Safeguarding the Sargasso Sea: The Role of the Biodiversity Beyond National Jurisdiction Agreement in Protecting High Seas Ecosystems

by

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Abstract

Biodiversity loss in the High Seas is an issue that has long evaded international action due to the legal standing of the High Seas as a global resource common (Ardron et al., 2014; Freestone, 2018). This has proven to be detrimental to High Seas biodiversity hotspots such as the Sargasso Sea, which could not be legally protected despite its ecological significance (Freestone, 2018). The advent of the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement has changed this, and for the first time, there exists an internationally recognized procedure for implementing legally enforceable conservation measures in the High Seas (Kim, 2024; Ricard, 2023). The BBNJ Agreement cannot, however, override or undermine any existing conservation policies of sectoral bodies (Langlet & Vardrot, 2023; Friedman, 2019; Scanlon, 2018). Such a provision is particularly influential in the Sargasso Sea, where human industrial activity is the leading cause of biodiversity loss (Laffoley et al., 2011). Using targeted policy coding and gap analysis, this thesis seeks to uncover the role that the BBNJ Agreement plays in stewarding the future conservation regime of the Sargasso Sea. It is revealed that sectoral bodies wield considerable power over the conservation future of the Sargasso Sea. The BBNJ Agreement, contrastingly, can exert little influence over the design of this regime, and strategies such as voluntary agreements and internal norm setting must be investigated to ensure that the Sargasso Sea is adequately protected.

Key terms: Biodiversity Beyond National Jurisdiction (BBNJ) Agreement, Sargasso Sea, Area-based Management Tools (ABMT), Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), conservation

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Dalhousie University sits in Kjipuktuk, Mi’kma’ki, the unceded and ancestral territory of the Mi’kmaq people. As an academic of settler descent, it is a privilege to study on this land. Mi’kma’ki is governed by the Peace and Friendship Treaties of the 1700s, a series of multilateral treaties signed between Great Britain, the Mi’kmaq, the Maliseet, and the Passamaquoddy nations. Like the Agreement discussed in this thesis, the Peace and Friendship Treaties were signed between equal nations. This fact must be recognized and respected in the pursuit of genuine truth and reconciliation in so-called Canada.

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List of Abbreviations

ABMT	Area-Based Management Tool(s)
BBNJ	Biodiversity Beyond National Jurisdiction
EIA	Environmental Impact Assessment
ESG	Environment, Social, and Governance
IMO	International Maritime Organization
IPBES	Intergovernmental Panel for Biodiversity and Ecosystem Services
ISA	International Seabed Authority
MPA	Marine Protected Area
NAFO	Northwest Atlantic Fisheries Organization
RFMO	Regional Fisheries Management Organizations
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea

1.0 Introduction

Biodiversity loss is an internationally recognized planetary crisis threatening to upend the regulation of ecosystem functions and the subsequent foundation for all life-sustaining properties of the Earth (Gamfeldt et al., 2008; Godbold & Solan, 2009; Intergovernmental Panel for Biodiversity and Ecosystem Services [IPBES], 2019; Singh, 2002). As of the year 1500, nearly 700 species have been driven to extinction (IPBES, 2019). Today, at least one million species are being threatened by extinction, a rate that is 10 to 100 times higher than in the last ten million years.

The marine environment has not been spared from this crisis and may be more threatened than we know. Marine ecologists have successfully identified a still-unknown fraction of the theorized number of marine species in our oceans today (estimates suggest that between 11 and 78% of species have been described) (Luypaert et al., 2020). In the words of Luypaert et al. (2020), "[w]ithout knowing how many species there are, there is no way to know whether we are effectively conserving marine diversity in different regions and marine groups" (p. 60). These discrepancies have also made it difficult to know whether the rate of extinction in marine environments is proportional to that of terrestrial environments, or if these rates are consistent with historic rates, as some research has suggested.

Extinction rates aside, marine ecosystems have been severely degraded by human activity and require substantial conservation measures to prevent their eventual destruction (IPBES, 2019). For example, fisheries in regions with little biodiversity tend to collapse at a higher rate than those with expected levels of biodiversity (Worm et al., 2006). This constitutes the need for the conservation of marine species in addition to the intrinsic value that biodiverse oceans have.

One strategy for attaining marine biodiversity conservation is the establishment of policies and other governance strategies.

Several examples of marine biodiversity governance exist; however, none have the mandate to devise a conservation plan for the world's biggest resource commons: the High Seas. Occupying more than 40% of the Earth's surface (Freestone et al., 2013), the High Seas is a region of the ocean that falls beyond any one State's control. These international waters are governed by global agreements and are navigated by any State that so pleases. They serve as a critical source of economic activity due to the plentiful fishing, shipping, and, eventually, mining that occurs or will occur in areas beyond national jurisdiction.

Some areas of the High Seas also serve as biodiverse havens for migratory and endangered species around the world. One such location is the Sargasso Sea, an area beyond national jurisdiction that falls East of the Carolinas of the United States and North of the Caribbean and that is defined exclusively by ocean currents (J. Ardron et al., 2011). The biological significance of this and other regions of the High Seas is being recognized by the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement, the third implementing agreement to the United Nations Convention on the Law of the Sea (UNCLOS).

This thesis seeks to uncover the capacity of the BBNJ Agreement to support the implementation of necessary conservation measures in the Sargasso Sea (the Sea). This will be accomplished by first determining the conservation needs of the Sea using existing literature on the subject, at which point the capabilities of the BBNJ Agreement will be assessed for this case study. This introductory chapter expands on the points raised in the paragraphs above to contextualize the importance of the issue of study and to provide a baseline understanding of the technical components of the geography and Agreement being considered in this work.

1.1 The Sargasso Sea

The biodiversity loss crisis implicates one of the most unique large marine ecosystems on the planet. The Sargasso Sea is a borderless marine area in the Northwest Caribbean (Figure 1) with no land-related boundaries that is instead defined by currents, which shift over time (Laffoley et al., 2011). The working assessment area of the Sargasso Sea is just shy of 4.2 million km^2 and reaches 4,500 m at its deepest point. It is the only region of the High Seas to have been independently assessed in the First and Second Global Integrated Marine Assessment from the United Nations, a further signifier of its importance (Freestone, 2021).

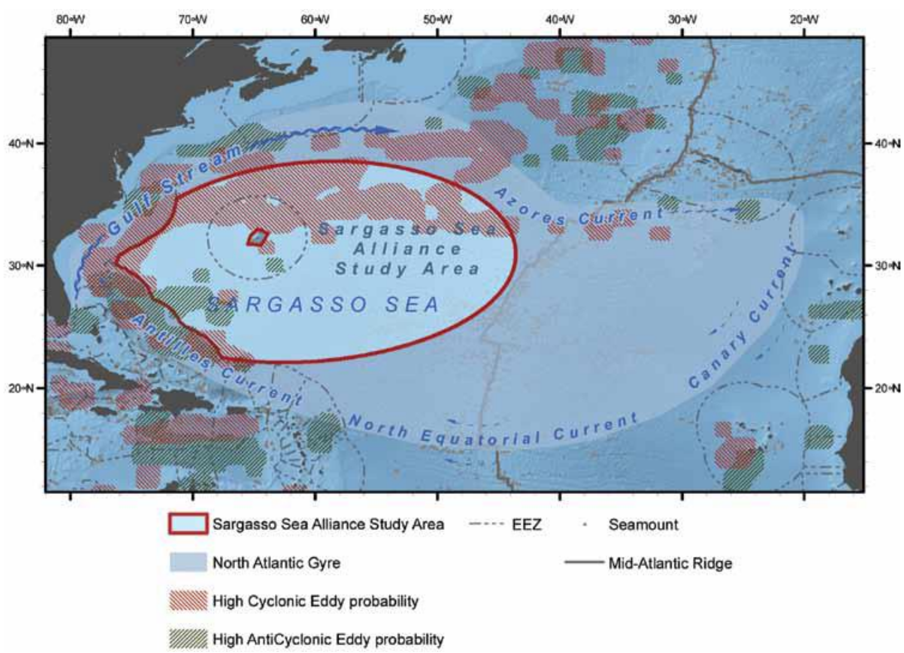

Figure 1. Current delimitations of the Sargasso Sea, including relevant currents that define the region (Laffoley et al., 2011). To remain consistent with the academic literature on the Sargasso Sea, this thesis will utilize the area defined by the Sargasso Sea Commission when referring to this region.

The Sargasso Sea is named for the presence of *Sargassum*, a genus of macroalgae that remains in the water column for the entirety of its lifecycle (Laffoley et al., 2011). It is a floating organism that forms dense mats shaped by the winds of the West Atlantic and serves as an important resting place for organisms in an otherwise open expanse of ocean. Some species have evolved to rely on the one million tonnes of *Sargassum* present in the Sargasso Sea, making the region home to ten known endemic species (Laffoley et al., 2011; Roe et al., 2022). *Sargassum* mats – also referred to as the 'canopy' – are critical spawning grounds and waypoints for migratory species (Laffoley et al., 2011). Several fish species lay eggs in the dense canopy of macroalgae, and migratory sharks have been observed pupping in the depths of the Sea. Various species of tuna have also been observed to spawn here and several others pass through during their migrations. It has been theorized that sea turtles in the Caribbean (all of which are endangered or critically endangered) spend the years of their adolescence in the Sargasso Sea (Laffoley et al., 2011; Mansfield et al., 2021). Other charismatic megafauna rely on the Sea during their migrations as well, including several species of whales and dolphins (Wachtendonk et al., 2023). It is clear from the volume of endemic species, nursery properties of the Sargasso Sea, and prevalence of migratory species in the area that the Sargasso Sea is a biodiversity hotspot in the High Seas.

Human activity in a sensitive marine ecosystem like the Sargasso Sea can have a number of effects on the surrounding environment, including biodiversity loss and marine pollution (Herbert-Read et al., 2022). One such activity is shipping. The Sargasso Sea is within one of the world's most travelled international shipping routes. The North Atlantic makes up 32% of all international shipping and is "the busiest ocean in the world" as a result (Roberts, 2011). This amount of shipping is not without consequence; the introduction of invasive species to the Sea, chemical and physical pollution incurred from waste discharging, and ship strikes against cetaceans can all occur as a result (Roberts, 2011).

Another human activity in the Sargasso Sea is fishing. It is estimated that the Sargasso Sea is responsible for nearly USD 100 million worth of fisheries products, both from fishing directly in the Sea and from the nursery services it provides to many fished species in the

Atlantic (Pendleton et al., 2014). Fisheries in this region rely predominantly on various species of tuna, swordfish, and billfish (Luckhurst, 2015). Most fishing in this region is done using gillnets and longlines, which involves setting hundreds of baited hooks on a single line anchored to the seafloor (Moffitt, n.d.). Bottom trawling has also been practiced in the Sargasso Sea, to the detriment of the local environment. In fact, the New England and Corner Rise seamounts – both located within the Sea – were closed in 1995 and will remain closed until 2026 in an attempt to recover the degraded ecosystem (Bulger, n.d.). Though there has been a decrease in fishing in the Sargasso Sea since the 1990s, it is estimated that 40,000 tonnes of fish are still caught annually in this area (Sumaila et al., 2013).

Though no current activity exists, interest has been expressed regarding deep-sea mining in the Sea and deposits of valuable mineral resources have been catalogued for the area (Parson & Edwards, 2011). This constitutes a concern, as areas such as the Clarion-Clipperton Zone in the Pacific Ocean have accrued contracts from more than 20 countries (International Seabed Authority, 2022) despite the absence of regulatory standards for pursuing such an activity (Pickens et al., 2024). If a similar level of development were to occur in and around the Sargasso Sea, challenges to the ecological integrity of the area could present themselves.

1.2 International Law in the High Seas

Such human activities are overseen by the United Nations Convention on the Law of the Sea (UNCLOS, the Convention). The Convention is responsible for governing the ocean both within and beyond State jurisdiction. It was signed into force in 1982 as a mechanism for governing the High Seas and delineating ocean ‘borders’ over which individual states can exercise sovereignty, called Exclusive Economic Zones (International Maritime Organization Department of Legal Affairs, n.d.). It has been described as the ‘constitution for the oceans’ (Zou

& Telesetsky, 2023) and is one of the few pieces of UN legislation that gets its own dispute resolution body – the International Tribunal for the Law of the Sea. It has continually grown since its adoption and has since had three implementing agreements bringing new legal jurisdiction to the Convention (Kojima, 2023). This adaptability has been particularly useful in the face of impending climate, biodiversity loss, and pollution crises, all of which are seriously affecting the ocean (Fava, 2022; National Aeronautics and Space Administration, 2024; Worm et al., 2006). It is critical, therefore, that UNCLOS's mandate expands to adopt these changes, otherwise risking disconnects with other international laws and organizations.

1.2.1 The Biodiversity Beyond National Jurisdiction Agreement

The third implementing agreement, 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 Nation Jurisdiction (BBNJ Agreement), is one of the tools that UNCLOS has implemented to remain aligned with international environmental law. The BBNJ Agreement was first conceptualized in 2004 during the fifth meeting of the UN Open-ended Informal Consultative Process on the Oceans and the Law of the Sea (United Nations, n.d.). It was here that areas beyond national jurisdiction were highlighted as a subject requiring special attention when considering the sustainable use of marine resources. From there, nearly 20 years of informal working groups, preparatory committees, and intergovernmental conferences were initiated to establish a third implementing agreement under UNCLOS. The product of this work is an implementing agreement with the mandate of coordinating existing international organizations and global actors in the High Seas for the sake of establishing a holistic approach to biodiversity conservation (Kim, 2024; Ricard, 2024; Trung, 2023). The text of the agreement is unique in that it mandates collaboration and consultation with relevant actors in lieu of administering top-down best practices, as UN treaties historically have done (Sabel & Victor, 2017). Further, it draws substantially from the text of previous agreements, a feature that demonstrates the integration of UNCLOS into norms of other UN areas of priority. There are four areas of interest that are introduced under the BBNJ Agreement: marine genetic resources, area-based management tools (ABMT), environmental impact assessment (EIA), and capacity building and the transfer of marine technology (BBNJ Agreement, 2023).

These areas of concentration are aligned with Parts XII, XIII, and XIV of UNCLOS on the Protection and Preservation of the Marine Environment, Marine Scientific Research, and Development and Transfer of Marine Technology, respectively (UNCLOS, 1982). While these parts both directly and indirectly reference the four concentrations listed above, no text is included on *how* environmental protection and scientific research are to be conducted. The BBNJ Agreement brings substance to these Parts by adopting appropriate Articles to establish the normative procedures for meeting UNCLOS's original targets.

The primary function of the BBNJ Agreement is to mandate cooperation and coordination between existing global, regional, subregional, and sectoral bodies. Further "[t]his Agreement shall be interpreted and applied in a manner that does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies and that promotes coherence and coordination with those instruments, frameworks and bodies." (BBNJ Agreement, 2024, Article 5.2). This form of coordination is unique to the agreement and underscores the importance of multisectoral cooperation when attempting to conserve a global common such as the High Seas. Involving non-state actors in a decision-making process generally exclusive to States ensures that the BBNJ Agreement implements well-informed conservation measures that are predisposed to harmonizing with existing international law and other governance mechanisms. Some scholars have even gone as far as to say that the decision to adopt non-state actors into the fold of the BBNJ Agreement increases the legitimacy of decisions made within the legal realm of UNCLOS (Verdon, 2024).

