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The Need for Marine Spatial Planning in Areas Beyond National Jurisdiction

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1 Introduction

1.1 Why Would Marine Spatial Planning Be Undertaken in Areas Beyond National Jurisdiction?

There are a number of sectors potentially active in Areas Beyond National Jurisdiction (ABNJ) including fishing, shipping and cable laying. In addition to these, mining concessions have been leased in a number of locations although, to date, these are only at the exploration phase. These sectors all have individual frameworks in which they are managed. For example, fishing is managed regionally through Regional Fishery Management Organisations (RFMOs), whereas shipping is supported by various Conventions under the International Maritime Organization (IMO), and underwater mining areas are leased through the International Seabed Authority (ISA). Nonetheless, coordination between the different sectors is currently limited, which challenges the conservation of natural resources in ABNJ, although there is potential for cross-sectoral coordination for the purposes of biodiversity conservation (Gjerde et al. 2016).

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It would potentially be valuable to use Marine Spatial Planning (MSP) as it provides a framework for coordinated spatial management, especially in data-poor situations characterised by high uncertainty. Moreover, the enforcement of spatial controls could result to be more cost-effective than other management measures (FAO 2007). Transboundary MSP can help with fishing, shipping and cultural heritage (Soininen and Hassan 2015) and can also be useful to implement the Integrated Maritime Policy (IMP) as well as the Marine Strategy Framework Directive (MSFD) (Becker-Weinberg 2017).

Box 17.1 Explanation of the Two Main Concepts of the Chapter

Marine Spatial Planning

Marine spatial planning (MSP) is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that are usually specified through a political process (Ehler & Douvere 2009).

Areas Beyond National Jurisdiction

The areas beyond the limits of national jurisdiction are defined according to the UN Convention of the Laws of the Seas (UNCLOS):

1. *The water column beyond the Exclusive Economic Zone (EEZ), or beyond the Territorial Sea where no EEZ has been declared, called the High Seas (Art. 86) and*
2. *The seabed which lies beyond the limits of the continental shelf, established in conformity with Art. 76 of the Convention, designated as 'the Area' (Art. 1).*

Commonly called the high seas, no one nation has the sole responsibility for management. Everyone has the freedom to navigate, overflight, exploration and exploitation of natural resources (except mineral resources), and others (Part VII of UNCLOS).

The Area has the status of 'common heritage of mankind'. The ISA is the body entitled to act on behalf of the mankind as a whole (UNCLOS, art. 137(2)) and to give concrete content to the principle of the common heritage of mankind foreseeing the international management of mineral resources (Part XI of UNCLOS).

ABNJ account for most of the global ocean and are home to a great amount of biodiversity and natural resources (UNEP-WCMC 2017). Although the remoteness and difficulty of exploiting the resources located in these areas has historically contributed to maintain their preservation, recent shifts in technological capacity and market opportunities allowed humans to expand their interest in ABNJ (Merrie et al. 2014). This interest has resulted in the devel-

opment of different human activities, which all have the potential to generate significant threats to the marine species and ecosystems of the high seas, also referred to as the Biodiversity Beyond National Jurisdiction (BBNJ) (Kimball 2005; United Nations 2017). Threats include the over-exploitation of resources, habitat degradation, pollution (including those from terrestrial sources such as plastics), exploitation of mineral resources, climate change and climate engineering, ocean acidification and new human activities (Halpern et al. 2008). Because of these pressures, MSP in ABNJ is increasingly needed to ensure the sustainable use of natural resources and the resilience of marine ecosystems in the high seas (Ardron et al. 2008).

Although some sector-specific ABNJ management measures exist, at present there is no overarching mechanism to ensure that important or vulnerable ecosystems in international waters are comprehensively protected (Druel and Gjerde 2014). Efforts are being undertaken to address this challenge through the creation of a new implementing agreement under the United Nations Convention on the Law of the Sea (UNCLOS) for the conservation and sustainable use of BBNJ, referred to as the International Legally Binding Instrument (ILBI). One of the challenges that has been recognised is the need for cross-sectoral coordination of activities in ABNJ (United Nations 2017). Given the limited experience of area-based planning tools for the protection of ABNJ, it is necessary and appropriate to examine the application of spatial planning tools within Exclusive Economic Zones (EEZs) in order to consider their potential for effective use in ABNJ.

