader practices under the 1998 Aarhus Convention and EU directives (International Tribunal for the Law of the Sea, 2008). The tribunal prudently limited its interpretation of the terms submitted and accurately considered the intentions of the Contracting Parties of the OSPAR Convention (McDorman, 2004). One significant reason for this stance was that, at the time, neither the UK nor Ireland were Parties to the 1998 Aarhus Convention (United Nations Treaty Collection, 2025a). Since the NEAMPA is based on the OSPAR Convention, and the interpretation of this convention is discussed in the case, this case could serve as a reference for NEAMPA members in interpreting the OSPAR Convention. Based on the position of the tribunal in this case, it can be assumed that the EIA obligations under the BBNJ Agreement should not be interpreted in a way that extends the EIA obligations of NEAMPA members who are not Parties to the BBNJ Agreement.

4.3 Possible understanding of the “due regard” in the context of the EIA

Firstly, when a State conducts short-term or long-term monitoring for EIA within high seas MPAs, it should notify other States timely. The minimum scope of such notifications should include all members of the IFBs of high seas MPAs. States that are both Parties to the BBNJ Agreement and members of the IFBs of high seas MPAs must provide timely and accurate notifications. These updates should be shared through both the CL-HM under the

BBNJ Agreement and the IFBs’ information exchange mechanisms. This ensures that other States operating in high seas MPAs can respond promptly and minimize disruptions to their freedom of the high seas. Public notification and consultation are crucial, as they are important means of informing stakeholders about potential threats and influencing whether and how proposed activities are conducted (Payne, 2022). Additionally, EIAs should not substantially infringe upon other States’ freedom of the high seas. For example, if a State’s activities for EIA within the high seas MPAs significantly obstruct other States’ rights to fish or navigate written in UNCLOS or regulations set by the IFBs of high seas MPAs, such activities cannot be considered as complying with the “due regard”.

Secondly, it is advised that EIAs should not be prioritized over other freedom of the high seas. This is because no international legal documents support the prioritization of EIA over other freedom of the high seas. Where other States’ freedom of high seas complies with existing international legal instruments, the freedom of other States should be on par with those of the state conducting EIAs. This can reduce the likelihood of a state abusing EIA activities to seek exclusive benefits within high seas MPAs.

4.4 Develop the CL-HM between the BBNJ Agreement and the IFBs of high seas MPAs

According to article 51(4) of the BBNJ Agreement, the CL-HM should be managed by the Secretariat established under article 50 of the BBNJ Agreement. The Secretariat should actively engage with existing IFBs of high seas MPAs and ensure comprehensive communication on matters including EIAs. For the engagement with the IFBs of high seas MPAs, the following considerations may apply.

First, the Secretariat of the BBNJ Agreement should encourage the members of the IFBs of high seas MPAs that are not yet Parties to the BBNJ Agreement to provide relevant information about EIAs conducted within high seas MPAs to the CL-HM. The member who conducts the EIA should enjoy autonomy in deciding which domestic institutions are responsible for providing information. Second, the Secretariat of the BBNJ Agreement may develop memoranda of understanding (MoU) or cooperation agreements with the IFBs of the IFBs of high seas MPAs to establish detailed arrangements for the CL-HM related to EIA. Existing practices among the IFBs of high seas MPAs may serve as references. For instance, in 2024, the Secretariats of the RAMOGE Agreement and the Pelagos Agreement signed a MoU aimed at establishing principles of cooperation between the two agreements and promoting information exchange and sharing to encourage international cooperation in the protection of marine mammals and their habitats (Pelagos Sanctuary, 2024). Additionally, the Secretariat of the BBNJ Agreement might also consider entering into collective arrangements with the IFBs of high seas MPAs. For example, since the OSPAR Convention does not regulate fishing based on article 4 of its Annex V, the North East Atlantic Fisheries Commission (NEAFC) is an important IFB for regulating fishing activities in the NEAMPA. For better coordination, the OSPAR

Commission and the NEAFC signed a MoU in 2008, which ensures the free flow of information (including data) between the two organizations (The NEAFC and the OSPAR Commission, 2008). This arrangement provides general guidance for information exchange between them (Kvalvik, 2012). As practices developed, a collective arrangement was adopted in 2014, which requires relevant international organizations to cooperate in information exchange and EIAs (OSPAR Commission, 2024b). The Secretariat of the BBNJ Agreement can draw lessons from this collective arrangement to establish arrangements for EIA and CL-HM with the IFBs of high seas MPAs, particularly in the NEAMPA.