The Conference of the Parties established under the BBNJ Agreement will take decisions related to ABMT and EIA, in consultation with the expertise of non-state actors. This means that no sweeping environmental protection measures will be implemented under the BBNJ Agreement, it will instead take case-by-case decisions as a group, and the decisions made will be legally binding for all Parties to the agreement (BBNJ Agreement, 2023, Article 23.3; Ricard, 2023). It is worth noting that States can be party to the BBNJ Agreement without being party to UNCLOS, as is the case for the United States, and should States feel as though the actions requested from them exceed that which they agreed to in the BBNJ Agreement, they are entitled to exemption (BBNJ Agreement, 2023, Article 60.7; Kim, 2024).

1.2.2 High Seas Sectoral Bodies

This thesis focuses on a specific group of non-state actors referred to as sectoral bodies. Sectoral bodies are empowered to regulate industries at the international level. Like most international organizations, membership in sectoral bodies is voluntary and is predominantly comprised of States. The use of the term sectoral bodies will refer to non-state actors responsible for overseeing individual sectors for the remainder of this thesis.

Several sectoral bodies exist on the High Seas. Arguably the most prevalent of these actors is the International Maritime Organization (IMO), established by the UN General Assembly (UNGA) in 1948 and entered into force in 1958 (IMO, n.d.-a). The intention of the organization is to govern the passage of ships through the High Seas. It sets environmental and safety standards for all ships and shipping-related activities.

Another major sectoral body on the high seas is the International Seabed Authority (ISA). This international organization dates back to 1994 when it was created pursuant to UNCLOS and its implementing agreement from the same year (ISA, 2022a). All parties to UNCLOS are automatically members of the ISA, as UNCLOS is the central document guiding the ISA. It governs all mineral-related activities in the High Seas and promotes the protection of the marine environment from any impacts of exploration and extraction.

Finally, Regional Fisheries Management Organizations (RFMOs) are critical actors in the High Seas governance scheme. RFMOs are region-specific, meaning that not all areas of international waters are subject to the same regulatory regimes (Directorate-General for Maritime Affairs and Fisheries, 2024). While these organizations can be joined by any State regardless of location, they focus on predefined stocks and take measures deemed appropriate by all Parties to manage those stocks. The RFMO operating in the Sargasso Sea is the Northwest Atlantic Fisheries Organization (NAFO) and will be the fisheries organization of focus in this thesis.

While these organizations are just a few of the primary bodies operating in international waters it remains evident that individual actors are already implementing conservation measures under their own mandates (IMO, n.d.-b; ISA, 2023; NAFO, n.d.). The BBNJ Agreement seeks to harmonize these measures to create more comprehensive conservation mechanisms and avoid the gaps of the current piecemeal approach (Freestone, 2018). The product of Conference of the Parties decisions should create holistic and universally agreed-upon conservation protocols in international waters. This will provide a single set of obligations for a given region of the High Seas.

1.3 Purpose of the Study

Marine biodiversity is critical to the continuation of life underwater and on land. To effectively protect marine biodiversity, we must understand the conservation needs of ecologically significant areas in international waters and the protection measures that are available to support them (Singh, 2002). The Sargasso Sea is one of the most unique cases of High Seas habitat, as it supports nearly a dozen endemic species, countless migratory species, and fisheries throughout the Atlantic Ocean (Laffoley et al., 2011). As its reach continues to change with its defining currents, an enforceable conservation plan with designated responsibilities is crucial to the protection of this ecosystem. Assessing conservation needs in relation to existing governance capacities can provide insight into how governance in the High Seas can be coordinated under the BBNJ Agreement.

1.3.1 Research Questions

The introductory research above provides ample information from which research questions can be developed. Though Laffoley et al. (2011)'s work adequately justifies the importance of conserving the Sargasso Sea, they fall short of evaluating the measures that would be appropriate for fulfilling those conservation aspirations. Research question 1 is necessitated as a result:

1. *What are the conservation needs of the Sargasso Sea and what existing High Seas governance mechanisms exist to meet those needs?*

Once an understanding of the current reality of conservation in the Sargasso Sea is developed, it is then necessary to investigate the role of the BBNJ Agreement in meeting the established conservation needs. According to the content of the Agreement text, as well as theories by Freestone (2018) and other scholars, research question 2 is posed as the following:

2. *What governance gaps exist in the needs of the Sargasso Sea that can be filled through the Biodiversity Beyond National Jurisdiction Agreement?*

These questions will provide an initial assessment of the potential applications, successes, and shortcomings of the BBNJ Agreement in the Sargasso Sea governance regime. This will be important as the Sargasso Sea Commission – the main advocacy group for the Sea – begins making recommendations on the conservation measures required for the Sargasso Sea in the coming year (Sargasso Sea Commission, 2021). Knowing the predicted degree of support that the BBNJ Agreement can offer to this region will provide more insight into the kinds of conservation regimes that will be plausible.

1.3.2 Research Design

The conservation needs of the Sargasso Sea will be determined by reviewing relevant literature to correlate the state of the Sea's ecosystem with a variety of marine conservation measures. From these recommendations, a second literature review will be performed to compile a set of performance indicators for the conservation measures identified for the Sargasso Sea. Relevant sectoral bodies in the Sargasso Sea will then have their conservation policies analyzed using these indicators. Relevant bodies will be determined by surveying the activities taking place in the Sea. The role of the Biodiversity Beyond National Jurisdiction Agreement will then be determined based on the results of the sectoral bodies analysis.

1.3.3 Hypothesis

This research expects to reveal that significant gaps and governance coordination challenges exist with the current piecemeal conservation approach that is possible in the Sargasso Sea. It is expected that these coordination challenges can be overcome through mandates under the BBNJ Agreement, but that implementing conservation mechanisms outside of the existing competencies of sectoral bodies could lead to the undermining of sectoral body mandates. This may result in the conclusion that the level of protection achievable in the Sargasso Sea is insufficient for the protection it warrants.

1.4 Conclusions

The Sargasso Sea is the ideal case study for analyzing the strengths and weaknesses of the BBNJ Agreement. Flexibility and adaptability are essential aspects of conservation recommendations that the BBNJ Agreement must adopt to be successful in this proverbial Litmus test of an ecosystem. Applying the BBNJ Agreement to this case study, therefore, serves to illuminate the possibilities for filling governance gaps in the regime. This study will also serve to elucidate the strengths and limitations of the BBNJ Agreement when coordinating the policy of sectoral bodies, which are not presently beholden to the existing regional agreements for the Sea. As such, this is a test case for starting 'from scratch' on a legal regime for a large marine ecosystem in international waters.

2.0 Literature Review

Much like any international agreement adopted under the UN Convention on the Law of the Sea, the Biodiversity Beyond National Jurisdiction Agreement and the conservation regimes it can implement are important precedent-setting tools for the treatment of marine biodiversity in international agreements. As the new presiding body on this topic, the quality of the governance strategies employed by the BBNJ Agreement must be investigated to determine its validity as an instrument for protecting the Sargasso Sea. The lack of hard power that the BBNJ Agreement can wield may result in diminished capacities for enforcing area-based management tools and environmental impact assessment provisions. Following this thread of inquiry, one of the primary themes of this literature review is a survey of approaches to governance and an exploration of commentary on the structure of the BBNJ Agreement.

A discussion of the various implementation strategies for area-based management tools and environmental impact assessments is also beneficial to the proposed study at hand. The best practices gleaned from this review will be used to inform the policy assessment done on sectoral bodies. Important debates on this subject matter will also be used to inform conclusions relating to the conservation needs of the Sargasso Sea. The sections below will provide a foundational understanding of some of the fundamentals of the Sargasso Sea, the BBNJ Agreement, and the general concepts of protecting marine biodiversity.

2.1 The Significance of the Sargasso Sea Case

Scholars argue that the Sargasso Sea is a cornerstone of marine biodiversity for the Caribbean and Atlantic Oceans (Laffoley et al., 2011), and it provides high-value ecosystem services that benefit several industries operating in the space (Pendleton et al., 2014) . In addition to being an ecological marvel, the Sargasso Sea provides several critical insights into the broader application of the BBNJ Agreement and measuring its potential as a governance instrument.

The treatment of the Sargasso Sea by the BBNJ Agreement will set several precedents in and beyond marine law. First and foremost, if the Sargasso Sea is designated as a Marine Protected Area (MPA) or other area-based management tools are applied in the region, it will be the first designation of this kind awarded to a marine region not defined by its physical geography. Verlaan & Kanayev claim that such a designation would set a precedent for protecting other seascapes that are not defined by land borders, such as the South Indian Ocean (2024).

Further, the implementation of ABMT and EIA requirements in the Sargasso Sea would lead to environmentally favourable changes in one of the busiest shipping zones in the world (Roberts, 2011). This would set a precedent for the evaluation of shipping lanes around the globe, particularly in regions with similar ecology to that present in the Sea. As the IMO has always been responsible for developing its own interpretations of High Seas law (Pozdnakova, 2023), work in the Sargasso Sea under the BBNJ Agreement will reveal the degree to which environmental policies can be affixed to existing bodies that have legal autonomy.

A third reason why the Sargasso Sea constitutes a valuable case study for analyzing the BBNJ Agreement is that the Sea itself has no existing legally binding agreements supporting its conservation (Balton & Freestone, 2022; Freestone, 2021; Roe et al., 2022). This region can therefore serve as a test case for developing an original conservation regime in the new international context of the BBNJ Agreement.

2.2 Critical Components of the Biodiversity Beyond National Jurisdiction Agreement

The Biodiversity Beyond National Jurisdiction Agreement is nothing short of a long time coming. This seminal text for High Seas governance was theorized, negotiated, and eventually adopted over a period of nearly 20 years (Ricard, 2024). Though it has yet to enter into force, it has widely been considered a treaty of the ages and a feat of multilateralism (Bodansky, 2024; Ricard, 2024). Provisions included in the treaty text include the inability to undermine existing governance tools and non-state actors as well as opt-out provisions for states that feel conservation mechanisms under the BBNJ Agreement will inhibit their ability to exploit their Exclusive Economic Zones as authorized by UNCLOS (BBNJ Agreement, 2023).

2.2.1 Interactions with Other International Regimes

It is worth noting that the BBNJ Agreement must be adopted in alignment with UNCLOS and cannot subvert any measures or articles already adopted by the Convention (Trung, 2023; Welchman, 2024). As a coordinating mechanism for conservation in the High Seas, understanding how the BBNJ Agreement will affect and be affected by other components of UNCLOS, other UN treaties, and non-state actors will be critical to understanding how it can be applied in practice. Langlet & Vadrot (2023) estimate that as many as 52 separate instruments, frameworks, and bodies will be affected by the adoption of the BBNJ Agreement. While not all institutions will be relevant for understanding the opportunities and limitations of the BBNJ Agreement for marine governance in the Sargasso Sea, this figure provides a scope of how far-reaching the BBNJ Agreement is. Kim (2024) in their analysis of the BBNJ Agreement's influence over instruments, frameworks, and bodies concludes that the BBNJ Agreement should not be expected to centralize ocean governance, as it is merely a normative instrument that promotes cooperation. They determine that there are two levels of influence that the BBNJ Agreement may exert: direct influence over existing instruments, frameworks, and bodies, and indirect influence over how instruments, frameworks, and bodies interact with and relate to one another.

Kim (2024) and Friedman (2019) each conclude that, despite the lack of hard power (military threats, economic sanctions, legal action, etc.) that can be exerted by the BBNJ Agreement, its power lies in its soft influence[1] and its requirement of States to promote its interests under the instruments, frameworks, and bodies they are party to. Kim (2024) and Friedman (2019) further argue that by not placing the BBNJ Agreement at the top of a decision-

[1] Soft influence and soft power are executed by leveraging diplomatic negotiations that often result in State compromises balancing domestic interests with international cooperation (Vuving, 2009).

making hierarchy, better coordination and less overlapping between instruments, frameworks, and bodies would occur than if decisions were imposed upon them. Friedman refers to this as "a system oriented towards 'joint interplay management'" (2019, p. 453), which positions the BBNJ Agreement as a more holistically focused instrument than perhaps other agreements may be.

Conversely, Pedrozo (2024) argues that this arrangement of soft influence may be detrimental to the recognition of any decisions adopted by the BBNJ Agreement's Conference of the Parties. The author expects that states will instead exert influence over one another to restrict the application of BBNJ Agreement measures to contested areas of the High Seas, particularly in the South China Sea. Bodansky (2024) argues that this soft power will not be enough to keep States from exercising their right to opt out of area-based management tool provisions, nor will it exert sufficient influence on non-parties to adhere to protective measures implemented in the High Seas.

Ma and Zhou (2021) substantiate this point on the drawbacks of soft power with an analysis of the lack of responsibilities of third parties under this agreement. The Vienna Convention on the Law of Treaties prohibits non-signatories from being obligated to meet commitments of international agreements signed under the auspices of the United Nations. Ma and Zhou (2021) present an additional weakness in that the BBNJ Agreement cannot be adopted as customary international law, which typically manifests as a norm arising from an existing treaty and has no technical legal commitments. It is prohibited from acquiring this status on account of not being in general practice[2], and not being accepted as law as a result of not yet ascending the ratification process of the United Nations (Ma & Zhou, 2021). It stands to reason,

[2] General practice refers to the influence of States over the creation of laws (International Law Commission, 2018). These are the established norms that the majority of States follow and have adopted into their legal practices that precede the establishment of customary international law (a rule that States have adopted through their own behaviour that did not arise from the establishment of a treaty [Cornell Law School, n.d.]).

therefore, that the BBNJ Agreement would befall a similar fate when attempting to bind third parties to its provisions.

Another interaction with existing UNCLOS provisions is the tension between ecosystems that straddle areas beyond national jurisdiction and Exclusive Economic Zones. Resources and habitats that span oceanic borders are referred to as the “interface area” by Ong (2023, p. 9) as they illustrate that neither UNCLOS nor the BBNJ Agreement outlines mechanisms for balancing the obligations of States within their maritime claims and in zones of international waters. Further, the mechanisms for consultation included in the agreement text do not include overarching requirements and instead relate to specific matters of text, such as the provisions for ABMT in areas beyond national jurisdiction.

2.2.2 Non-state Actors, Sectoral Bodies, and Undermining

For the purpose of this research, one of the most notable features of the BBNJ Agreement is that it cannot ‘undermine’ the mandates and policies that govern non-state actors and other instruments, frameworks, and bodies. This limits the BBNJ Agreement to working within existing mechanisms and adopting a coordination role more so than it does a legislating role. Langlet & Vardot (2023) refer to governance in international waters as a ‘regime complex’, as there is no singular hierarchy making decisions for the region and there are specific instruments, frameworks, and bodies that address different parts of the High Seas. While this allows for specialized work on a given issue, regime complexes without oversight from a centralized organization incentivize States to be selective about the institutions they work with according to their intended goals on the High Seas. As individual institutions are not beholden to a standardized set of regulations or practices, the implementation of international agreements is difficult to achieve in a comprehensive way (Langlet & Vadrot, 2023).

The interpretation of ‘undermining’ for the sake of this research will relate to both the effectiveness and the authority of a given instrument, framework, or body. Scanlon (2018) defines effectiveness and authority as the primary mechanisms that facilitate undermining in the international sphere. She argues that both apply to the BBNJ Agreement because both are referenced in UNCLOS as a larger document, despite the intentional omissions of ‘effectiveness’ as a concept from articles referencing undermining in their texts (Kim, 2024). I will be operating under this dual definition in response to Article 5.1 of the BBNJ Agreement, which states that “[t]his Agreement shall be interpreted and applied in the context of and in a manner consistent with [UNCLOS].” (BBNJ, 2023, Article 5.1).

