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The long and winding road: negotiating a treaty for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction

Glen Wright, Julien Rochette (IDDRI), Kristina Gjerde (IUCN), Isabel Seeger (IDDRI)

Forewords by Laurence Tubiana and Eden Charles

A VAST GLOBAL COMMONS UNDER INCREASING PRESSURE

Marine areas beyond national jurisdiction (ABNJ) cover nearly half of the Earth's surface and host a significant portion of its biodiversity. The remoteness of ABNJ and a lack of knowledge previously placed them beyond the reach of human activities. In recent decades, technological and scientific advancements, coupled with growing demand for resources, have increased interest in these areas and driven exploration and exploitation.

A TREATY TO SAFEGUARD THE HEALTH OF THE GLOBAL OCEAN

The international community has become increasingly aware of the growing threats to marine biodiversity in ABNJ and been discussing options to conserve and sustainably use it. On December 24, 2017, following more than 10 years of discussions, the United Nations General Assembly decided to convene an intergovernmental conference (IGC) to negotiate an international legally binding instrument (ILBI).

A PACKAGE OF VARIED AND COMPLEX ISSUES

Negotiations will cover the 'Package Deal' of issues agreed in 2011, namely: marine genetic resources (MGRs), including questions on the sharing of benefits; area-based management tools (ABMTs), including marine protected areas (MPAs); environmental impact assessments (EIA); and capacity-building and the transfer of marine technology.

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Institut du développement durable
et des relations internationales
27, rue Saint-Guillaume
75337 Paris cedex 07 France

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For more information about this document, please contact:
Glen Wright glen.wright@iddri.org
Kristina Gjerde kristina.gjerde@eip.com.pl

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FOREWORD BY LAURENCE TUBIANA

Former French Ambassador for Climate Change and Special Representative for COP21

On a particular Monday morning in December 2015, I sat with Minister Laurent Fabius in the beautiful Napoleon III office at the Ministry of Foreign Affairs. He was calm, as always, but exhausted. Like seafarers having navigated a wild storm, we were catching our breath. He was reading the 15 pages of the newly minted Paris Agreement: "It really is rather good. I don't know how we managed it". I laughed a little. I knew how we made this happen, but I also knew what he meant: there were so many opportunities for failure. And this was certainly the main obstacle: fear of failure. Throughout the process towards the final adoption of the Paris Agreement, my main concern was to ensure that we prevailed over fear.

Now a consensus has been reached on the need for a new treaty on another pressing issue: the health of the global ocean. On the eve of an historic intergovernmental conference, I imagine that everyone involved feels a huge sense of responsibility. Because the high seas are under threat and we must act.

Marine areas beyond national jurisdiction face a multitude of pressures that have intensified and increased in recent decades. They are at risk from the impacts of shipping and fishing, which leave their imprint on ever deeper and more distant areas. There is growing interest in seabed mining, marine genetic resources, and other new activities. And who knows what else we will ask of the ocean in the coming decades as we increasingly turn toward the sea for resources, jobs and economic growth. More than ever, the high seas need a strong political commitment and effective governance mechanisms to secure their future.

To a certain extent, the climate and the high seas —two global public goods—are similar. Both involve the same relationship between politics and scientific expertise. Climate scientists are working tirelessly to reduce uncertainty intervals, which are still immense; but there is no longer any question of these uncertainties impeding our efforts to reduce greenhouse gas emissions. In the same way, high seas ecosystems will keep the scientific community busy for decades to come. But should we wait for perfect knowledge before we make important decisions? Certainly not. The question is not whether we know a lot or a little, but whether we know enough to act. The answer is yes.

Biodiversity hotspots have been identified; knowledge of the behaviour of different species is increasing; deep-sea ecosystems are being studied in greater detail; and we are learning more and more about how the species and ecosystems of the open ocean are all interconnected. Above all, we know how destructive human activities can be and have identified legal and governance gaps. We are therefore impelled to take ambitious action now.

In no way do I seek to downplay the difficulties that States and stakeholders will almost certainly encounter along the road to a new high seas agreement. Negotiating a legal regime for an area covering almost half of the surface of our Planet will doubtless be a challenging task, notwithstanding the years of political and scientific discussions that we have to build on. But my experience with the climate change negotiations at COP 21 has left me with the profound conviction that, in certain historic moments, we can look beyond short-term interests, overcome power politics and egos, and pull together to build a common future.

I like to joke that there are just three conditions for the success of an intergovernmental negotiation: trust, trust and more trust. Trust among Parties, and trust in the process itself—i.e. that it should be transparent and give all countries the same opportunities for input and review.