Regarding the SOISS and RSr MPAs, article 23 of the Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention) stipulates that the Commission and the Scientific Committee shall cooperate with other IFBs and may enter into agreements with them when necessary (the CAMLR Convention, 1980, Art 23). Currently, the Commission and the Scientific Committee have signed MoU with IFBs such as the Agreement for the Conservation of Albatrosses and Petrels (ACAP) and the Southern Indian Ocean Fisheries Agreement to promote cooperation (CCAMLR, 2023). In the MoU signed in 2021 between CCAMLR and the Secretariat of the ACAP, the Parties may share expertise in developing systems for data collection, analysis, and information exchange (CCAMLR and ACAP, 2021). The Secretariat of the BBNJ Agreement could benefit from using these MoU as references when designing the CL-HM with the SOISS and RSr MPAs.

4.5 Develop EIA guidelines for high seas MPAs

The EIA provisions under the BBNJ Agreement may not be the first attempt by the international community to construct an EIA mechanism at the global level. As early as 1978, a U.S. Senator submitted a draft regarding international EIAs to the United Nations Environment Programme (UNEP), proposing that the UNEP serve as the core institution for consultations and initiations of negotiations when global common might be impacted (Craik, 2008). However, this proposal was not realized due to it exceeding UNEP's mandate (Craik, 2008). Nevertheless, the draft emphasized the significance of developing an EIA mechanism for global common including the high seas (Craik, 2008). The challenge lay in determining whom to notify about potential impacts on the global common and whom countries should consult with in the absence of a leading international institution at that time (Craik, 2008).

The failure of the proposal made by the U.S. Senator assumes that establishing a treaty regarding EIA in high seas MPAs may be difficult. It depends on sincere negotiations among the countries involved, based on the rules of procedure of the relevant IFBs. However, the establishment of legal instruments in the IFBs of high seas MPAs may also be influenced by political factors (Sykora-Bodie and Morrison, 2019), which can make it more challenging for members to develop a particular treaty regarding EIA. Nevertheless, given the unique ecological characteristics and vulnerabilities of high seas MPAs, advancing practices for EIA in these areas appears crucial. Therefore, it

is recommended to develop guidelines for EIAs in high seas MPAs. Although such documents are not legally binding, they can still play a crucial role by creating a unified framework for EIA procedures that relevant countries should adhere to. Additionally, these documents may support strategic environmental assessments and project post-evaluations, which have not yet been established in legally binding documents (Craik, 2008). Besides elaborating procedures for EIA, the guidelines should clarify the relationship between procedural obligations and substantive environmental requirements. Moreover, they should present the best practices of EIAs according to article 38 of the BBNJ Agreement. For instance, they should specify a timeline for the EIA process, mandating that the assessment commence during the planning phase to proactively minimize potential impacts and ensure transparency for both the public and decision-makers (Environmental Law Institute, 2021). In addition, they should establish rigorous transparency standards. When other authorities issue formal comments on a project, these remarks should be documented in writing and incorporated into the EIA, ensuring that all stakeholders can access these viewpoints (Environmental Law Institute, 2021). Formal responses from project authorities must also be included in the final EIA documentation (Environmental Law Institute, 2021).