Another component of this duty not to undermine is the dispute resolution mechanism of the BBNJ Agreement. The Conference of the Parties attached to the BBNJ Agreement will be unable to bring disputes to the International Tribunal for the Law of the Sea, the supreme body making judicial decisions regarding interpretations of UNCLOS – “on [matters] within the competences of other global, regional, subregional or sectoral bodies” (BBNJ Agreement, 2023, Article 47.7). The BBNJ Agreement will instead rely on competent bodies to independently seek a resolution instead. The aim of this provision is to prevent jurisdictional confusion, however, it may instead create a further dependence on sectoral and other bodies to properly implement and adjudicate the BBNJ Agreement (Willaert & and Soete, n.d.).

2.3 Governance Strategies on the High Seas

2.3.1 International Agreements for Biodiversity Conservation

Existing applications of international law for the purpose of biodiversity loss prevention are limited in the High Seas (Ardron et al., 2014). They apply only to a State’s national actions and do not have jurisdiction over the High Seas, making them unenforceable at this level.

Regional agreements can instead be used to promote conservation in international waters, though they have less breadth than a global agreement. An example of this is The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), an agreement between states of northern Europe that manages both exclusive economic zones and areas beyond national jurisdiction (Warner, 2019). States that have signed on to this agreement (contracting parties) collaborate to uphold and audit the quality of OSPAR-managed marine areas. The legitimacy of the conservation measures that have been implemented exclusively in the High Seas has been called into question, however, as their negotiation and implementation are done only with OSPAR contracting parties and not with the broader signatories of UNCLOS, as is required by current iterations of the Convention (International Seabed Authority, 2024). Even if these OSPAR areas were legitimate, the focus of the convention is not biodiversity, and the organization frequently faces scrutiny for its weak protective measures (Matz-Lück & Fuchs, 2014).

This example demonstrates the difficulties that arise with effecting positive change in the legal environment of the marine biodiversity space prior to the adoption of the BBNJ Agreement. They also demonstrate the variety of applications of international law and expose some of the weaknesses in the governance regimes of the 21st century. With this in mind, it becomes necessary to discuss the best practices for administering marine biodiversity conservation in international waters.

2.3.2 Theories of Good Governance in the High Seas

Scholars have analyzed High Seas stewardship strategies in an effort to discern the provisions required for the BBNJ Agreement to effectively govern marine biodiversity. Incorporating scientific knowledge in the political decision-making of governance bodies such as the BBNJ Agreement's Conference of the Parties is of great importance to upholding the principles of strong conservation measures (Oude Elferink, 2012; Tessnow-von Wysocki & Vadrot, 2022). The BBNJ Agreement uplifts scientific expertise in the form of a scientific advisory body that provides non-binding opinions to the Conference of the Parties, drawing on "appropriate advice emanating from… scientists and experts, as may be required." (BBNJ Agreement, 2023, Article 49). The BBNJ Agreement accounts for such applications of scientific theories by outlining general principles and approaches to interpreting the Agreement under Article 7.

Scientific principles are not the only component of governance in areas beyond national jurisdiction that require correct identification if they wish to succeed. In 2012, Oude Elferink proposed several qualities that international mechanisms for biodiversity conservation in the High Seas should fulfill. In addition to natural science concepts like the precautionary principle and ecosystem approaches, these qualities address attention to governance norms and equity. They suggest that respecting existing laws of the sea and acceptable practices for engaging with other states maintains a governance quality that otherwise risks being lost. Transparency has been recommended to improve public dissemination of information and the equitable allocation of tangible resources to equity-deserving groups and nations. The author also notes that – in addition to attaining the success of the Agreement – these principles are a necessary component of remaining compliant with UNCLOS (Oude Elferink, 2012).

Oude Elferink further argues that not only do these traits capture the sense of good international actors, but they are also enforceable under UNCLOS, which requires States to act in good faith, often defined by predetermined governance requirements (2012). The arguments presented for the necessity of these principles are all justified with references to UNCLOS articles, and as the BBNJ Agreement is an implementing agreement to UNCLOS, it is also reasonable to hold it to these standards. This is further affirmed in Oude Elferink (2012)'s discussion, where it is stated that "[m]ost if not all of the governance principles for [areas beyond national jurisdiction] discussed in the present report are already binding on States Parties to [UNCLOS] and other States and an instrument on governance principles should recognize that most if not all of these principles already are binding on States" (Oude Elferink, 2012, pp. 257–258). This set of principles, though not officially referenced in the treaty, appears to have been fulfilled by the BBNJ Agreement throughout the articles formally adopted in its text.

Governing the individual parts of the BBNJ Agreement will also be critical, and best practices have been identified for each part's goals. For the sake of continuity, this analysis will be limited to Articles addressing ABMT and EIA. Luger (2023) claims that access to data, adaptive management, transparent decision-making, and function interplay between levels of decision-makers have been identified as critical provisions for good governance under EIA requirements. They further develop that knowledge, skills, & capacity and an inclusive, equitable approach were identified for ABMT governance in addition to those already mentioned under EIA.

2.4 Conservation Strategies in the High Seas

Biodiversity conservation is a topic that has received significant attention over the last decade, particularly as this is the UN Decade for Ocean Science for Sustainable Development (UNESCO, 2023). As a result, current conservation strategies must be identified and analyzed to better understand what advances need to be made in this field. This discussion will be limited to the ABMT and EIA parts of the BBNJ Agreement (Parts III and IV), which have been proven to have the highest impact on broader UN ocean goals under Sustainable Development Goal 14: Life Below Water (Frigione & Pezzagno, 2023; Gissi et al., 2022; Haas, 2023).

2.4.1 Area-based Management Tools

Area-based management tools are a common basis for conservation policy both on land and at sea. ABMTs first and foremost define the bounds of a region that has been proposed for protection (The Girguis Laboratory, n.d.). They then implement restrictions and/or management strategies for extractive and non-extractive human activities with the purview of fostering sustainable resource use.

Marine Protected Areas (MPAs) are a common form of ABMT that have been suggested for improving the conservation status of High Seas areas. In the case of the BBNJ Agreement, an MPA is “a geographically defined marine area that is designated and managed to achieve specific long-term biological diversity conservation objectives and may allow, where appropriate, sustainable use provided it is consistent with the conservation objectives” (BBNJ Agreement, 2023, Article 1.9). As it stands, the BBNJ Agreement is the only international instrument that defines the goals of an MPA (Matz-Lüc & Al-Hajjaji, 2024). The International Union for the Conservation of Nature has defined four levels for the protection measures possible under an MPA: fully protected, highly protected, lightly protected, and minimally protected (Grorud-Colvert et al., 2021). Each level introduces new restrictions to the human activities taking place in the area. Classifying distinct groups of measures allows for standardization in the MPA space and sets clear standards for behaviour in a given region. This framework will be applied when determining the conservation needs of the Sargasso Sea in this thesis. Grorud-Colvert et al. (2021) further introduce necessary conditions for the proposal, designation, implementation, and management of MPAs for them to be successful, which will be used to evaluate the quality of existing institutional conservation mandates.

A shortcoming of ABMT is that it is often implemented in a static manner and does not ebb, flow, or evolve with the oft-changing nature of ocean ecosystems (Klerk et al., 2024). This is particularly important for a region of the High Seas like the Sargasso Sea that has no formal land boundaries and is defined exclusively by currents, which evolve over time (Laffoley et al., 2011). Having the fluidity of the Sargasso Sea reflected in an ABMT would lead to a more relevant and overall stronger decision on ABMT coordination because it will not be limited to spatial boundaries. Such a provision would be particularly important for migration routes, the importance of which changes over the course of a year, and fisheries closures could be more targeted based on the recovery of a given fish stock. Klerk et al. (2024) confirm that such a provision is possible under the framework presented in the BBNJ Agreement.

Introducing an international framework for implementing area-based management tools is a contested strategy among biodiversity conservationists. Xiao (2020) posits that an international framework is the only strategy for properly implementing ABMT like marine protected areas. They claim that an international body is the only feasible mechanism for executing this. However, other opinions arose during the negotiation of the BBNJ Agreement where States advocated for enhanced regional cooperation between neighbouring states and existing relevant institutions. This application of regionalism ties into Gjerde and Yadav (2021)'s work on large marine ecosystems as the appropriate scale for biodiversity governance. They argue that, in spite of the many international agreements that exist, coordination remains difficult. Moving these negotiations into a smaller scope of multilateralism serves to ease stalemates and promote more cooperation, though the authors concede that some challenges with negotiations remain intractable despite best efforts.

2.4.2 Environmental Impact Assessment

Another component of effective marine biodiversity conservation, as revealed by the literature, is environmental impact assessment (EIA), the third core competency of the BBNJ Agreement. EIA is a data-driven means of assessing the positive and negative effects that a human activity – typically in the form of an industrial project – may have on the surrounding environment (Noble, 2024). It is a blanket term used for a non-standard practice; the assessments of two different organizations may require vastly different information reporting and both be considered EIAs. Further, the temporal and spatial scopes of such an assessment can change on a project-by-project basis. The intent of EIA is to promote informed decision-making regarding project approvals.

Like ABMT, current requirements for EIA exist under UNCLOS, which mandates States to “as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments” (UNCLOS, 1982, Article 206). This requirement applies to instruments, frameworks, and bodies established under UNCLOS, such as the ISA. As it stands, no international standard or regulatory body exists to conduct EIA in areas beyond national jurisdiction, seeing as the BBNJ Agreement has yet to be ratified (Warner, 2012).

This ‘internationalization’ of EIA under the BBNJ, as Li & Zhang (2024) put it, will allow for State-led EIA processes overseen and approved by the BBNJ Conference of the Parties. This is enforced by Article 34.2: “[w]hen determining whether the planned activity may proceed under this Part, full account shall be taken of an environmental assessment conducted in accordance with this Part…" (BBNJ Agreement, 2023). Article 34 also states that Parties with jurisdiction over the proposed activity are wholly responsible for deciding whether the activity should proceed, though advisory opinions can be offered by the BBNJ Agreement's Conference of the Parties. Li & Zhang (2024) argue that this weakens the point of internationalizing EIA if the BBNJ Agreement offers no further interpretations of what triggers an EIA and the Conference of the Parties has no ultimate power over whether an activity proceeds or not.

A number of difficulties exist with attempting to conduct EIA in the High Seas, particularly as it relates to scope: the breadth and depth of some areas beyond national jurisdiction, the amount of time it takes for marine ecosystems to recover from disruptions, connectivity with other marine areas, and more make the needs of an EIA in the High Seas perhaps too difficult to fulfill (Warner, 2012). Strategic environmental assessment (SEA) is another form of EIA that may serve to overcome some of these limitations. It takes a broader approach to marine environment disruptions and directly implicates "trade and shipping patterns, fisheries, extraction of non-living resources, bioprospecting, climate change mitigation activities, the laying of pipelines and cables on the seabed, waste disposal and technological improvements to navigation, fishing equipment, mapping and visualization capabilities." (Warner, 2012, p. 486). Song et al. (2024) recommended that EIA and SEA should be applied in tandem.

Applying EIA and SEA could allow us to determine the overall effects that particular fishing practices or shipping lanes are having on marine ecosystems in the High Seas. The precautionary principle – the idea that it is better to act with mild uncertainty than delay action and risk further harm to the environment (Pinto-Bazurco, 2020) – applies to EIA in that awaiting perfect science on an area should not be used as grounds to circumvent an EIA process (Ma et al., 2016). Li & Zhang (2024), on the other hand, argue that EIA requirements, when properly implemented, can induce the precautionary principle. The precautionary principle has even been formally adopted by bodies like the ISA, which requires the submission of planned environmental tests and management plans during the exploration of seabed minerals (Hernández Anta, 2024). It is required to assess any plausibly impacted area and not just the deep-sea mining site being considered. The IMO is not formally held to the UNCLOS articles referencing environmental assessments as it has the competence to adopt its own international standards (Pozdnakova, 2023). While the IMO publishes requirements for EIAs in specific aspects of the shipping sector (such as for emission reduction technologies on ships, for example), no requirements exist for the environmental impacts of shipping lanes or other more holistic representations of the shipping industry.

Song et al. (2024) argue that SEA may be a stronger tool than EIA for assessing projects in the High Seas based on the holism it embraces. In fact, Article 39 of the BBNJ Agreement binds States to consider the outcome of SEAs if and where they exist (BBNJ Agreement, 2023). This lack of enforceability is identified as a flaw of SEA implementation, alongside unclear targets, duplication of assessment, few systems, and lack of political will (Song et al., 2024).

Duan & Shen (2024) take the joint requirements for EIA and SEA under the BBNJ Agreement and present a compelling case for how EIA criteria can be used to enforce international MPAs. This coupled assessment style would help identify the sectors causing the most harm in a given region and thus isolate the instruments, frameworks, and bodies that must be coordinated to implement ABMT measures. The proportionality of contributions to enforcing the MPA could also be determined from this part of the process.

2.5 Conclusions

From this literature review, it is evident that there is a substantial body of writing on the main principles informing the foundational theories of the BBNJ Agreement and that support the Sargasso Sea as a strong case study for evaluating the power of the Agreement. A clear understanding of best practices for governing international waters, establishing area-based management tools, and enforcing environmental impact assessments further substantiates the claim that the Biodiversity Beyond National Jurisdiction Agreement has the necessary components for success in High Seas conservation. Its utility will be largely dictated by the cooperation of institutions, frameworks, and bodies to implement an appropriate mechanism for conservation.

There are a number of issues that the BBNJ Agreement will be faced with regarding ABMT and EIA measures, some of which necessitate the references to undermining peppered throughout the text (Kim, 2024; Langlet & Vadrot, 2023). For example, if the right to innocent passage were undermined by an MPA adopted under the BBNJ Agreement, then international human rights law would be violated. At the same time, however, this literature review presents evidence suggesting that anti-undermining allowances may be abused by State and non-state actors alike, which would limit the effectiveness of the BBNJ Agreement. This give-and-take must be balanced in the case of the Sargasso Sea to ensure that rights are not infringed upon while preventing the interests of industries from being overrepresented in Conference of the Parties decisions.

The international scope of the BBNJ Agreement produces a similar dichotomy. Using an international agreement to protect biodiversity in a regional context both supports and works against the interests of the Sargasso Sea. An all-signatories Conference of the Parties is necessary to remain legally compliant with UNCLOS, and creating standards for area-based management tools and environmental impact assessment universalizes an otherwise contestable process (Oude Elferink, 2012; Tessnow-von Wysocki & Vadrot, 2022). At the same time, universality can obscure nuanced decisions that may be better able to support the Sargasso Sea, and taking opinions from the full Conference detracts from the voices of nations directly impacted by action taken in the Sea (Warner, 2019).

It becomes clear from this review of academic literature that the BBNJ Agreement has the power to be wielded as a strong governance tool for biodiversity conservation and equally to become a tool for catering to industry interests. Regardless of how it is implemented, the BBNJ Agreement may set the precedence for all future applications of High Seas law in the Sargasso Sea (Verlaan & Kanayev, 2024). The amount of flexibility, the decisions on drawing boundaries in the Sargasso Sea, and the influence that the BBNJ Agreement is allowed to exert over existing environmental treaties will all directly inform the future norms of governance in the region.

3.0 Methods

This thesis seeks to explore the functionality of the Biodiversity Beyond National Jurisdiction Agreement in the Sargasso Sea by comparatively analyzing the conservation needs of the region and the conservation strategies that can be applied by relevant sectoral bodies. Such a comparison can be accomplished by using most-similar-case design and score-based analysis strategies. Most similar case design is a comparative legal method that analyzes the key differences between cases with similar facts and different rulings (Linos & Carlson, 2017). This method can be adapted, Lino & Carlson present, to compare the similarities of the values in a policy in lieu of the facts of a case, which can be used in the assessment of marine biodiversity conservation in the Sargasso Sea. This applies to the activities of sectoral bodies in the area being established through UNCLOS.