Currently, international waters are governed under several sectoral governance regimes to manage specific activities and pressures (Kimball 2005). For example, the IMO governs shipping in the high seas and implements the MARPOL (The International Convention for the Prevention of Pollution from Ships) Convention and Protocol to prevent pollution from shipping. Whereas, the ISA governs 'the Area' (*the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction*) and implements environmental management measures to reduce the potential impacts of deep-sea mining. However, it is argued that the current sectoral framework leaves legal, governance and geographical gaps in management of activities within ABNJ (Druel and Gjerde 2014). In recognition of governance gaps, and in light of the growing anthropogenic pressures, society is slowly realising the importance of supporting the management of current and future activities occurring in international waters, especially if valuable resources, ecosystems, and biodiversity are to be preserved for future generations (Rayfuse 2012). One strand of discussions pertains specifically to the applicability of various area-based management approaches for the conservation and sustainable use of marine resources and biodiversity. Although MSP has the potential to assist states to fulfil their obligations under international agreements—such as UNCLOS

and the Convention on Biological Diversity (CBD)—its implementation in ABNJ by single states is not possible within the current governance frameworks. Moreover, international cooperation between various nations is required (Ardron et al. 2008; EC 2009).

1.2 Introduction to Biodiversity Beyond National Jurisdiction

In the Rio Earth Summit outcome document, the 'The Future We Want' importance of the conservation and sustainable use of marine BBNJ was recognised (United Nations 2012). Following the work done by the BBNJ Working Group, and the potential for increasing pressures in ABNJ, the UN General Assembly (UNGA) adopted the BBNJ Working Group's recommendation in Resolution 69/292 (A/RES/69/292) and decided to develop a new implementing agreement under UNCLOS for the conservation and sustainable use of BBNJ. Since 2015, four Preparatory Committee meetings have been held to explore and provide recommendations to the General Assembly on the elements of a draft text for a new instrument. On 24 December 2017, the UNGA adopted Resolution 79/249 and decided to convene an intergovernmental conference to "*consider the recommendations of the Preparatory Committee and to elaborate the text of an international legally binding instrument*" under UNCLOS (A/RES/79/249). The conference will occur over four sessions between 2018 and 2020.

Box 17.2 Processes of the BBNJ Working Group

International Discussions

The challenge of ensuring that marine biodiversity is effectively conserved in ABNJ has been part of extensive discussions for nearly 15 years. In 2004, the UNGA established a "*Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction*, known as Biodiversity Beyond National Jurisdiction (BBNJ) Working Group" to explore these issues (A/RES/59/24). In 2015, the working group provided recommendations (A/69/780*) to develop a new legally binding instrument for the conservation and sustainable use of marine biological diversity of ABNJ, with a particular focus on four overarching issues:

- Marine Genetic Resources (including issues of benefit sharing);
- Area-Based Management Tools (including Marine Protected Areas);
- Environmental Impact Assessments; and
- Capacity building and the transfer of marine technology.

2 Existing Spatial Measures in the High Seas

Following the Geneva Convention on the Law of the Sea (UNCLOS) in 1958, various legal and governance arrangements have been developed globally with the aim of regulating human activities in the marine environment (Merrie et al. 2014). Amongst the various arrangements, the following are the most prevalent regarding the high seas:

2.1 Conventions

- **UN Convention on the Law of the Sea (UNCLOS)** (1982) provides general obligation to protect the marine environment (see also Chap. 17 in this volume). It does not mention MSP, but its article 123 promotes the cooperation between states bordering enclosed or semi-enclosed seas, to manage, conserve, explore and exploit the living resources of the sea whilst protecting and preserving the marine environment. Whereas its article 192 requires all states to protect and preserve the marine environment (Maes and Cliquet 2015). Coastal states also have full sovereignty over their archipelagic waters, although it should be noted that their sovereignty is "subject to the freedom of innocent passage by foreign vessels and particular rules for certain international straits". This limits MSP "by setting legal requirements for MSP in terms of maritime transportation and navigation" (UNCLOS articles 2 and 17–26) (Hassan and Soininen 2015). Note: UNGA initiated the treaty negotiation for the development of an internationally legally binding instrument on the conservation and sustainable use of marine biological diversity in ABNJ (Fletcher et al. 2017).
- **The International Convention for the Prevention of Pollution from Ships (MARPOL) (1973)** aims to reduce intentional pollution from ships.
- **The Convention on Biological Diversity (CBD)** (1992) mentions that State Parties have the responsibility to ensure that all actions taken within their national jurisdiction shall not have negative impacts on the environment of other states or the environment of ABNJ (Kimball 2005). However, it does not directly apply to the components of biodiversity in ABNJ but instead only to the general impact on biodiversity (Kimball 2005). Each Party to the Convention is responsible for conducting assessments regarding various activities undertaken within their jurisdiction to ensure that they do not have negative impacts on the biodiversity. Moreover, the CBD highlights the need of area-based management approaches and emphasises

the importance that MSP has in promoting the ecosystem-based management approach (Becker-Weinberg 2017).

- **The Regional Sea Conventions.** Some regional seas conventions have a mandate binding on their members for management in ABNJ such as the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and SPA/BD Protocol (Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean); the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention); the Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention) together with the Antarctic Treaty; the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention); and the Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (Lima Convention) (Campbell et al. 2017).

2.2 Agreements and Guidelines

- **UN Fish Stock Agreement (UNFSA)** is an implementing agreement under UNCLOS in force since 2001, which aims to address the problems related to fisheries in high seas (United Nations 2010). The treaty sets forth the principles, legal tools and mechanisms now being employed to maintain sustainable levels of high seas fish stocks, and the RFMOs are one of the primary mechanisms for this (United Nations 2010).
- **Agreement relating to the implementation of Part XI** of the UNCLOS of 10 December 1982—specifically relates to the setting up of the ISA and the context around mining of 'the Area'.
- **FAO International Guidelines on Deep-sea Fisheries on the High Seas.**
- **Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas** (FAO Compliance Agreement).

2.3 Organisations

- **Regional Fisheries Management Organisations (RFMOs)** are intergovernmental organisations (formed by various states) that focus on the implementation of sustainable fishing practices and management measures in the high seas. They play a key role in achieving cooperation between different coastal states regarding the use of fish stocks, although their level of success is uncertain (The Royal Institute of International Affairs 2007).

- **International Maritime Organisation** (IMO) is the global standard-setting authority for the safety, security and environmental performance of international shipping.

2.4 Mechanism for Sustainable Use

- **Ecolabels** (such as Marine Stewardship Council and Friend of the Sea) can be considered as an indirect mechanism for high seas.

3 Identification of Tools to Support MSP in ABNJ

3.1 Can MSP Work in ABNJ?

As discussed earlier, one of the governance challenges present in ABNJ is the lack of a coordinating process or body for the various sectoral management processes. Each sector currently working in ABNJ has its own management process. However, if in the future the number of activities in ABNJ will increase, these sectors will need to better coordinate their actions to avoid incompatible activities occurring in the same spatial location. For example, mining areas being designated across existing deep-sea cables or interacting with vulnerable marine ecosystems (VMEs). The fact that the new implementing agreement for conservation and sustainable use of BBNJ includes area-based management tools provides a potential future mechanism to support improved cross-sectoral coordination.

3.2 Assessment

The use of MSP within national jurisdiction is reasonably common. However, when extending its application in ABNJ, there may be challenges associated with the different governance structures and environment. ABNJ and EEZs have very different physical and ecological characteristics. ABNJ often contain very deep habitats, which are home to slow-growing, potentially fragile ecosystems such as the hydrothermal vent communities (Fisher et al. 2007). Contrastingly, EEZs are characterised by shallower, faster-growing habitats that are often subject to a wider range of human pressures. The contextual differences between EEZs and ABNJ will influence the extent to which a tool is transferable to the high seas. Therefore, it is important to be able to under-

stand the specific characteristics of ABNJ and how they might differ from those found in EEZs, where the tools are typically applied.