Relevant institutions of high seas MPAs should primarily undertake the development of such guidelines with support from the STB established by the BBNJ Agreement. Relevant institutions of high seas MPAs should encourage members to actively disclose and report on key challenges encountered during EIAs and monitoring. By considering the environmental peculiarities of each high seas MPAs, the guidelines are likely to provide practical references for members. The support provided by the STB established under the BBNJ Agreement could include facilitating the exchange of data and information between Parties that are not members of the IFBs of high seas MPAs and the relevant IFBs. This support would enable these institutions to gather more comprehensive information, thereby allowing the EIA guidelines to reflect the best practices and needs of high seas MPAs.

For prospective high seas MPAs, the situation may be more complex than the current ones. If no countries are Parties to the BBNJ Agreement, it may be advisable to encourage these countries to establish EIA mechanisms that align with the EIA provisions of the BBNJ Agreement. When Parties to the BBNJ Agreement are involved, they should actively promote the integration of BBNJ Agreement's EIA system into the proposed high seas MPAs, while adhering to the procedural rules of establishing the proposed high seas MPAs and Part III of the BBNJ Agreement. Additionally, Parties to the BBNJ Agreement involved are expected to introduce proposals regarding EIA mechanisms or guidelines during the negotiation of establishing the proposed high seas MPAs.

4.6 Consider STB complementary in the determination of equivalency regarding the standard of the EIA

The auxiliary role of the BBNJ Agreement's STB in determining whether the EIA standards for high seas MPAs are equivalent to or

exceed those set by the BBNJ Agreement should be given due consideration. During the negotiations of the BBNJ Agreement, there was controversy over the scope of authority of the STB, but it was agreed that the STB should have the authority to develop guidelines for EIAs (Mendenhall et al., 2022). Article 38 of the BBNJ Agreement authorizes the STB to formulate standards and guidelines including determining whether planned activities meet or exceed the thresholds for screening or EIA specified in article 30. Additionally, article 49 of the BBNJ Agreement authorizes the STB to consider appropriate opinions provided by relevant IFBs. This indicates that the STB is authorized to discuss relevant opinions and information provided by the IFBs of high seas MPAs regarding EIAs. However, the STB is not authorized to unilaterally decide whether the EIA standards of high seas MPAs are equivalent to those set by the BBNJ Agreement. Article 29 of the BBNJ Agreement empowers the Parties having jurisdiction or control over the planned activities to determine whether the EIA standards applied are equivalent to those specified in the BBNJ Agreement. Therefore, the STB can only play a supplementary role in the determination of equivalence.

This can be accomplished in two ways. First, the STB may submit a report to the COP if invited, assessing whether the existing EIA standards for high seas MPAs align with or exceed the standards set by the BBNJ Agreement. Second, it may provide case-by-case recommendations on the Parties' determinations regarding the needs for an EIAs in high seas MPAs during the screening phase, as outlined in article 31(1) of the BBNJ Agreement. These recommendations could include preliminary evaluations of whether the EIA thresholds in the relevant high seas MPAs are equivalent to or higher than the standards established by the BBNJ Agreement, for the consideration of the Parties.

4.7 Enhance EIA practices in high seas MPAs

Each high seas MPAs has its unique characteristic, which has led to its designation by the international community (Warner, 2017). All activities within these high seas MPAs must align with the objectives for which the areas were established. Proposed activities should not damage the environment of high seas MPAs. EIAs are beneficial for evaluating whether proposed activities balance the utilization and protection of high seas MPAs. Therefore, it is essential to strengthen the practices of EIAs within high seas MPAs. To achieve this, first, cooperation among members of the IFBs of high seas MPAs should be enhanced. Compared to countries located in other regions, members of the IFBs of high seas MPAs have a deeper understanding of these areas. Additionally, these countries have a stronger stake in the sustainable utilization of these areas. This makes it easier to achieve international cooperation on EIA practices within these areas. Such cooperation may include but is not limited to, improving notifications of proposed activities, strengthening consultations and joint research with countries concerned about the proposed activities, and enhancing information-sharing mechanisms related to EIAs. Second, before the BBNJ

Agreement comes into force, it is recommended to increase the implementation of EIAs based on existing EIA provisions. Parties who are members of the IFBs of high seas MPAs can draw lessons from these practices and improve their future fulfilment of EIA obligations set by the BBNJ Agreement in high seas MPAs.