To answer Research Question 1 of this thesis, both a literature review and qualitative coding are employed. A literature review clarifies the conservation needs of the Sargasso Sea while providing a series of codes with which to analyze the relevant policies of sectoral bodies. The synergies and gaps identified in sectoral body policies were then compared against the competencies of the BBNJ Agreement to answer Research Question 2. This comparison reveals the misalignments between conservation needs and existing policies that the BBNJ Agreement can potentially address. It allows the author to comment on the likelihood of effective conservation measures being deployed in the Sargasso Sea under the BBNJ Agreement.

3.1 Determining the Conservation Needs of the Sargasso Sea

A literature review was deemed to be the most effective method of capturing experts' consensus on the ideal conservation measures for the Sargasso Sea. This is accomplished by performing searches of scholarly databases for academic writing on the ecosystem characteristics of the Sargasso Sea. Information regarding endemic species, migratory species, and species richness are used to uncover recommended conservation measures for large marine ecosystems with similar characteristics. The findings of these recommendations are then categorized under the appropriate competencies of the BBNJ Agreement, namely ABMT and EIA-SEA provisions.

3.2 Evaluating the Quality of Area-based Management Tools and Environmental & Strategic Impact Assessment Requirements for Sargasso Sea Sectoral Bodies

To complete these reviews a scoring mechanism will be used to standardize the information gleaned from the documents slated for analysis. The use of scores to standardize the findings of qualitative research is common in social science research. Andresen (2002) utilizes this method when analyzing the regime effectiveness of the Convention for the Conservation of Antarctic Marine Living Resources. The scholar in this instance developed criteria based on the goals of the Convention to score three measures of effectiveness and problem-solving capacity. In the introductory chapters of the same book, Underdal (2002) explains that such a method allows for systematic assessment of "patterns of variance across cases" (p. 48) to produce "a more rigorous analysis of a larger set of observations" (ibid., p. 49). Reducing these outcomes to scores allows for a standardized understanding of issues despite inconsistencies between the governance structures being evaluated. Following these examples, a similar method will be replicated for the analysis in this thesis.

The second part of the analysis in this thesis relates to the overall ability of the International Seabed Authority (ISA), International Maritime Organization (IMO), and Northwest Atlantic Fisheries Organization (NAFO) to enforce the area-based management tools (AMBT) and environmental impact and strategic environmental assessments (EIA-SEA) requirements that have been identified to conserve biodiversity in the Sargasso Sea. This is accomplished by completing a score-based analysis of the following documents:

Box 1. List of documents analyzed in this thesis

<u>ISA</u>

- *United Nations Convention for the Law of the Sea Part XI* (1982)
- *Guidance to facilitate the development of regional environmental management plans* (2022)
- *Recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area* (2019)

<u>IMO</u>

- *Convention on the International Maritime Organization* (1948)
- *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas* (2005)

<u>NAFO</u>

- *Convention on Cooperation for the Northwestern Atlantic Fisheries Organization (2021)*
- *International Guidelines for the Management of Deep-Sea Fisheries in the High Seas* (2008)

The mandates selected for analysis have been chosen on the basis of their goals and the expected results of each policy. For example, ABMT is not explicitly referenced in any documents, however regional environmental management plans (ISA), particularly sensitive sea areas (IMO), and vulnerable marine ecosystems (NAFO) all include concepts related to ABMT and thus related documents have been selected for analysis. The analysis of these documents is completed using the criteria outlined in Appendices A and B. Each point listed in the frameworks is a different criterion that scholars in the field have identified as indicators for the success of ABMT and EIA-SEA in conservation policy. As ABMT and EIA-SEA are all critical to the conservation of the Sargasso Sea, the indicators in the Appendices are therefore indicative of the necessary policies for this case study. 38 criteria were identified for successful ABMT and 18 criteria were identified for EIA-SEA provisions. Each document is coded according to these criteria to reveal which criteria are present and which are absent, if any. If a given criterion is absent from a text, that criterion is scored as ‘0’. If it is present in one or more instances in the text, then it is scored as ‘1’. Documents are coded using NVivo software to determine the presence of each criterion. The results of this coding exercise are represented in a 2x2 matrix where criteria make up the row labels and document titles make up the column headings.

The total score of each document will serve as an indicator of the overall ability of each document to support the recommended conservation techniques for the Sargasso Sea. An analysis of the individual codes then reveals more trends in the nature of the documents being analyzed. First, individual criteria are grouped according to whether they are completely absent in all 7 documents, whether they are somewhat represented across the 7 documents, or whether they are fully integrated into each of the 7 documents. Identifying trends related to these categories is an important undertone for the remainder of the analyses required in this work.

It is first critical to identify what criteria are being missed most consistently in the analysis. These missed criteria can then be categorized and analyzed in groups to discern trends in the components of the current conservation governance regime that are inconsistent with scholarly suggestions on the subject. Other trends can subsequently be determined by isolating the presence of criteria in nearly all documents. The documents analyzed in this methodology are either binding or non-binding on the States party to the ISA, IMO, and/or NAFO. It is therefore important to reveal any commonalities that exist between the criteria that are present in either degree of bindingness, or whether there are differences in the criteria being addressed across this binary. Finally, there is a need to analyze the consistencies between what components are present across all documents. If there are noticeable trends in these inclusions, it is necessary to discuss what this means for the implementation of ABMT and EIA-SEA in the Sargasso Sea. If individual criteria can be grouped into categories for the discussion of these results, categories will be created deductively following the completion of coding.

3.3 Determining the Role of the Biodiversity Beyond National Jurisdiction Agreement

The final step in the analysis of this thesis is determining whether the BBNJ Agreement has the necessary mandate to functionally implement the conservation mechanisms necessary to protect the Sargasso Sea. Once it is clear what commonalities exist between the codes that are present and absent in the ISA, IMO, and NAFO documents, an analysis can then be conducted to determine that role.

From the coding information that is captured in the above step, sectoral body documents are then compared to one another to determine commonalities between the inclusions and exclusions of codes. This information is used to determine the conservation measures that could successfully be implemented within the mandates of each of the three bodies being analyzed. Gaps will be categorized based on commonalities in the missing criteria. An analysis of the BBNJ Agreement text can then be executed to identify the gaps that it can fill using its institutional arrangements, and the gaps that would undermine the sectoral bodies operating in the space.

The proposed conservation regime for the Sargasso Sea is then revisited and compared to the common criteria present in the ISA, IMO, and NAFO documents analyzed using the method explained in Section 3.2. The remaining gaps between the present criteria and the recommended criteria that are not exclusively within the competencies of the BBNJ Agreement are considered to be in violation of the "no undermining" principle of the BBNJ Agreement given that addressing those gaps through the BBNJ Agreement would not satisfy all three mandates of the selected IFBs. These gaps must be considered violations as the author does not have the authority to comment on whether these gaps are intentional omissions in the mandate documents or accidental exclusions. If such gaps do exist, a discussion on the role of sectoral bodies in the conservation space will ensue.

3.4 Conclusions

Qualitative methods are used to provide both a scientific justification for this analysis as well as to interpret the contents of legal texts in relation to an overarching thematic international law. Score-based assessments are used to characterize the components of implementing policies of sectoral bodies in the High Seas when designing conservation schemes for areas beyond national jurisdiction. These objective criteria allow for a more in-depth analysis of the applications of the Biodiversity Beyond National Jurisdiction Agreement in the context of the

Sargasso Sea ecosystem. A complete analysis of the codes that are present and absent in each document will allow for a more comprehensive overview of the success each sectoral body will have when implementing conservation measures. As the BBNJ Agreement is limited to operating within the existing mandates of instruments, frameworks, and bodies on the High Seas, this will be directly representative of the BBNJ Agreement's ability to implement strong conservation measures.

4.0 Results

The goal of this analysis is to identify the principles of strong area-based management tools and environmental impact assessment incorporated into the official mandates and recommendations of sectoral bodies operating in the Sargasso Sea. The presence and absence of these principles, standardized into a series of codes, indicate the quality with which ABMT and EIA-SEA respectively can be implemented under each of the three organizations being assessed. The results of the seven documents that were coded can be broken down into ABMT and EIA-SEA codes. They can be further understood through the analysis of *a posteriori* grouping. After coding, scores were assigned to each document to produce a standardized indicator of the quality of each document.

56 criteria were coded for in this analysis. 86 codes were recorded in total. Data from this coding exercise can be found in Appendix C. The median score of all seven documents was 33%, or 18.5/56 codes. A wider discrepancy exists when analyzing the bindingness of the documents, however: the three legally binding documents obtained a median score of 12.5% (7/56 codes) while the four non-binding recommendation documents had a median score of 36% (20.16/56 codes). Three *a posteriori* categories were developed through which to analyze ABMT criteria. These categories are governance principles, ecological principles, and social equity principles.

The same categories were used to analyze EIA-SEA criteria. These categories improve the ease with which trends can be drawn from the coding data gathered in this analysis. With these general observations in mind, a deeper analysis of the data can be conducted.

4.1 Author Decisions

A series of decisions were made following the finalization of the methodology for this thesis to properly scope and represent this research. The following sections provide details on how and why these decisions were made. Such decisions were necessary based on the capacities of the researcher, the effectiveness of communicating results, and the adherence to academic norms for this style of research.

4.1.1 Selection of Documents

Seeing as this thesis hinges on the outcomes of textual analysis, it is critical to clarify the rationale behind the selection of documents for this body of work. It has been established that the sectoral bodies being analyzed were selected based on their relevance to the anthropogenic activity ongoing in the Sargasso Sea. The documents selected for each institution sought to contribute to a number of goals. First and foremost, both legally binding and non-legally binding documents were chosen to determine if there would be a difference in performance between the two categories. Legally binding documents performed over 23% worse than non-legally binding agreements did in this analysis, which is concerning, as this indicates that what little ambition exists in the regulations of sectoral bodies cannot be enforced. Landmark agreements like the Paris Agreement and the Global Compact for Migration have reported that a lack of enforcement has impeded the ambitious content of the text from being properly implemented (Höflinger, 2020; Stankovic et al., 2023). It is only logical to extrapolate this fact to the regulatory regimes of marine sectoral bodies: without being able to hold states accountable to ambitious agreements, the ambition of those agreements suffers. The results of this analysis reflect such a trend, and this result will be critical for revealing what the BBNJ Agreement can hold sectoral bodies accountable for.

There were intentional omissions of International Maritime Organization documents. No EIA-SEA-specific documents were coded despite the IMO's reputation for setting EIA standards. These standards, though rigorous, are highly specific, and apply primarily to individual components of ships (IMODOCS, 2025). It was decided that such documents would be unhelpful in contributing to this overview of the regulatory regimes of sectoral bodies. Further, no EIA directives existed for the assessment of shipping routes (Sander, 2016), which is the issue of primary concern for conservation in the Sargasso Sea. It is for these reasons that EIA-SEA documents were not selected for analysis in this work.

Hyper-specificity was the opposite of the challenge faced when selecting EIA-SEA documents to code for the Northwest Atlantic Fisheries Organization, as no publicly facing directives on this matter exist. A similar issue existed for the evaluation and adoption of vulnerable marine ecosystems, and no publicly facing documents were found on this topic. Additionally, it was decided that the Food and Agriculture Organization's *International Guidelines for the Management of Deep-Sea Fisheries in the High Seas* would be coded into this analysis based on its frequent reference within the NAFO Convention text itself. This made it quite evident that, despite not authoring them, the NAFO was holding itself to these standards in its work.

4.1.2 Justifications for A Posteriori *Codes*

A posteriori coding played a central role in the establishment of trends in this analysis. As a result, it is important to provide a justification for how these codes were selected. It was elected to use an *a posteriori* coding strategy to detect commonalities between conservation regime criteria because the author first found it necessary to establish how these criteria were being referenced in the coded texts. From this exercise, it was determined that an adapted version of an environmental, social, and governance (ESG) framework would best represent the commonalities between the criteria selected for review. This approach is substantiated by Nōmmela and Kōrbe Kaare's 2022 work entitled *Maritime Policy Design Framework with ESG Performance Approach: Case of Estonia*. They determine that "[t]he ESG concept is influencing maritime enterprises worldwide and these issues will not fade in the near future. Therefore, it has the strong potential to be a consistent framework for policy design." (Nõmmela & Kõrbe Kaare, 2022, p. 9). To appropriately reflect the themes of the criteria used in this analysis, the 'environmental' category of ESG was substituted for the closely related 'ecological' category, and the 'social' category of ESG was further specified as 'social equity'.

4.1.3 Groupings for Code Frequency

Codes are discussed in this chapter in relation to their relative frequency across the 7 documents. Any individual ABMT code that is represented five or more times is considered representative of synergies and will be used to support recommendations for the BBNJ Agreement. ABMT codes represented one or fewer times are representative of gaps in the conservation regime that the BBNJ Agreement must attempt to address. Any ABMT codes represented between two and four times are considered near misses and will not be incorporated into this analysis as they are not distinctly representative of either a success or a failure in the current ocean governance regime. For EIA codes, the presence of a code four or more times will be considered a synergy, as EIA was formally excluded from more documents than was ABMT.

One or fewer codes constitute a gap. Codes represented only twice or thrice will be considered near misses.

4.2 Identifying the Conservation Needs of the Sargasso Sea

As a prime example of marine biodiversity in the High Seas, considerable research exists regarding the conservation needs of the Sargasso Sea. Laffoley et al. (2011) provide perhaps the most comprehensive assessment of the importance of the Sargasso Sea, highlighting its elevated proportion of endemic and endangered species, as was indicated in the introductory chapter of this thesis. They also indicate that industrial activities are a root issue of biodiversity loss in the region. Overfishing in the area has led to a steady decline in target populations and an increase in bycatch, and the volume of shipping traffic can be responsible for the destruction of *Sargassum* mats, leading to critical habitat loss for endemic and endangered species. To address concerns about shipping pollution, it has been suggested that the IMO designate Regional Guidelines for discharges for ships travelling through the Sargasso Sea (Freestone et al., 2013). This would be considered an area-based management tool, as it is a regionally specific set of practices enforceable under the IMO's auspices. Other area-based management tools have been suggested for the Sea as well, including marine protected areas that are planned according to the dispersion patterns of endemic and endangered species (Sehein et al., 2014). The recommendations align with Grorud-Colvert et al. (2021)'s definition of a Highly Protected area, which allows for minimal anchoring, fishing, and non-extractive activities while outright banning mining, dredging, and dumping.

Extensive environmental impact assessments can also be recommended for this region. In each of the articles studied in the preceding work, and more, there have been references to a lack of information regarding the relationship between certain human activities and the Sargasso Sea.

This uncertain connection necessitates study through the lens of an environmental impact assessment, which can analyze the lifecycle of a given activity and trace the impacts that it may have (Weiser, 2016). Further, sectoral EIA is recommended for international waters (Warner, 2012), and given that the biggest biodiversity concerns in the Sargasso Sea relate to the presence of industry, such a recommendation remains relevant to this region.

4.3 Area-based Management Tools Coding Analysis

The coding frequencies observed for ABMT criteria can be referenced in Appendix C. Of the seven documents analyzed in this work, six contained references to ABMT. These codes include the governance, ecological, and social equity principles that indicate the successful implementation of area-based management tools. ABMT codes include information such as the coordination between relevant actors and required administration that must precede the implementation of an ABMT, the ecosystem-based information that should be used to inform the restrictions accompanying an ABMT, and the equity measures that must be established to ensure that no one social group is disproportionately advantaged or harmed by the implementation of ABMT. To be considered a reference, sectoral body documents must explicitly – though not verbatim – include the principles of a given code.