Legal framework: The legal and institutional framework in ABNJ is dominated by the high seas provisions of UNCLOS and regional agreements rather than national-level agreements.

Stakeholder engagement: There are a limited number of sectors currently working in ABNJ. However, the connectivity of the ocean and the fact that ABNJ are considered areas where the principle of the common heritage of mankind applies, stakeholders could include the global population.

Pelagic conditions and large size: The greater depth and physical characteristics of water in ABNJ generate distinctive 'oceanic' conditions. Additionally, the habitats and species in ABNJ have evolved to reflect deep cold ecosystems and are generally slow growing. Additionally, the very large size of ABNJ is a unique challenge. In one statistic, 95% of the volume of the ocean is beyond national jurisdiction (Ribeiro 2013).

Data paucity: The distances and costs involved in getting to the high seas and exploring the deep ocean means that there are considerable data gaps in ABNJ.

Management: ABNJ are currently managed in a sectoral way, with individual sectoral-specific management authorities (Gjerde et al. 2016).

Regarding the legal framework, UNCLOS does not specifically mention MSP although it recognises the need to address problems of the ocean space as a whole (Becker-Weinberg 2017). Various articles focus on the preservation of marine ecosystems, *inter alia*, Article 118 on the Cooperation of States in the conservation and management of living resources and Article 194 (para. 5) on the duty of States to protect and preserve fragile ecosystems (UNCLOS 1982). Such provisions provide a legal foundation upon which MSP could be undertaken to achieve the provisions of these articles. They are also particularly relevant to BBNJ discussions. A key characteristic of marine spatial planning is that it is a participatory process. The MSP Guidelines place a strong emphasis on stakeholder engagement, listing mechanisms for enhancing the inclusion of stakeholders. A mechanism for public participation would therefore need to be considered although there would be challenges over this with global population potentially being 'the public'.

The large scale of ABNJ may require that MSP is undertaken over larger areas than currently. This is possible and guidelines for MSP do not specify a limit for the size making it possible. MSP can also be applied to any ecosystems, and guidelines do not limit this; therefore, it could be applied to the variety of ecosystems that exist in ABNJ. There will be a limit to the size of an area that can be planned in relation to the practicality, data and stakeholder inclu-

sion. A specific limitation to a planning process may be the data paucity particularly clear in ABNJ and in deeper waters. Data limitations also apply to waters within national jurisdictions and therefore this situation is not entirely unique to ABNJ. The distances and depths are greater, and therefore the costs would be higher to access some types of data. However, using the precautionary principle, a feature of MSP, it may be possible to undertake initial planning processes, and subsequently modify the measures in an adaptive way, as additional data becomes available.

Potentially one of the major obstacles to the achievement of cross-sectoral planning process in ABNJ is the lack of a clearly mandated leadership organisation or a coordination mechanism. Some coordinating process is needed to undertake marine spatial planning, at both the planning and implementation stages. Currently there is no clear authority in ABNJ with a mandate to lead a cross-sectoral planning process, but it is hoped that the new BBNJ process will result in some organising framework for ABNJ planning.

3.3 Are There Any Existing Tools that Could Be Used in the Different Stages of the MSP Cycle in ABNJ?

The application and effectiveness of MSP are often supported by various processes, approaches and tools, which help to ensure that the most appropriate measures are implemented to meet the agreed upon objectives. Decision-support tools, for example, tend to provide a mechanism for efficient computation or problem-solving in order to support part of an MSP process. Decision-support tools are often designed to perform analyses to support decisions by managers or non-technical people. There are several stages of MSP, where specific decision-supporting tools would be valuable, for example: (1) stocktaking, vision and mapping; (2) development and evaluation of alternative management actions; and (3) monitoring and evaluation. Considering the three stages, it is useful to understand whether it would be feasible to effectively use certain tools for managing these steps in ABNJ. Examples of supporting tools and area-based planning tools that need them are the following:

- Geographic Information Systems (GIS)
- Systematic reserve designing (e.g. Marxan)
- Valuation mapping
- Trade-off analysis
- Cumulative impact assessment

- Future scenario-building
- Enforcement tools

For many of these tools and scientific efforts, the issues related to their use are similar within and beyond national jurisdiction. For example, GIS can be used both in national territories and in ABNJ. The main constraint is the technical capacity of mapping that is needed in order to provide the information into a GIS. The governance organisations around the world, including within ABNJ, all have constraints placed upon them in terms of software, user skills and time. These constraints are not unique in ABNJ but a general issue.