5 Conclusion

After the BBNJ Agreement enters into force, its EIA provisions will apply to high seas MPAs. This paper argues that although the BBNJ Agreement presents a significant step forward in improving the legal framework for EIAs in ABNJ, its successful implementation in high seas MPAs will depend on addressing a number of challenges. The first part of this paper has analyzed current treaties and practices in the four high seas MPAs. It finds that current EIA provisions set by UNCLOS appear ambiguous. The EIA provisions under the BBNJ Agreement present its ambition of improving the current EIA law and practices in ABNJ. In addition, the four high seas MPAs have the basis of international law regarding EIA. The second part of this paper finds that issues may arise during the application of the EIA provisions under the BBNJ Agreement in high seas MPAs. First, if a member of the IFB of high seas MPA does not ratify the BBNJ Agreement, it is not obliged to apply EIA provisions under the BBNJ Agreement. The EIA practices in respect of high seas MPAs may be fragmented. Second, ambiguity of the "not undermine" proviso may influence the application of the EIA provision under the BBNJ Agreement. Third, "due regard" as a restriction of freedom of the high seas is ambiguous concerning the EIA. This may influence countries' EIA practices in high seas MPAs. Fourth, the CL-HM set by the BBNJ Agreement requires further development to cooperate with the institutions of high seas MPAs. Fifth, it may be difficult to determine whether the EIA standards, subjects and procedures for high seas MPAs are equivalent to those set in the BBNJ Agreement since they are fragmented. Sixth, the EIA provisions for existing high seas MPAs appear limited. Seventh, the practices of the EIA in high seas MPAs appear insufficient. The third part of this paper puts forward several suggestions for the above challenges. First, non-Parties could be encouraged to apply EIA provisions under the BBNJ Agreement. Second, the "not undermine" proviso in the context of the EIA provisions of the BBNJ Agreement should include not undermining the effectiveness of decisions made by relevant IFBs of high seas MPAs. It should not be assumed that the EIA provisions under the BBNJ Agreement shall supersede or replace the EIA provisions set by the IFBs of high seas MPAs. This aligns with the promotion of international cooperation and coordination set by articles 2 and 8 of the BBNJ Agreement. Third, "due regard" in the context of the EIA should include timely notification and EIAs should not be prioritized over other freedom of the high seas. Fourth, the Secretariat of the BBNJ Agreement could encourage members of the IFBs of high seas MPAs that are non-Parties to the BBNJ Agreement to take part in information exchange regarding the EIA. The Secretariat of the BBNJ Agreement may cooperate with the IFBs of high seas MPAs by the establishment of MoU or collective arrangements. Fifth, the IFBs of high seas MPAs are expected to develop their own EIA guidelines with

reference to the EIA provisions under the BBNJ Agreement and the support from the STB. Sixth, the STB should play a complementary role in the determination of the equivalency of the standard of the EIA. Seventh, members of the IFBs of high seas MPAs are recommended to enhance EIA practices for future application of the EIA provision under the BBNJ Agreement.

The changing dynamics of ocean governance offer both opportunities and challenges. It is crucial for stakeholders to be proactive in protecting marine biodiversity by taking substantive action and promoting international collaboration. The success of the BBNJ Agreement will rely on the collective commitment of the international community to maintain environmental integrity in ABNJ, ensuring that the oceans continue to be a sustainable resource for future generations.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material. Further inquiries can be directed to the corresponding author/s.

Author contributions

YW: Conceptualization, Supervision, Writing – review & editing. XP: Conceptualization, Formal Analysis, Funding acquisition, Methodology, Visualization, Writing – original draft, Writing – review & editing.

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Funding

The author(s) declare that financial support was received for the research and/or publication of this article. This research is funded by the China Oceanic Development Foundation and the Academy of Ocean of China (Grant number: CODF-AOC202304).

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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The author(s) declare that Generative AI was used in the creation of this manuscript.

ChatGPT-4o was used for proofreading.

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