The only document that did not reference ABMT (*ISA recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area*) formally excluded ABMT from its subject matter, as it focused only on EIA-SEA. In fact, ABMT were over-represented in the documents and accounted for 87% of the 86 recorded codes. Considering the ratio of ABMT codes to EIA-SEA codes, ABMT codes were expected to represent only 68% of the total codes. Despite this high representation of ABMT codes, only 1 code was present in all 6 ABMT-referencing documents. This criterion was

Criterion 1: Clearly defined vision and objectives. It serves as the impetus for implementing a marine protected area, per Grorud-Colvert et al. (2021)'s analysis of the necessary criteria for a successful MPA. This result constitutes a synergy in this analysis. A similar trend is replicated for the remainder of the ABMT codes, where the codes most often identified can be categorized as principles of governance. Governance principles were the best-represented coding category, with 8 of the 10 codes identified in at least 50% of documents belonging to this category.

Criteria 15 and 16, on representativeness and uniqueness of habitats, each occurred 3 times between the 6 documents referencing ABMT. This was the most that any ecological principle code was identified. 2 ecological principles were never referenced, and these were Criteria 19: Consideration of existing threats and mitigation, and 35: Effective management of broader seascapes and external pressures. Unfortunately, no trends in ecological codes qualified as synergies, and only gaps can be analyzed for this ABMT category.

Of the criteria that were coded 0 times, the majority of codes relate to social equity principles (3/5). Social equity principles were the least represented codes across the documents, despite having the most deductive code possibilities (15 codes total, as opposed to 10 ecological principle codes and 13 governance principle codes). This demonstrates a clear gap in the current governance regime. The highest reporting frequency for a social equity principle was twice, with codes 6, 20, 21, 22, 34, and 37 reaching this level of representation. Most of the social equity codes that were represented twice were coded in non-binding documents.

Overall, 13/13 governance criteria were referenced in one or more documents addressing ABMT, 8/10 ecological criteria were referenced in one or more documents, and 12/15 social equity criteria were referenced in one or more documents.

4.4 Environmental Impact Assessment and Strategic Environmental Assessment Coding Analysis

The coding frequency observed for EIA-SEA criteria can be referenced in Appendix C. Of the seven documents, only two referenced EIA considerations, and none referenced the concept of SEA. EIA-SEA codes are also understood in terms of governance, ecological, and social equity principles. In this instance, governance codes comprise administrative measures such as reporting timelines and management plans that underline an EIA-SEA process, ecological codes assess the inclusion of ecosystem information in the final EIA-SEA decision, and social equity codes include a transparent and engaged decision-making process. Much like ABMT codes, the principles described above must have been explicitly outlined in EIA-SEA documents to be considered a coding reference.

Two documents (*ISA guidance to facilitate the development of regional environmental management plans* and *IMO Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*) formally excluded EIA from their scope, as both documents focused on ABMT theories. For this analysis, coding trends will be approached by analyzing the number of documents with the potential to include EIA-SEA considerations (i.e. those that did not formally exclude this category). This is done with the aim of accurately representing the prevalence of codes. Only 11 of 86 codes recorded in total were in reference to EIA-SEA criteria. This accounts for only 13% of total codes. EIA-SEA accounted for 32% of the *a priori* codes applied in this analysis and was therefore underrepresented in the final data.

Of the 5 documents with the potential to reference EIA & SEA, two referenced Criteria 42 (Provides a list of what the EIA content should address) and 52 (Consider mitigation and enhancement measures that can be adopted under the project intentions). This is the most that any individual EIA criteria was referenced. Of the 9 criteria that were absent from all EIA-SEA documents (Criteria 39, 40, 41, 43, 45, 49, 51, 54, and 56), two-thirds related to the *a posteriori* coding category ecological principles. 4/7 Governance Principles were identified in one or more documents, whereas 3/9 ecological criteria were present, and 2/2 social equity criteria were present in at least 1 document. No synergies were identified for EIA-SEA codes, and only gaps will be analyzed in the discussion to come.

4.5 Document-specific Coding Analysis

4.5.1 United Nations Convention for the Law of the Sea Part XI

The United Nations Convention for the Law of the Sea (UNCLOS) enables the ISA and provides it with its mandate in Part XI of the Convention. This section thus serves as the legally binding foundation from which ISA policies are formulated. 15 individual ABMT codes were recorded in Part XI, listed in Table 1. It had a strong showing from the ABMT governance criteria, with 11 of the document codes falling into this category. This represents a whopping 84.6% of possible ABMT governance codes, the most of any individual document. 3 codes pertained to ABMT social equity principles, representing 20% of possible codes in this category. Only one ecological criterion was present for the ABMT codes in this document. This accounts for only 10% of the possible codes in this group. No references to EIA-SEA codes were made. The final score of this document is 27%.

Table 1. Summary of codes present in *United Nations Convention for the Law of the Sea Part XI*

Code number	**Code criterion**	**Code category**
1	Clearly defined vision and objectives	Governance principle
2	Sustainable financing	Governance principle
3	Public participation with contextual and procedural fairness	
5	Evidence-based decision-making	Governance principle
7	Coordination with related governance institutions	Governance principle

8	Collaboration across jurisdictions	Governance principle
9	Transparency and communication	Governance principle
12	Conflict resolution mechanisms	Governance principle
24	Accounting for unequal costs and benefits to different social groups	Social equity principle
25	Impact- and benefit-sharing with distributional fairness	Social equity principle
26	Sufficient and properly organized staffing and funding	Governance principle
27	Appropriate and adequate administrative structures and processes	Governance principle
29	Compliance and enforcement (including graduated sanctioning)	Governance principle
32	Ongoing monitoring, evaluation, and knowledge sharing	Ecological principle
34	Support for livelihoods, e.g. development programs, capacity building, hiring	Social equity principle

4.5.2 International Seabed Authority guidance to facilitate the development of regional environmental management plans

The non-binding ISA guidance on regional environmental management plans performed significantly better than the binding ISA Draft Regulations. Regional environmental management plans are the equivalent of area-based management tools within the ISA. As such, this document was limited to the analysis of ABMT codes only. To score this document, the number of codes present was divided by 38 and multiplied by 100. This was done to recognize that EIA-SEA measures were excluded from the document, and thus their absence in the codes does not reflect a deficiency. The overall score of this document was 34%. Of the 13 codes present, 8 were related to governance principles. This represented 61% of governance codes overall. 3 of the 13 codes reflected ecological principles in ABMTs and represented 30% of the possible codes in this category. Finally, 2 out of the 13 codes represented in this document were related to social equity principles, fulfilling 13% of the criteria for this category. See Table 2 for a summary of the codes identified in this document.

Table 2. Summary of codes present in *International Seabed Authority guidance to facilitate the development of regional environmental management plans*

Code number	Code criterion	Code category
1	Clearly defined vision and objectives	Governance principle
2	Long-term political will and commitment	Governance principle
3	Sustainable financing	Governance principle
4	Public participation with contextual and procedural fairness	Social equity principle
5	Evidence-based decision-making	Governance principle
6	Knowledge integration, e.g., across academic disciplines, local, Indigenous, practitioner domains	Social equity principle
7	Coordination with related governance institutions	Governance principle
8	Collaboration across jurisdictions	Governance principle
9	Transparency and communication	Governance principle
10	Upward and downward accountability to legal mandate and to stakeholders	Governance principle
14	Viability based on MPA location, size, spacing, shape, and permanence	Ecological principle
15	Representativeness and replication of habitats	Ecological principle
16	Incorporation of habitats and species of unique conservation value	Ecological principle

4.5.3 International Seabed Authority recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area

Unsurprisingly, the ISA recommendations for EIA contained far more EIA-SEA codes than the binding ISA draft regulations, with the former addressing 12/18 criteria and the latter addressing 0/18 criteria. To score this document, the number of codes present was divided by 18 and multiplied by 100. This was done to recognize that ABMT measures were excluded from the document, and thus their absence in the codes does not reflect a deficiency. The overall score of this non-binding document was 35%. The 6 codes in this document (see Table 3) contribute to each of the three *a posteriori* categories for EIA-SEA criteria. 2/6 codes relate to social equity principles, thus representing 100% of that category. This is the most that social equity is represented in EIA-SEA discussions in any of the documents. Of the 6 codes, two relate to ecological principles, which represents 22.2% of possible ecological codes. Governance principles were represented twice in the Recommendations, accounting for 28.5% of applicable codes.

Table 3. Summary of codes present in *International Seabed Authority recommendations for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area*

Code number	Code criterion	Code category
42	Provides a list of what the EIA content should address	Governance principle
44	Inclusion of public participation in the Assessment	Social equity principle
47	Considers project review after its approval	Governance principle
50	Gathers baseline data on the environment to measure the magnitude of change that has taken place	Ecological principle
52	Consider mitigation and enhancement measures that can be adopted under the project intentions	Ecological principle
55	Should be conducted by a diverse group of experts and with public consultation	Social equity principle

4.5.4 Convention on the International Maritime Organization

This document is the legally binding text that serves as the foundation for regulating all shipping-related activities on the planet. It is the lowest scoring of the seven documents analyzed in this thesis. It contains a mere 5/56 of the codes being analyzed, earning it a score of 8.9%. These codes relate only to ABMT governance principles and make no reference to ecological principles, social principles, or EIA-SEA at all. 38.5% of ABMT governance principles are represented in the convention text. The codes present in this document are captured in Table 4 below.

Table 4. Summary of codes present in *Convention on the International Maritime Organization*

Code number	Code criterion	Code category
1	Clearly defined vision and objectives	Governance principles
2	Long-term political will and commitment	Governance principles

3	Sustainable financing	Governance principles
7	Coordination with related governance institutions	Governance principles
12	Conflict resolution mechanisms	Governance principles

4.5.5 International Maritime Organization Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas

The non-binding IMO Guidelines were restricted to analyzing only ABMT criteria. To score this document, the number of codes present was divided by 38 and multiplied by 100. This was done to recognize that EIA-SEA measures were excluded from the document, and thus their absence in the codes does not reflect a deficiency. The IMO Guidelines scored a 37%. 14 codes were identified in this document, and they are listed in Table 5. Coding was evenly distributed between the *a posteriori* categories that were identified for ABMT criteria. 5 governance principles were present in the text, accounting for 38.5% of possible codes in this category. Another 5 codes were identified for social equity principles and represent 33.33% of the possible codes for this category. Finally, 4 codes in the document reflected ecological principles and fulfilled 40% of the possible codes in this category.

Table 5. Summary of codes present in *International Maritime Organization Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*

Code number	**Code criterion**	**Code category**
1	Clearly defined vision and objectives	Governance principles
3	Sustainable financing	Governance principles
5	Evidence-based decision-making	Governance principles
8	Collaboration across jurisdictions	Governance principles
13	Ecological design principles	Ecological principles
15	Representativeness and replication of habitats	Ecological principles
16	Incorporation of habitats and species of unique conservation value	Ecological principles
17	Design for connectivity and resilience	Ecological principles
20	Social design principles	Social equity principles
21	Inclusion of social objectives for multi-dimensional human well-being	Social equity principles

22	Recognition of pre-existing rights, tenure, uses: extractive and non-extractive	Social equity principles
31	Clarity of rules, rights, and boundaries	Governance principles
37	Local collaboration in monitoring, enforcement, and management	Social equity principles
38	Ongoing consideration of cultural values, traditions, and activities in site management	Social equity principles

4.5.6 Convention on Cooperation in the Northwest Atlantic Fisheries

The final binding document in this analysis was the Convention that oversees the activities of the Northwest Atlantic Fisheries Organization. The overall score of this document was 12.5%, with 7/56 codes present in the convention text. These codes are represented in Table 6 below. All 7 codes related to ABMT criteria, despite the document not formally excluding EIA-SEA criteria, like how the ISA and IMO Guidelines did. The majority of the codes (5/7) were in reference to governance principles and fulfilled 38.5% of the possible codes in this category. One code from each of the ecological principles and social equity principles was identified, representing 10% and 6.66% of possible codes respectively.

Table 6. Summary of codes present in *Convention on Cooperation in the Northwest Atlantic Fisheries*

Code number	**Code criterion**	**Code category**
1	Clearly defined vision and objectives	Governance principles
3	Sustainable financing	Governance principles
5	Evidence-based decision-making	Governance principles
6	Knowledge integration, e.g., across academic disciplines, local, Indigenous, practitioner domains	Social equity principle
8	Collaboration across jurisdictions	Governance principles
12	Conflict resolution mechanisms	Governance principles
18	Precautionary approach considering current and emerging threats	Ecological principles

4.5.7 International Guidelines for the Management of Deep-Sea Fisheries in the High Seas

The highest-scoring document in this analysis was the *International Guidelines for the Management of Deep-Sea Fisheries in the High Seas*. This non-binding document contained 26 of the 56 criteria being analyzed, which equates to a score of 46%. The vast majority (80.76%) of the total codes were related to ABMT, and 21/38 codes were satisfied in this category. The representation of *a posteriori* categories was completely even. 7 codes were identified for each of governance, ecological, and social equity principles. This represented 53.8%, 70%, and 46.66% of codes respectively. Performance drastically dropped off for EIA-SEA codes, with only 5/18 codes captured. 3 codes were represented for governance principles. This accounted for 42.9% of possible codes for this category. 2 codes were identified for ecological principles, representing 22.2% of possible codes in this category. No social equity EIA-SEA codes were present.

Table 7. Summary of codes present in *International Guidelines for the Management of Deep-Sea Fisheries in the High Seas*

Code number	Code criterion	Code category
1	Clearly defined vision and objectives	Governance principle
5	Evidence-based decision-making	Governance principle
7	Coordination with related governance institutions	Governance principle
8	Collaboration across jurisdictions	Governance principle
9	Transparency and communication	Governance principle
14	Viability based on MPA location, size, spacing, shape, and permanence	Ecological principles
15	Representativeness and replication of habitats	Ecological principles
16	Incorporation of habitats and species of unique conservation value	Ecological principles
17	Design for connectivity and resilience	Ecological principles
18	Precautionary approach considering current and emerging threats	Ecological principles
20	Social design principles	Social equity principles
21	Inclusion of social objectives for multi-dimensional human well-being	Social equity principles

22	Recognition of pre-existing rights, tenure, uses: extractive and non-extractive	Social equity principles
23	Consideration of pre-existing resource use and socio-economic status	Social equity principles
29	Compliance and enforcement (including graduated sanctioning)	Governance principles
30	Education and outreach initiatives	Social equity principles
31	Clarity of rules, rights, and boundaries	Governance principles
32	Ongoing monitoring, evaluation, and knowledge sharing	Ecological principles
33	Adaptive management	Ecological principles
34	Support for livelihoods, e.g. development programs, capacity building, hiring	Social equity principles
37	Local collaboration in monitoring, enforcement, and management	Social equity principles
42	Provides a list of what the EIA content should address.	Governance principle
46	Production of a Strategic Environmental Management Plan	Governance principle
48	Evaluates existing regulations	Governance principle
52	Consider mitigation and enhancement measures that can be adopted under the project intentions	Ecological principle
53	Surveys of the spatial and temporal extent that biodiversity impacts will have should be deployed to properly scope the assessment	Ecological principle

4.6 Limitations

It must be noted that there are several limitations in the scope of this research. First and foremost, the time constraints on the research prevent a comprehensive document review from being done. As a result, choices such as those outlined in Section 4.1 had to be made to reflect the capacities of the researcher. Further, document interpretation is limited to the content of the documents themselves and does not necessarily reflect broader policy trends for sectoral bodies as a result of this non-comprehensive review. The documents used for this analysis were limited to those made publicly available by the sectoral bodies being evaluated. This has imposed a constraint upon this research that may have influenced the findings presented above.

Information regarding the Sargasso Sea and its conservation needs is also fairly dated. While it remains the most current research available for the area, it is safe to assume that changes have occurred in the nearly fifteen years since the guiding document for this thesis – Laffoley et al.'s *The protection and management of the Sargasso Sea* (2011) – was published. This means that conservation recommendations for this region may not be entirely reflective of present-day Sargasso Sea issues.