With systematic planning processes, trade-off analysis, cumulative impact assessment and scenario-building, the limits of data availability are a problem, which will likely challenge them all. The process of planning a reserve system, for example, requires the input of a specific set of data to minimise the cost of a reserve system and maximise the benefits. In general, there is no limit to the application of this process in geographic terms, although the data paucity in ABNJ may challenge the application of specific software systems such as Marxan. However, even in data-poor situations, some processes have been undertaken already in ABNJ to better understanding the biodiversity and ecosystem functions. For example, the CBD's Ecologically and Biologically Significant Areas (EBSAs)—ran through expert workshops—can support the identification of important marine areas both within and beyond the limits of national jurisdiction (CBD 2018). Key Biodiversity Areas (KBAs) consider a wider variety of issues and have already been identified in ABNJ, in particular areas of importance to birds, Important Bird and Biodiversity Areas (BirdLife International 2018).

With valuation, one of the common mechanisms to fill data gaps is to undertake benefits transfer, which is the use of values created in one location and extrapolated to another (Richardson et al. 2015). When studies have been undertaken within national jurisdiction, it may not be suitable to use the process of benefits transfer. In addition, how the benefits or costs of the trade-offs or values could be judged in relation to each other at a global scale will require an immense communication effort.

One of the wider challenges, yet to be fully solved, is the enforcement of effective management measures in ABNJ. There are systems capable to recognise ships movements, for example, Vessel Monitoring Systems (VMS), which track ships. These systems can be used but are limited by the challenge of knowing what activities are being undertaken on board. Also, if an infringement is identified, what jurisdiction the infraction is judged through or how the ship is physically intercepted is difficult, given the distances and potential costs involved.

4 Can Marine Spatial Planning Be Effectively Implemented in ABNJ?

4.1 Coordination Process

One of the challenges present in ABNJ is the lack of a coordinating process or body for the various sectoral management processes. Each sector currently working in ABNJ has their own management process. However, as human activities are expected to increase in ABNJ, the involved industries should start coordinating their actions in order to avoid incompatible activities from occurring in the same location. The fact that the new implementing agreement for conservation and sustainable use of BBNJ includes area-based management tools provides a potential future mechanism to support improved cross-sectoral coordination. For example, the following four options could be adopted to properly implement MSP into the agreement:

Option 1: an UNCLOS Implementing Agreement (IA) might establish the common objectives of ensuring the conservation and sustainable use of marine natural resources as well as to develop a network of MPAs in ABNJ, which are effectively managed and represented.

Option 2: an UNCLOS IA might establish a largely regional approach by requiring states and other competent bodies to submit MPAs' proposals for international endorsement. The agreement could define the criteria for submitting proposals, agreeing management measures and procedures for scientific review and endorsement as well as monitoring, control and enforcement measures. Management responsibility could remain at the regional level, operating through regional bodies or through specific collaborations between interested States (i.e. the Sargasso Sea Alliance).

Option 3: an UNCLOS IA might establish a systematic approach in which a global scientific body develops proposals for MPAs, complementary to already existing processes (i.e. at the regional level). Proposals would be based on the results of a scientifically driven process focused on the identification of areas with ecological and cultural significance. Proposals would be submitted to and adopted by the Contracting Parties whilst management responsibility could remain within the regional level and have assistance at the global level.

Option 4: an UNCLOS IA could further initiate a framework for integrated spatial planning and management to facilitate discussions between State Parties and regional and sectoral organisations to ease the coordination of spatial management plans and thus improve the use of marine resources. The agreement could mandate a coordinated process for developing an eco-

logically and biologically coherent system of MPAs as well as other management measures to achieve the objectives set forth in the agreement and any annexes thereto.

Option 5: in the absence of an agreed UNCLOS IA, the sectors that are currently active in ABNJ could self-organise and mutually agree to a process to identify where potential incompatible activities could occur. Discussions (bilaterally or within a group of existing organisations with mandates) could take place and agreements set up regarding how the various sectors are going to actively engage with other sectors' management designations.