4.7 Conclusions

The documents analyzed in this thesis each serve an important role in the adoption of standards for industries in the Sargasso Sea (Parson & Edwards, 2011; Pendleton et al., 2014; Roberts, 2011), be they binding or not. The lowest-scoring document in this analysis only achieved a score of 8.9%, while the highest-scoring document attained a score of 46%. No documents accomplished or exceeded a 'passing' score of 50%. ABMT codes were overrepresented in this analysis compared to EIA-SEA codes. Within ABMT codes, there was a concentration on governance-related indicators, which accounted for 37 of the 70 recorded ABMT codes. Ecological principles comprised only 17 codes, and social equity principles only 16. For EIA-SEA codes, governance principles were the most frequently observed, with 11 of 23 codes falling under this *a posteriori* category. 9 codes related to the ecological principles, and 3 reflected social equity principles. The significance of these trends will be investigated in the next chapter.

5.0 Discussion

Following the results of the preceding chapter, it is important to interpret these findings and integrate them into the trends observed in broader international Law of the Sea scholarship. After carefully reviewing the trends that have arisen inter- and intra-institutionally, it is reasonable to conclude that the gaps existing in High Seas conservation law exceed those that can be reasonably filled by the Biodiversity Beyond National Jurisdiction Agreement. Similarly, the synergies that exist do little more than justify an attempt at implementing a conservation regime in the Sargasso Sea. Beyond this, there is little agreement between sectoral bodies on what measures should be pursued. Following from these issues, this discussion makes the case for pursuing other means of aligning sectoral bodies outside of the auspices of the BBNJ Agreement.

5.1 Document Synergies

The majority of the ABMT codes observed were considered by Grorud-Colvert et al. (2021) to be general enabling conditions for successful marine protected areas. In their work, they describe that these considerations are a necessary foundation if the other requirements for a strong MPA are to succeed. As far as this concerns the BBNJ Agreement, it is a positive indicator that these are the codes present in the documents, as they provide a robust foundation from which more ambitious conservation regimes can be designed. Mukherjee et al. (2021) state specifically that "an enabling design space that is able to support the design of its constituent policy instruments signifies an environment that is marked by high analytical, operational and political capacity " (p. 253), which aligns with the trend observed in this research.

As was established in the results section of this research, governance criteria were the best represented in documents that addressed ABMT. The best-represented individual criterion was number 1: Clearly defined vision and objectives. It was present in 100% of documents coded for ABMT criteria. This is consistent with Petek et al. (2021)'s assertion that "policy goals act as the fundamental guidelines for policymaking. They justify all governmental actions through policymaking, and their empirical relevance is unquestionable" (p. 453). Clearly defined visions and objectives being a commonality between the ABMT documents suggests that there is a strong commitment to purposeful policies at each of the sectoral bodies in this analysis. Such visions can provide a jumping-off point for finding synergies that can be leveraged by the BBNJ Agreement Conference of the Parties when designing conservation regimes.

Other governance synergies include the presence of codes 3 (Sustainable financing), 5 (Evidence-based decision-making), and 8 (Collaboration across jurisdictions), each of which was present in at least five documents. These codes fit into Grorud-Colvert et al. (2021)'s hierarchical framework as enabling conditions that must be satisfied in order to progress with the conceptualization and implementation of an ABMT. This indicates that there is a desire for effective implementation of area-based management tools since such enabling conditions have been prioritized by the documents.

The documents of sectoral bodies had a number of synergies both inter- and intra-institutionally. All documents possessed a strong showing of governance principles in ABMT criteria. This demonstrates alignment between the ISA, IMO, and NAFO on the priorities present in their respective mandates. Another trend that was observed across all documents was the strengthening effect that the non-binding documents had on binding ones. This was particularly true for the IMO and NAFO, whose non-binding contributions outscored their binding ones by 28% and 36% respectively. This suggests that ambitions for marine conservation are reserved for unenforceable guidelines rather than strict mandates.

The ISA is the only sectoral body with documents including social equity principles in relation to EIA-SEA codes. This indicates that the ISA has made efforts to align itself with the growing recognition that the social elements of impact assessments should be paid considerable attention (Dendena & Corsi, 2015). The presence of social equity codes may be indicative of the

ISA's wider acceptance of adopting new norms and could be leveraged by the BBNJ Agreement to promote ambitious EIA-SEA practices. The IMO had a nearly equal showing from each of the three *a posteriori* code categories, which suggests that conservation policies under the IMO are well-equipped to evaluate multiple considerations contributing to conservation requirements. The balance between governance, ecological, and social equity principles has been lacking in maritime policies to date (Nõmmela & Kõrbe Kaare, 2022). That the IMO promotes a balance between these considerations in its ABMT policy demonstrates the adoption of progressive best practices for this conservation measure.

There is a general synergy between the NAFO Convention and the FAO Guidelines in that the Guidelines offer significant policy reinforcement for the Convention. Considering these documents in tandem produces a conservation regime that fulfills 50% of the codes analyzed in this document (28/56 codes). Analyzing policies as a collective rather than in isolation provides for a fuller understanding of the general goals of an institution and is a recommended practice when assessing policy regimes (May & Jochim, 2013). It is clear here that High Seas conservation is of interest to NAFO. Further, the representation of governance, ecological, and social equity principles was nearly equal within NAFO documents, which indicates a balanced approach will be taken in conservation considerations. Equal prioritization of these principles allows us to infer that, like the IMO, NAFO is similarly committed to the advancement of holistic conservation measures.

Neither ecological nor social equity ABMT codes met the threshold to be considered for synergies between sectoral bodies. Further, no EIA-SEA codes were present in four or more documents. As a result, no such synergies exist for analysis.

The synergies described above indicate possible avenues for the orchestration of a conservation regime in the Sargasso Sea. The prioritization of enabling factors for area-based management tools bodes well for the implementation of a highly protected Marine Protected Area, per the conservation needs of the Sargasso Sea. These criteria provide a justification for broaching the subject of negotiating terms of reference for an MPA in the Sargasso Sea because sectoral bodies have enshrined the very conditions necessary for such discussions in their externally facing policies.

Further, the synergy between sectoral bodies regarding well-balanced representation from governance, ecological, and social equity principles is a positive indicator of how such ideals may be conferred in future conservation measures in the Sargasso Sea. This fact, combined with the strong representation of enabling criteria paves the way for an MPA that takes a well-rounded approach to conservation. This is of particular importance for areas such as the Sargasso Sea which have a diversity of resources and activity from multiple sectors to coordinate (Laffoley et al., 2011).

5.2 Document Gaps

Regrettably, far more gaps existed in this analysis than did synergies. The most significant gaps relate to a poor representation of EIA-SEA codes across the board. Further, social equity and ecological criteria were undervalued by coded policies. Broad academic trends and sectoral-body specific strategies are used to explain why these gaps may have occurred. The impact of these gaps on the Sargasso Sea is also investigated.

5.2.1 Area-based Management Tool Gaps

Three governance codes presented gaps in the analysis: codes 10 (upward and downward accountability to legal mandate and stakeholders), 26 (sufficient and properly organized staffing and funding) and 27 (appropriate and adequate administrative structures and processes). The omission of these codes indicates that there is a lack of planning for the administrative aspects of governance within the documents referencing ABMT. This shortcoming is reflective of a broader trend in marine protected area underperformance due to a lack of consideration for staffing and planning (Gill et al., 2017). In fact, these are the primary determinants of the success or failure of an MPA (2017, p. 667). Such deficiencies relate to a lack of accountability to the legal mandate of an institution by exposing how sectoral bodies have only concerned themselves with appearing to have met their conservation mandates without actually having done so. The absence of staffing and financing considerations may produce "paper parks": protected areas that are legally protected but are not enforced (Di Cintio et al., 2023). Di Cintio et al. (2023) further concluded that funding and monitoring within an MPA are two of the more effective measures for avoiding paper parks.

One of the leading strategies for reducing paper parks is improved stakeholder inclusion in all facets of establishing, implementing, and enforcing MPAs (Di Cintio et al., 2023). This solution implicates the single largest gap in this analysis: that of social equity principles in ABMTs. In total, nine social equity codes were absent from the analyzed texts. These codes were: 4 (Public participation with contextual and procedural fairness), 11 (Recognition and support of existing governance by Indigenous peoples and local rights-holders, including sovereignty, self-determination, and rights of access, use, and management), 23 (Consideration of pre-existing resource use and socio-economic status), 24 (Accounting for unequal costs and benefits to different social groups), 25 (impact- and benefit-sharing with distributional fairness), 28 (Stakeholder engagement plan), 30 (Education and outreach initiatives), 36 (Ongoing efforts to build trust, strong local leadership, partnerships with local users), and 38 (Ongoing consideration of cultural values, traditions, and activities in site management). The theme of these absent codes is what appears to be a general disregard for the implications that ABMTs have on individuals who are not operating within sectoral bodies. Such a trend flies in the face of considerable evidence that stakeholder dialogue is critical to the success of conservation regimes (Di Cintio et al., 2023; Weiand et al., 2021; Zervaki, 2018). As a result, there is reason to believe that the success of MPAs in the presence of such a gap would be hindered if not entirely quashed.

Several ABMT ecological principles constituted gaps in this analysis, including codes 13 (Ecological design principles), 19 (Consideration of existing threats and mitigation), 33 (adaptive management), and code 35 (Effective management of broader seascapes and external pressures). These gaps can be understood as failures of harm prevention and management. External pressures are factors that affect marine ecosystems but are not occurring directly within them, such as climate change (Ortuño Crespo et al., 2020). Failing to account for such pressures results in an incomplete understanding of the threats facing a given ecosystem. As such, this produces an incomplete sense of the conservation needs that must be implemented in order for ABMT to have a positive effect. Further, an absence of adaptable management prevents an ABMT scheme from being able to change in response to the area it is protecting (Klerk et al., 2024). This is in direct opposition to the needs of the Sargasso Sea, which has fluid boundaries and will need continual reassessment. A lack of harm prevention arising from the shortcomings of codes 13 and 19 exacerbates management issues because the information that is needed to inform proper management is unavailable (Månsson et al., 2023). This cocktail of inconsiderate ABMT policy would directly inhibit High Seas conservation in the Sargasso Sea.

5.2.2 Environmental Impact Assessment and Strategic Environmental Assessment Gaps

A general theme in this analysis is that EIA-SEA codes were poorly represented. Of the five documents that could have referenced EIA-SEA, only two did, and these documents did so poorly. This is a trend that has been observed across international environmental agreements and policies, which is indicative of an unwillingness to centre environmental concerns in informed decision-making processes (Sadler, 2004). There is also evidence that EIA-SEA is adopted as a face-saving policy that gives the illusion of accounting for environmental harms without actually conducting a robust assessment (Enríquez-de-Salamanca, 2018). Such a discounting of EIA-SEA is likely the driver behind the limited representation of EIA-SEA codes in this analysis. Finally, EIA in the High Seas has been deemed a difficult task given the breadth and depth required in the region (Warner, 2012). For this reason alone it is unsurprising that EIA-SEA codes performed poorly.

8 of the gaps for EIA-SEA codes pertained to ecological principles. They were codes 39 (Considers cumulative effects early on in the assessment process), 40 (Application of a test of significance that determines the magnitude of the environmental impacts from a given activity), 45 (Considers the outcome of environmental effects from existing plans and projects), 50 (Gathers baseline data on the environment to measure the magnitude of change that has taken place), 51 (Adopt biodiversity considerations in screening questions to prevent biologically harmful projects from being approved), 53 (Surveys the spatial and temporal extent that biodiversity impacts will have should be deployed to properly scope the assessment), 54 (Allows for alternatives to be identified when evaluating ecosystems), and 56 (Information in the environmental impact statement [the summary of the findings of the EIA] should comply with Convention for Biological Diversity principles).

These gaps suggest a general disregard for developing any quantitative measures for appraising the impact of a project. A lack of baseline data, significance tests, and scope undermines the quality of an impact assessment by making it unclear whether an impact has taken place and whether that impact is acceptable (Dias et al., 2022; Jones & Morrison-Saunders, 2016). The lack of other data considerations, such as cumulative effects and effects from existing projects, communicates that EIA and SEA are not performed for the sake of environmental protection, they are instead deployed to remain compliant with global norms (Laurance, 2022). Other indications exist that EIA-SEA is intentionally free of biodiversity considerations: assessing alternative locations for siting a project is rarely in the interest of the project proponent (Hundloe, 2021), which allows us to infer that, by failing to mention alternative ecosystems for a project, sectoral bodies are acting in favour of industrial interest rather than biodiversity ones. Further, insufficient representations of biodiversity-based screening questions in EIA-SEA limit the recognition of how projects can change biological systems and ecosystem interactions, thus producing assessments and mitigation plans that fail to account for the biological diversity-specific harms of a given project (Slootweg & Kolhoff, 2003). It follows logically from these trends that EIA-SEA may be intentionally upheld by sectoral bodies.

Issues with evaluative measures are also present in the gaps in governance principles under EIA-SEA. Gaps were recorded for codes 41 (Ideally open-ended), 43 (Requires a timeline for the expected duration of the environmental impacts), 46 (Production of a Strategic Environmental Management Plan), 47 (Considers project review after its approval), 48 (Evaluates existing regulations), and 49 (Identifies alternatives to the project). Timelines and Strategic Environmental Management Plans are accountability mechanisms that guide the decision-making process in the region being assessed (Impact Assessment Agency of Canada, 2020; Lai & Hamilton, 2020). Moreover, a failure to require the identification of project alternatives and to review projects post-approval indicates additional provisions in service of industry at the expense of biodiversity (Hundloe, 2021).

It is worth noting that, while all social equity principles were represented in the final codebook, these references were only present once each and were limited to ISA documents. A substantial gap, therefore, exists for the other EIA-SEA-relevant documents. The scarcity of social equity considerations in EIA-SEA is consistent with literature suggesting that, despite a general awareness of the links between environmental and social issues, there have been few efforts to properly integrate social equity considerations into environmental impact assessments (Dendena & Corsi, 2015; Domínguez-Gómez, 2016).

5.2.3 Sectoral Body Gaps

The sectoral bodies implicated in this analysis incurred deficiencies in all three *a posteriori* code categories. It is important to analyze how the broad trends in gaps apply to specific sectoral bodies to determine if there are any institution-specific reasons that gaps may exist. Doing this showed that many of the identified deficiencies were revealed to be intentional once compared to literature on the subject. The gap of primary concern that exists in the sectoral bodies is that no body referenced intentions for conducting public consultations, which would have alleviated many of the social equity code absences that were detected. Another prominent gap across the ISA, IMO, and NAFO was the resounding lack of consideration for EIA-SEA. This is determined from sparse references to biodiversity-related data collection and the organization of that information once it has been collected.

5.2.3.1 The International Seabed Authority

One of the primary issues with the International Seabed Authority's documents is that, when analyzed as a collective, most of the gaps that existed when analyzing documents in isolation were not filled. One potential reason for this prominence of gaps is that UNCLOS Part XI was written before the ABMT Guidelines and EIA Recommendations were finalized. Considerable evidence exists that it is favourable to policy writers to reuse language from already adopted policies when designing new international agreements (Allee & Elsig, 2019). This strategy provides a path of least resistance to secure agreement among negotiators. It appears, however, that recycling language can exacerbate gaps in policies instead of filling them. This observation that similar gaps exist across documents from the ISA counters the trend in international agreements that non-binding texts are typically more ambitious in their content when it comes to protecting the oceans (Skjærseth et al., 2006).

Some of the gaps identified for the ISA include the underrepresentation of social equity principles in ABMT-related documents, an issue that appears systemic to the entire Authority. The ISA has been found guilty of failing to incorporate human rights considerations in its public-facing engagement (Morgera & Lily, 2022). By failing to meet even minimum UN standards for public participation, the ISA sets a dangerous precedent of undervaluing the contributions of the general public as one of the most influential and powerful actors among maritime industries.

One of the most prominent gaps in the ISA's EIA-SEA regime is that they are missing several ecological criteria, contrary to literature suggesting that biodiversity is a high priority for impact assessments at the ISA (Le Gurun, 2008). New research is emerging that claims, despite the ISA's outward-facing interests in biodiversity conservation, the ISA is substantially underperforming on these promises (Guilhon et al., 2022). In fact, there has been a limited willingness from the ISA to enforce proper EIA-SEA procedures and they have overall been a weak regulator on this front. This – like many of their other actions – suggests that the few ecological criteria included in ISA policies may be there for the express purpose of saving face on the international stage.

5.2.3.2 International Maritime Organization

Perhaps the most disconcerting gap present in the IMO's conservation regime in relation to the Sargasso Sea is the lack of mechanisms for performing EIAs and SEAs on shipping route proposals. The IMO is well known for having a robust EIA-SEA framework guiding its practices, however, these regulations are for hyper-specific components of the shipping industry and primarily relate to individual components of ships (IMODOCS, 2025). While this is beneficial to addressing some of the IMO's key competencies, it fails to provide a coherent and holistic assessment of the impacts of ships traversing the High Seas. It has been found that, to properly understand the environmental impacts of the shipping sector, these individual components must be interpreted as an entire system (Moldanová et al., 2022). This does not yet exist and serves as a major gap in the IMO's marine conservation capabilities.

Another major gap in the IMO's marine biodiversity conservation capabilities is that it fails to reference any ecological or social equity principles in its 1948 convention. Conventions serve as the foundation for the work of a given international instrument, framework, or body, and these institutional arrangements largely dictate the future policy directions for such bodies (Panke et al., 2019). It can be inferred, therefore, that the exclusion of ecological and social equity considerations has led to the underrepresentation of each of these qualities in subsequent policies of the same body. What is more, the IMO is exempt from the recommended EIA practices under UNCLOS (Pozdnakova, 2023), which may also explain the lack of ecological representation in existing EIA policies.

The regrettable showing by social equity principles is upheld by a lack of diversity in the interests the IMO considers at its Marine Environmental Protection Committee (Cariou & Randrianarisoa, 2023). There is a distinct overrepresentation of input offered by States and organizations with a vested interest in prolific shipping rates. Such an overrepresentation can be directly responsible for a narrow conversation that fails to account for the States and non-governmental organizations alike that may wish to advocate an alternative position but are not granted the opportunity (Cariou & Randrianarisoa, 2023).

5.2.3.3 Northwest Atlantic Fisheries Organization

The biggest gap in the conservation regime possibilities of the NAFO is that, without a supplement from the Food and Agriculture Organization's Guidelines on Deepsea Fishing, its conservation regime is far from comprehensive. Of the 33 unique codes that the NAFO included in its documents, only 7 were present in the convention text itself. What is more, the vast majority of the codes present in the NAFO convention are related to governance principles. This replicates similar issues to those observed with the IMO: foundational documents of sectoral bodies lack the criteria necessary to enable adequate conservation policies.

Similar concerns to those of the IMO have also been recorded regarding the lack of consideration for social equity principles by the NAFO. Non-governmental organizations advocating on behalf of public interests state that they face both direct and indirect barriers to the public participation processes at the NAFO (Petersson, 2022). Such concerns are indicative of systemic issues within the institutions being analyzed that may prevent them from ever properly addressing these gaps in social equity.

The trend of underrepresented EIA-SEA codes was continued by the NAFO policy regime analyzed in this thesis. This is of particular concern for a fisheries organization that works exclusively with the extraction of biota from the High Seas. Other research has made similar conclusions that the EIAs and SEAs conducted by regional fisheries management organizations are not meeting the standards that they ought to (Kaikkonen et al., 2024).

5.2.4 Gaps and the Sargasso Sea

The conservation needs of the Sargasso Sea are severely undermined by the number and nature of the gaps present in the conservation policies of sectoral bodies. This discussion lays bare the risk of the Sargasso Sea becoming a 'paper park' under current conservation opportunities. This occurs when MPAs are missing the exact measures that are nowhere to be found in the policy documents analyzed for this research (Di Cintio et al., 2023). This is particularly dangerous for areas like the Sargasso Sea which have been proven to be a cornerstone of marine biodiversity for the entire Atlantic Ocean (Laffoley et al., 2011). Paper parks are often a symptom of poor implementation capacity and are not necessarily representative of dubious intentions, though their consequences include reduced belief in the effectiveness of MPAs (Grorud-Colvert et al., 2021). Such an effect could functionally remove the possibility of implementing ABMT in the Sargasso Sea.

The likelihood of a paper park occurring is reinforced by the inability of policies to prevent or manage ecological harms and the exclusion of public engagement from the decision-making process. Ecological harm reduction is fundamental to the purpose of an MPA – there is no use in endeavouring to restrict activities in a large marine ecosystem if there is no intention of limiting the harm done to said ecosystem (Grorud-Colvert et al., 2021). An MPA implemented under a policy regime that does not recognize this dichotomy is ineffective by nature. Further, public participation has been identified as a core tenet of successful MPA implementation (Di Cintio et al., 2023). This is particularly important for the Sargasso Sea because of the breadth of its influence. For example, Bermuda is the only landmass within the Sargasso Sea and exercises partial control over the Sea's resources through its Exclusive Economic Zone (Hallett, 2011). Bermudians have a significant portion of their identities related to the Sea and should have the opportunity to advocate their positions on MPAs in the High Seas areas of the Sargasso Sea. Under current policies, however, this is not required, nor is it likely to become required.

Perhaps the most disconcerting gap is the near-complete absence of EIA-SEA codes in the conservation policies of sectoral bodies. Given that EIA is one of only two recommended conservation measures for the Sargasso Sea, this leaves the Sea in a particularly vulnerable position regarding the ability of sectoral bodies to meet its conservation needs. Without the adequate collection of data to inform EIA-SEA, assessments are likely to overlook critical concerns regarding the unique characteristics of the Sargasso Sea's ecology. In fact, the Sargasso Sea is so unique in its species composition and ever-changing delimitations that there are no comparable ecosystems anywhere on Earth (Laffoley et al., 2011). This means that, in their current state, any impact assessments conducted in this region are in complete control of establishing norms for the commissioning of new projects in the Sargasso Sea. The utility of assessments is consequently nullified if they are not representative of the true nature of an ecosystem, and dangerous precedents could be set for the future of EIA-SEA in the Sargasso Sea based on weaponized incompetence.

It is clear that the conservation needs of the Sargasso Sea are not being met by the existing conservation policies of sectoral bodies operating in the region. These gaps – which are currently the demise of acquiring any meaningful protective measures for the Sea – may be fillable by the BBNJ Agreement. The remainder of this analysis will serve to test the potential of the BBNJ Agreement as an instrument for pursuing the appropriate ABMT and EIA measures for the Sargasso Sea.

5.3 Recommendations for the Biodiversity Beyond National Jurisdiction Agreement

There is a considerable volume of evidence from this research that indicates the synergies and gaps that the BBNJ Agreement must work within to avoid violating Article 5.2 regarding the undermining of existing sectoral bodies in the High Seas (BBNJ Agreement, 2023, Article 5.2). Synergistic areas across the analyzed documents indicate subject matter that the BBNJ Agreement must align itself with, given that these norms have already been set by sectoral bodies. The gaps identified in this discussion can be subdivided into fillable and unfillable gaps. What remains from the unfillable gaps and the synergies that are not aligned with the conservation needs of the Sargasso Sea will inform whether the Sargasso Sea can be adequately protected by the BBNJ Agreement. The remainder of this discussion will be grouped into two parts: the ability of the BBNJ Agreement to implement a ‘highly protected’ MPA in the Sargasso Sea, and the ability of the BBNJ Agreement to enforce EIAs and SEAs on projects in the Sargasso Sea. These groupings reflect the major conservation needs that were identified for the Sargasso Sea in Chapter 4 and seek to answer Research Question 2 of this thesis.

5.3.1 Implementing a Highly Protected Marine Protected Area in the Sargasso Sea

The most important synergy identified for ABMT criteria is that the criteria identified most often were considered enabling conditions for MPAs. The presence of these criteria would support the BBNJ Agreement’s ability to implement an MPA in the Sargasso Sea because a baseline has already been established from which such policies could be built. The challenge with only fulfilling enabling conditions, however, is that very few of the criteria necessary for an

MPA to *remain* successful are fulfilled in this analysis. Many such codes are present in no more than one document at a time, if they are recorded at all. This represents a rather substantial gap, as active management is one of the hallmarks of a highly protected MPA due to its commitment to managing the activities that can take place within the MPA[3] (Grorud-Colvert et al., 2021).

Gaps relating to the lack of consideration for staffing, financing, and administrative arrangements amongst the sectoral bodies can be easily overcome through the BBNJ Agreement. The BBNJ Agreement has its own institutional arrangements addressing each of these considerations (BBNJ Agreement, 2023, Articles 50 and 52), and as the administrator of any ABMTs that are implemented, it will not face the same issues that sectoral bodies would in this regard. Further, gaps regarding the ecological principle of managing external pressures can also be overcome by the BBNJ Agreement by the Conference of the Parties including this as a consideration for the MPA.

Another significant gap that exists when analyzing the ABMT-relevant documents was the poor implementation of social equity principles, particularly regarding public participation. This is expected to be a source of opposition from sectoral bodies due to considerable evidence showing that limited opportunities for public input are by design in many instances (Cariou & Randrianarisoa, 2023; Morgera & Lily, 2022; Petersson, 2022). If the BBNJ Agreement suddenly requires public participation when designating an MPA that would greatly restrict the activities of the ISA, IMO, and NAFO, one could assume these sectoral bodies would claim that they are being undermined given that no such requirements would exist if they were designating their own protected areas. Failing to execute sufficient public participation, however, is critical at each of the designation, implementation, and management phases of an MPA's lifecycle (Grorud-

[3] A 'highly protected' MPA allows for a range of non-extractive, non-harmful activities and for a limited amount of extractive activity within the bounds of the MPA (Grorud-Colvert et al., 2021).

Colvert et al., 2021). This gap presents an impasse that the BBNJ Agreement is unlikely to subvert without compromising the integrity of the resultant MPA[4].

A strategy for overcoming the remaining gaps would be to leverage the existing synergy between sectoral bodies: enabling conditions. If sectoral bodies are already including the enabling criteria for a successful MPA within their policies, then it is not unreasonable to suggest that those same actors must be at least somewhat amenable to the implementation of such a protection measure. This argument could be exploited through voluntary agreements. Voluntary agreements are applied in international environmental spaces to achieve goals above and beyond what parties are obliged to achieve (Intergovernmental Panel on Climate Change, 2007). This theory could be used to establish cooperation with sectoral bodies without undermining their interests. Such a voluntary agreement could reflect an agreement to facilitate certain kinds of public participation that are not presently endorsed by sectoral bodies in a one-time allowance. This would ensure that no significant gaps exist in the MPA framework and would provide an MPA in the Sargasso Sea its best chance at effectiveness.

To ensure that ambition is not stifled, BBNJ Agreement negotiators should also analyze sectoral conventions and policies in a holistic sense. That is, when documents, like the NAFO Convention, refer to other guiding literature or recommendations, those subsequent non-binding documents should still be interpreted as interests of the sectoral body. This is another way that voluntary agreements may be justified.

[4] It must be noted that the BBNJ Agreement includes requirements for public participation under Article 48: Transparency. Article 48.3 states that "The Conference of the Parties shall promote transparency in the implementation of this agreement including through… participation of, and consultation with,… civil society and other appropriate stakeholders" (BBNJ Agreement, 2023, Art. 48.3). This does not, however, mandate compliance with this Article by sectoral bodies, per Article 5.2. Therefore, if sectoral bodies do not already have equally ambitious text regarding public consultation in their policies, they cannot be held to the standards set in the BBNJ Agreement going forward.

It goes without saying that this is by no means a guaranteed solution to the issues around establishing an MPA in the Sargasso Sea. For this solution to be effective, it relies on an interest by sectoral bodies to implement the most effective conservation measures possible for the Sea. Even if such an interest exists, it would be at the expense of freedom to operate in a four-million square kilometre region of the Atlantic Ocean (J. Ardron et al., 2011). This is not necessarily out of the question: the NAFO has closed its only fishable seamounts in the Sargasso Sea in the interest of conservation (Bulger, n.d.), and the ISA is not yet operating in the Sea, so it has no sunk costs in the region (ISA, 2022b). If these actions are representative of general sentiments from each sectoral body, a voluntary agreement enabling the full force of the BBNJ Agreement is not impossible. On the other hand, the IMO operates some of the world's busiest shipping lanes through the Sargasso Sea (Roberts, 2011). It is reasonable to assume that this body would not be in favour of any mechanisms that would inhibit this activity, making a voluntary agreement potentially not enough to garner support for enacting the entirety of the BBNJ Agreement's mandate. This dichotomy reveals the power that sectoral bodies hold over the effectiveness of conservation efforts in the Sargasso Sea.

The recommendation of voluntary agreements could be initiated by the Sargasso Sea Commission, a scientific and legal advocacy body for the Sargasso Sea (Freestone, 2021). The Sargasso Sea Commission has already issued a non-binding voluntary agreement, the Hamilton Declaration on Collaboration and Conservation in the Sargasso Sea, with the view of drawing attention to the importance of the Sargasso Sea as a High Seas ecosystem. This body could issue a similar, albeit binding, agreement to be entered by sectoral bodies which would commit them to fulfilling the entire mandate of the BBNJ Agreement.

5.3.2 Enforcing Environmental Impact Assessments in the Sargasso Sea

No synergies existed in the analyzed documents that the BBNJ Agreement could utilize as a starting place for enforcing the assessment of new projects in the Sargasso Sea. States proposing new projects under the BBNJ Agreement are not obligated to follow requirements laid out in the Agreement, so long as the "regulations or standards of the relevant… sectoral bodies arising from the assessment were designed to prevent, mitigate or manage potential impacts…" (BBNJ Agreement, 2023, Article 29.b.ii). Essentially, this wording permits States to conduct impact assessments under sectoral bodies such as the ISA, IMO, and NAFO so long as those bodies can prove that their impact assessment mechanisms "ensure that activities covered by this Part are assessed and conducted to prevent, mitigate and manage significant adverse impacts for the purpose of protecting and preserving the marine environment" (BBNJ Agreement, 2023, Article 27.b). This may allow States to conduct less robust impact assessments than they would have to under the BBNJ Agreement, as we have uncovered that the ISA, IMO, and NAFO are respectively lacking in their EIA-SEA considerations.

As a result of this wording, it will be difficult to overcome the underachieving policies of sectoral bodies without undermining their mandates and violating the BBNJ Agreement. A similar foray into voluntary agreement has the potential to satisfy the impact assessment needs of the Sargasso Sea by getting sectoral bodies to agree to more ambitious EIA-SEA requirements. Another way that this could be accomplished is through internal pressure from ISA, IMO, and NAFO Member States. Article 8 of the BBNJ Agreement states that "[p]arties shall endeavour to promote, as appropriate, the objectives of this agreement when participating in decision-making under other relevant… sectoral bodies" (BBNJ Agreement, 2023). Keen parties of both the BBNJ Agreement and one or more of the ISA, IMO, or NAFO could pledge to reject project

EIAs and SEAs that do not conform with the standards set by the BBNJ Agreement. In order for the BBNJ Agreement to remain compliant with its requirement not to undermine, however, this cannot be a recommendation directly from the BBNJ Agreement Secretariate and should instead be a State-led initiative. The impact of such an action would remain to be seen and again would vary from sectoral body to sectoral body.