A key characteristic of marine spatial planning is that it is a participatory process. The MSP Guidelines place a strong emphasis on stakeholder engagement, listing a number of mechanisms for including stakeholders and a mechanism for public participation would therefore need to be considered. There would be challenges over this with global population potentially being, 'the public'. Therefore, MSP could support coordination of existing bodies for information exchange about how to involve stakeholder groups related to specific regional and cultural needs.

4.2 Surveillance

Aspects of Surveillance and Implementation of Measures in ABNJ: Is It Feasible to Control Implementation?

Clear legal aspects are needed to ease the enforceability of MSP and facilitate its implementation in ABNJ (UNEP 2017). So far monitoring, control and surveillance systems for high seas fisheries appear to be insufficient (Ardron et al. 2008). For example, the Food and Agriculture Organization of the United Nations (FAO) and RFMO face various challenges in ABNJ. Although RFMOs establish regulations for the management of fisheries, member states are not legally obliged to follow these regulations in the high seas (Ringbom and Henriksen 2017). Moreover, vessels carrying flags of states non-member of the RFMO, cannot be enforced to follow the RFMO's protocol, which may undermine the efforts made by the RFMO in conserving fishing stocks (Ringbom and Henriksen 2017). In 2006, RFMOs—under the call of UNGA—required fishing vessels to stop practising bottom fishing when encountering VMEs and report the encounter (UNGA Resolution 61/105, para 83(d)) (FAO 2015). Most RFMOs with a mandate to regulate bottom fisheries in the ABNJ have responded with some form of encounter protocol. Two distinct approaches have emerged: one primarily for longlining in the

Southern Ocean developed by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and another for trawl fisheries in the North Atlantic developed by the Northwest Atlantic Fisheries Organization (NAFO) and the North East Atlantic Fisheries Commission (NEAFC) (FAO 2015). Nonetheless, the different VMEs encounter protocols that have been put in place in various fisheries negatively impacted fishers and have resulted in economic losses and increased costs of fishing (FAO 2015).

New Zealand has adopted a unique approach for its vessels fishing in South Pacific ABNJ, while Australia independently developed a protocol similar to the North Atlantic approach. In response to the UNGA resolutions, RFMOs have defined fishery footprints effectively restricting fishing to those areas, and instituted extensive closures, portions of which close parts of each footprint. Those measures are supported by an encounter protocol. As adopted in 2008, the footprint approach was identical across the North Atlantic, but each RFMO has since developed it in regionally specific ways (FAO 2015).

Major difficulties for the industry include the imbalance in the VMEs debate and the challenge the industry faces to comply with strict conservation measures, while also attempting to conduct a sustainable business. From the start, the industry voiced that move-on rules would impact fishing operations. The fishing sector also noted that fishers knew where areas of sensitive habitats were, as well as regional differences with respect to habitats and the types of fisheries that operated in each region. Fishers living on the ocean see a different ocean than policymakers, and a disconnect between fishers and managers was noted. Other challenges faced by RFMOs in managing fisheries in ABNJ are the lower level of data and knowledge (as compared to national areas), the distance, which could negatively affect the costs of assessments and monitoring, as well as control and surveillance (United Nations 2011; Wright et al. 2015).

4.3 Case Studies

Submarine Cable Considerations for Area-Based Planning in ABNJ with Reference to Two Ongoing ISA Processes

Trans-oceanic cables have been deployed in the ocean seabed since 1858 (Carter 2009). Although they are considered to have a minimal environmental impact (Friedman 2017), various uncertainties still exist in relation to the electro-magnetic fields, seabed disturbance and cumulative effect assessment (Johnson 2017). There are currently two main different types of submarine

cables: power cables and telecommunication cables. Power cables are larger in size and, compared with telecommunication cables, are less common and have not been placed in ABNJ yet, although the current legislation allows states to freely lay down both types of cables in ABNJ (Art. 87 UNCLOS) (Friedman 2017).