Evidence exists that norms can be established within international organizations through the democratic engagement of parties within that organization (Tallberg et al., 2020). State representatives are better positioned to successfully advocate for the norms that are of interest to them in such institutional settings. To ensure that the best possible criteria are being advocated by States at assemblies of the relevant sectoral bodies, the Scientific and Technical Body of the BBNJ Agreement should adopt the EIA-SEA codes missing from sectoral body documents under the standards and guidelines for the required content of impact assessment reports.

Effective internal pressure on behalf of the Sargasso Sea could again leverage the Sargasso Sea Commission as a tool. This body could coordinate its own member states to engage sectoral bodies and encourage their advocacy during the meetings of sectoral bodies with influence over conservation in the Sea. Such a concerted effort could effectively promote best practices outlined in the BBNJ Agreement without implicating the BBNJ Agreement Conference of the Parties in any kind of undermining activity.

6. 0 Conclusion

This thesis sought to investigate the conservation needs of the Sargasso Sea, determine the sufficiency of existing measures to meet those needs, and assess the role that the Biodiversity Beyond National Jurisdiction Agreement may play in filling gaps in the current Sargasso Sea conservation regime. It was determined that the two most worthwhile measures for protecting the

Sargasso Sea were area-based management tools and environmental impact assessments (Freestone et al., 2013; Sehein et al., 2014; Warner, 2012; Weiser, 2016). The most influential actors in the Sargasso Sea were deemed to be the International Seabed Authority, the International Maritime Organization, and the Northwest Atlantic Fisheries Organization on account of the greatest perceived risks to the Sea (Laffoley et al., 2011; Parson & Edwards, 2011; Roberts, 2011).

An analysis of the legally and non-legally binding policies at each of these bodies revealed that biodiversity loss is treated with little regard in the current High Seas governance regime, potentially jeopardizing the future of the Sargasso Sea. Substantial gaps exist that functionally remove ecological and social equity considerations from the existing conservation regime of the Sargasso Sea. Failing to consider such criteria produces ineffective policies that, while legally providing protection measures for a given oceanic region, often result in the substandard enforcement of such requirements. This leaves the Sargasso Sea vulnerable to biodiversity-degrading activities that remain permissible in light of policies that do not reflect the true nature of the issue.

The only synergy that emerged from this analysis is that of enabling conditions. The majority of the codes identified in sectoral body policies were categorized as the foundational requirements that an ABMT would require to be successfully implemented. This indicates that existing conservation policies have the substance necessary to enter into substantive negotiations regarding the regulations for a marine protected area, as would be required for the Sargasso Sea. No synergies were identified for EIA-SEA measures.

Specific gaps relating to area-based management tools include a lack of consideration for staffing and funding mechanisms for an MPA, the failure to account for and manage ecological harms, and a general disregard for the impact that protective measures have on civil society. These gaps are representative of specific failings of governance, ecological, and social equity principles respectively. The primary consequence of such shortcomings is the establishment of a paper park, a marine protected area with legal standing that is not enforced. Such an outcome would be detrimental to the marine biodiversity conservation of the Sargasso Sea.

The predominant gap recorded for EIA-SEA criteria in this analysis relates to the insufficient collection of data and organization of information. These deficiencies lead to impact assessments with poor relevance and underwhelming outcomes that accomplish little by way of marine biodiversity conservation. In fact, there is evidence to suggest that this is purposeful on the part of sectoral bodies: for example, Kaikkonen et al. (2024) conclude that the NAFO typically conduct impact assessments when they believe that deep sea fishing may interfere with a vulnerable marine ecosystem. This may indicate that where vulnerable marine ecosystems are not present, or not classified as such, the Organization is not conducting impact assessments and is therefore not quantifying the harm that it is causing in all ecosystems.

Regrettably, the Biodiversity Beyond National Jurisdiction Agreement is unable to effectively remedy this reality without violating its own Article 5.2: “This Agreement shall be interpreted and applied in a manner that does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies and that promotes coherence and coordination with those instruments, frameworks, and bodies”. (BBNJ Agreements, 2023, Art. 5.2). The number of gaps and their associated subject matter prohibits the BBNJ Agreement Conference of the Parties from adopting the resolutions that would be required to conserve the Sargasso Sea. This demonstrates that policy coherence between sectoral bodies under the BBNJ Agreement is insufficient if that coherence is a product of underachieving conservation policies. A knock-on effect is produced under such agreements that inhibits the BBNJ Agreement's ability to produce ambitious and relevant regulations that would provide the Sargasso Sea with the protection it deserves.

The mere advent of the BBNJ Agreement is thus not enough to enforce legally binding conservation measures in the High Seas. Alternative policy mechanisms will instead have to be deployed to support the BBNJ Agreement's mandate without undermining relevant institutions, frameworks, and bodies. Voluntary agreements and internal norm setting are recommended as two possible avenues for adhering to Article 5.2 without losing the ambition of biodiversity conservation policies. The strategies would require sectoral bodies to either commit to additional agreements or account for Member State interests in future policy proposals, each of which is beyond the control of the BBNJ Agreement. It can be concluded, therefore, that sectoral bodies hold the power to dictate the direction and ambition of conservation measures in the Sargasso Sea.

It is critical that these voluntary agreements and norm enforcement are responsive to the gaps that exist in the High Seas biodiversity conservation sphere. Targeted efforts should be made to champion the inclusion of more ecological and social equity principles in conservation measures, given that these were the indicators referenced least often in ABMT and EIA-SEA policies. A concerted push for improved EIA-SEA practices should also be championed in response to the complete and utter absence of impact assessment criteria from the relevant documents in this analysis. This will be the most difficult gap to overcome due to the reemphasis of anti-undermining provisions in the EIA section of the BBNJ Agreement.

It is important to recognize that these findings do not represent an outright failure of the BBNJ Agreement and instead represent only the beginning of a line of inquiry into the functional applications of the Agreement. The Sargasso Sea is just one of many large marine ecosystems warranting protection in areas beyond national jurisdiction. Similar analyses of the BBNJ Agreement within these contexts are recommended to fully explore the legal constraints of the Agreement. Further, a more robust analysis of the ABMT and EIA-SEA regulations that exist in sectoral bodies should be conducted to derive comprehensive results on the state of the policy indicators used to code the analysis in this work. Future research should investigate the likelihood of leveraging extra-BBNJ Agreement strategies to overcome the limitations of existing marine biodiversity conservation measures.

The Biodiversity Beyond National Jurisdiction Agreement remains at the forefront of international marine law. Regardless of this, however, it has a number of shortcomings that may prevent it from reaching its highest potential. This discussion has placed a spotlight on the synergies and gaps that exist within the current institutional High Seas conservation regime. These trends have been used to inform the conclusions that, while both ABMT and EIA-SEA measures could be implemented in the Sargasso Sea through sectoral bodies, they would require additional measures outside of the BBNJ Agreement to achieve adequate conservation status. Such measures would be entirely reliant on cooperation from sectoral bodies, meaning that sectoral bodies have the power to dictate the conservation of the Sargasso Sea. Conservationists and policymakers alike must continue to develop creative solutions for safeguarding the Sargasso Sea if marine biodiversity loss is to be effectively combatted.

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Appendix A

Table 8. Conditions for the success of an ABMT, modified from Grorud-Colvert (2021)

Enabling conditions across all stages of establishment	1. Clearly defined vision and objectives 2. Long-term political will and commitment 3. Sustainable financing 4. Public participation with contextual and procedural fairness 5. Evidence-based decision-making 6. Knowledge integration, e.g., across academic disciplines, local, Indigenous, practitioner domains 7. Coordination with related governance institutions 8. Collaboration across jurisdictions 9. Transparency and communication 10. Upward and downward accountability to legal mandate and to stakeholders 11. Recognition and support of existing governance by Indigenous peoples and local rights-holders, including sovereignty, self-determination, and rights of access, use, and management 12. Conflict resolution mechanisms
Enabling conditions from proposed/committed to designation	All enabling conditions above, plus: 13. Ecological design principles 14. Viability based on MPA location, size, spacing, shape, and permanence 15. Representativeness and replication of habitats 16. Incorporation of habitats and species of unique conservation value 17. Design for connectivity and resilience 18. Precautionary approach considering current and emerging threats 19. Consideration of existing threats and mitigation 20. Social design principles 21. Inclusion of social objectives for multi-dimensional human well-being 22. Recognition of pre-existing rights, tenure, uses: extractive and non-extractive 23. Consideration of pre-existing resource use and socio-economic status 24. Accounting for unequal costs and benefits to different social groups 25. Impact- and benefit-sharing with distributional fairness
Enabling conditions from designated to implemented	All the enabling conditions above, plus: 26. Sufficient and properly organized staffing and funding 27. Appropriate and adequate administrative structures and processes 28. Stakeholder engagement plan 29. Compliance and enforcement (including graduated sanctioning) 30. Education and outreach initiatives

	31. Clarity of rules, rights, and boundaries
Enabling conditions from implemented to actively managed	All the enabling conditions above, plus: 32. Ongoing monitoring, evaluation, and knowledge sharing 33. Adaptive management 34. Support for livelihoods, e.g. development programs, capacity building, hiring 35. Effective management of broader seascapes and external pressures 36. Ongoing efforts to build trust, strong local leadership, partnerships with local users 37. Local collaboration in monitoring, enforcement, and management 38. Ongoing consideration of cultural values, traditions, and activities in site management

Appendix B

Table 9. Conditions for the success of EIAs, produced from information by Currie (2016) and Decision VIII/28 of the Convention for Biological Diversity – Impact assessment: Voluntary guidelines on biodiversity-inclusive impact assessment.

Components and best practices of EIAs and SEAs	
Currie (2016)	Environmental Impact Assessment 39. Considers cumulative effects early on in the assessment process. 40. Application of a test of significance that determines the magnitude of the environmental impacts from a given activity. 41. Should ideally be open ended 42. Should account for cumulative impacts 43. Provides a list of what the EIA content should address. 44. Requires a timeline for the expected duration of the environmental impacts. Strategic Environmental Assessment 45. Inclusion of public participation in the Assessment. 46. Considers the outcome of environmental effects from existing plans and projects. 47. Production of a Strategic Environmental Management Plan. 48. Considers project review after its approval. 49. Evaluates existing regulations. 50. Identifies alternatives to the project. 51. Gathers baseline data on the environment to measure the magnitude of change that has taken place.
Convention for Bilogical Diversity Decision 8/31	Environmental Impact Assessment 52. Adopt biodiversity considerations in screening questions to prevent biologically harmful projects from being approved. 53. Would likely include questions regarding extinction potential, carrying capacity and maximum sustainable yields, the rights to biological resources, ecosystem services, etc. 54. Consider mitigation and enhancement measures that can be adopted under the project intentions. 55. Will likely be produced from the already-mandatory requirements for project and environment descriptions, expected changes, and the scope of the project. 56. Surveys of the spatial and temporal extent that biodiversity impacts will have should be deployed to properly scope the assessment. 57. Will also allow for alternatives to be identified when evaluating ecosystems

	58. Should be conducted by a diverse group of experts and with public consultation 59. Information in the environmental impact statement (the summary of the findings of the EIA) should comply with CBD principles.

Appendix C

Table 10. Coding frequency of ABMT-related codes

Code number	Code criterion	Code frequency	Code category
1	Clearly defined vision and objectives	6	Governance principle
2	Long-term political will and commitment	3	Governance principle
3	Sustainable financing	5	Governance principle
4	Public participation with contextual and procedural fairness	1	Social equity principle
5	Evidence-based decision-making	5	Governance principle
6	Knowledge integration, e.g., across academic disciplines, local, Indigenous, practitioner domains	2	Social equity principle
7	Coordination with related governance institutions	4	Governance principle
8	Collaboration across jurisdictions	5	Governance principle
9	Transparency and communication	3	Governance principle
10	Upward and downward accountability to legal mandate and to stakeholders	1	Governance principle
11	Recognition and support of existing governance by Indigenous peoples and local rights-holders, including sovereignty, self-determination, and rights of access, use, and management	0	Social equity principle
12	Conflict resolution mechanisms	3	Governance principle
13	Ecological design principles	1	Ecological principle
14	Viability based on MPA location, size, spacing, shape, and permanence	2	Ecological principle
15	Representativeness and replication of habitats	3	Ecological principle
16	Incorporation of habitats and species of unique conservation value	3	Ecological principle
17	Design for connectivity and resilience	2	Ecological principle
18	Precautionary approach considering current and emerging threats	2	Ecological principle

19	Consideration of existing threats and mitigation	0	Ecological principle
20	Social design principles	2	Social equity principle
21	Inclusion of social objectives for multi-dimensional human well-being	2	Social equity principle
22	Recognition of pre-existing rights, tenure, uses: extractive and non-extractive	2	Social equity principle
23	Consideration of pre-existing resource use and socio-economic status	1	Social equity principle
24	Accounting for unequal costs and benefits to different social groups	1	Social equity principle
25	Impact- and benefit-sharing with distributional fairness	1	Social equity principle
26	Sufficient and properly organized staffing and funding	1	Governance principle
27	Appropriate and adequate administrative structures and processes	1	Governance principle
28	Stakeholder engagement plan	0	Social equity principle
29	Compliance and enforcement (including graduated sanctioning)	2	Governance principle
30	Education and outreach initiatives	1	Social equity principle
31	Clarity of rules, rights, and boundaries	2	Governance principle
32	Ongoing monitoring, evaluation, and knowledge sharing	2	Ecological principle
33	Adaptive management	1	Ecological principle
34	Support for livelihoods, e.g. development programs, capacity building, hiring	2	Social equity principle
35	Effective management of broader seascapes and external pressures	0	Ecological principle
36	Ongoing efforts to build trust, strong local leadership, partnerships with local users	0	Social equity principle

37	Local collaboration in monitoring, enforcement, and management	2	Social equity principle
38	Ongoing consideration of cultural values, traditions, and activities in site management	1	Social equity principle

Table 11. Coding frequency of EIA-SEA-related codes

Code number	Code criterion	Code frequency	Code category
39	Considers cumulative effects early on in the assessment process	0	Ecological principle
40	Application of a test of significance that determines the magnitude of the environmental impacts from a given activity	0	Ecological principle
41	Ideally be open ended	0	Governance principle
42	Provides a list of what the EIA content should address	2	Governance principle
43	Requires a timeline for the expected duration of the environmental impacts	0	Governance principle
44	Inclusion of public participation in the Assessment.	1	Social equity principle
45	Considers the outcome of environmental effects from existing plans and projects	0	Ecological principle
46	Production of a Strategic Environmental Management Plan	1	Governance principle
47	Considers project review after its approval	1	Governance principle
48	Evaluates existing regulations	1	Governance principle
49	Identifies alternatives to the project	0	Governance principle
50	Gathers baseline data on the environment to measure the magnitude of change that has taken place	1	Ecological principle
51	Adopt biodiversity considerations in screening questions to prevent biologically harmful projects from being approved	0	Ecological principle
52	Consider mitigation and enhancement measures that can be adopted under the project intentions	2	Ecological principle
53	Surveys of the spatial and temporal extent that biodiversity impacts will have should be deployed to properly scope the assessment	1	Ecological principle

54	Allows for alternatives to be identified when evaluating ecosystems	0	Ecological principle
55	Should be conducted by a diverse group of experts and with public consultation	1	Social equity principle
56	Information in the environmental impact statement (the summary of the findings of the EIA) should comply with CBD principles	0	Ecological principle