Even though submarine cables are likely to have minimal environmental impacts, the International Cable Protection Committee (ICPC) strongly opposed the idea to use MSP for submarine cables in ABNJ, arguing that it is an unnecessary procedure that would only introduce risks, and that historically, the involved stakeholders have always successfully managed conflicts (ICPC 2016). On the contrary, Johnson (2017) argues that conflict between stakeholders is recognised to be an issue for submarine cable developers, which emphasise the need to improve tools for stakeholder participation, whereas Friedman (2017) notes that excluding cable operations in ABNJ from MSP (or other instruments) would legitimate the request from other human activities to be similarly excepted, which could have negative repercussions.

The implementation of a specific environmental instrument (such as the environmental impact assessment) for submarine cables in ABNJ could be beneficial for the cable industry as it would not directly restrict cable instalments, but instead it would allow the sector to be one of the first movers in establishing a fair instrument (Friedman 2017). This is particularly important considering that in the future, conflicts between the submarine cable industry and the seabed mining sector could exacerbate; a scenario that reinforces the idea that the communication between the two sectors would be beneficial (Johnson 2017). In fact, the Secretary General of the ISA has recently announced a workshop with the ICPC to develop guidance for avoiding conflict between the sectors (ENB 2018).

Area-based planning is considered an effective mechanism for design of spatial regulation and for the sustainable use of marine resources as it reduces the risk of possible conflicts between different stakeholders (UNEP-WCMC 2017). Nonetheless, spatial differences exist, and known Best Environmental Practices (BEPs) suitable for national waters are not necessarily appropriate for ABNJ (Johnson 2017). Finally, although the assessment of spatial human activities in ABNJ is a major challenge, the use of MSP for deep-sea environments is increasingly needed to resolve possible space and use conflicts (Johnson 2017).

Area-Based Planning in the Southeast Pacific and Western Indian Ocean Regions

In this area, the Nairobi Convention Contracting Parties expanded the Convention to cover adjacent water in ABNJ to implement an ecosystem-based approach (UNEP-WCMC 2017). It includes the development of ecosystem-based management tools for implementation. The major challenge in implementing activities related to ABNJ in the Western Indian Ocean is the lack of capacity on ABNJ-related issues at the national level (UNEP-WCMC 2017). Here, ongoing research might highlight possible approaches on how to develop a collective governance mechanism, including as many stakeholders as possible and using the Nairobi Convention's Secretariat as coordinator of activities and agreed management approaches.

5 Conclusion

Within the marine environment, a greater number of human activities are taking place and are expected to increase in the future which not only put at risk the availability of many natural resources but also jeopardise the marine biodiversity and thus the benefits people obtain from the services provided by natural ecosystems. Although various legal frameworks exist for the governance of the marine environment, their effectiveness—especially within the ABNJ—in achieving their objectives is questioned. The MSP approach is a valuable tool, which could be used as a framework to achieve better management and spatial use of the marine environment. Although most of the international regimes do not directly deal with MSP, UNCLOS recognises that the activities happening in the oceans are interrelated and should be considered a whole (Becker-Weinberg 2017). Similarly, the UNESCO considers MSP as a 'public process' capable of identifying the different human activities in the marine environment and allocate them in a rational and sustainable manner to reduce negative impacts and possible impacts (Becker-Weinberg 2017, p. 579).

In ABNJ each sector is singularly managed and there is a need for better coordination across the different sectors. MSP could provide a solution to this aspect and not only improve coordination but also deliver a more rational use of the marine environment. However, ABNJ have very different characteristics than areas within national jurisdictions and although MSP has been used in national waters, its use in ABNJ is limited by the fragmented governance framework and by the lack of a coordinating mechanism, or leadership body

to facilitate a cross-sectoral planning process. Considering this weakness, it is hoped that the new BBNJ process will discuss MSP together with MPAs and produce a framework for spatial planning in ABNJ, which would facilitate the use of MSP in international waters. Eventually, collaborative actions among states are often the only way to create a legal framework for protecting the marine environment, especially since the oceans do not have physical borders and pollution as well as human pressures do not necessarily stay within designed borders. The MSP approach could facilitate maritime governance and establish new ways of managing the sea that not only takes into consideration the human activities but also considers the interconnections between the marine ecosystems.

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