Civil society plays a crucial, albeit delicate, supporting role: injecting optimism and ambition into the process, while proposing pragmatic solutions to seemingly intractable problems. To strike this balance, stakeholders must not only develop a deep understanding of the issues at stake, but must also be able to spot the room for manoeuvre amongst the political sensitivities and red lines.

The Long and Winding Road has served as an indispensable guide to this process and its complexities. I am certain that this updated third edition will prove invaluable as you embark on this exciting and important negotiation.

Indeed, you are about to negotiate the future of the high seas, half of "our" blue Planet. The task is daunting, but I hope that you will be inspired by the Paris Agreement to take ambitious action. With collective wisdom, personal courage and good organization, nothing is impossible.

I wish you all the best in this endeavour.

Laurence Tubiana

FOREWORD BY EDEN CHARLES

Former Chair of the PrepCom and former Ambassador of Trinidad and Tobago at the United Nations

"The long and winding road"? Indeed it has been a long and winding road in the struggle to improve governance of marine biological diversity beyond areas of national jurisdiction (BBNJ). At the same time, I have observed how political will and international cooperation can produce profound results for the betterment of the international community as a whole.

I have seen these successes from my vantage point as a delegate of my country, as well as coordinator or chairman of contentious and politically charged negotiations on different issues relating to ocean governance. I also speak as a person who was intimately involved in the promotion of the rule of law at the international level as Chairman of the Sixth Committee (Legal Affairs) of the United Nations General Assembly and the negotiation of complex multilateral treaties including the *United Nations Arms Trade Treaty* (ATT) and the Convention on the Rights of Persons with Disabilities (CRPD).

Consequently, I am optimistic that the intergovernmental conference on BBNJ, which commences in September 2018, will lead to a legally binding agreement that will contribute to the promotion and maintenance of the rule of law in our oceans and seas.

I have witnessed the ability of delegations to navigate the sometimes turbulent waters of the Ad Hoc Working Group, which saw many delegations move from total objection, lukewarm support, or lack of enthusiasm, to ultimately embrace, with some modifications, the idea first touted by the European Union (EU) around 2006 for an implementing agreement under the *1982 United Nations Convention on the Law of the Sea* ("Convention").

There is almost universal recognition by States that the Convention is the constitution of our oceans and seas, based either on adherence to legally binding obligations which flow from being States Parties to the Convention or due to the acceptance of most or all of the provisions of the Convention as customary international law. Owing to this, and other factors, many States were not initially convinced of the need to conclude another implementing agreement. They advanced, *inter alia*, that there were no legal or governance gaps relating to the conservation and sustainable use of BBNJ under the Convention and that existing regional arrangements and other mechanisms covered the subject.

As a firm believer of the role of multilateralism as the primary vehicle to resolve disputes and develop a rules-based system for the fostering of harmonious relations between and among members of the international community, I was not surprised that consensus emerged on the need to conclude a future BBNJ instrument. The turning point arrived with agreement on the delicately crafted 2011 Package Deal, which has remained at the centre of all discussions on what would become the third implementing agreement under the Convention, alongside the *1994 Agreement on the Implementation of Part XI of the Convention* and the *1995 Agreement on Straddling and Highly Migratory Fish Stocks*.

I was part of the process that gave birth to the 2011 package deal and recognized the importance of compromise, strategic retreat and the critical role of bridge-building in arriving at decisions which, at a minimum, are acceptable to all stakeholders. I treasure the memories of late night (or rather, early morning) exchanges between the most enthusiastic delegations, as well as those less enthused. It is true to say, however, that all involved viewed this development as an important milestone on the road to a future BBNJ Agreement. This was a victory for all States.

These memories remained with me when I coordinated resolution 69/292, the modalities resolution for the Preparatory Committee established by the United Nations General Assembly on BBNJ. Here again, multilateralism triumphed in establishing the PrepCom, an extremely critical juncture on this "long and winding road".

As the first Chairman of the PrepCom, having presided over its first two sessions, I never felt dismayed or disillusioned when "the going got tough". All those involved were present to advance and safeguard their interests. It is this coming together that provided the space for open exchange and resulted in success of the PrepCom over its four sessions.

I have been asked by many commentators, at different intervals, if I am optimistic that a legally binding agreement on the conservation and sustainable use of marine biological diversity is in sight. On each occasion, I have answered with a resounding "yes". Too much is at stake for there to be any other answer.

Eden Charles

TABLE OF FIGURES

LIST OF ABBREVIATIONS

ABMTs Area-based management tools

ABNJ Areas beyond national jurisdiction

ABS Access and benefit sharing

AIS Automatic Identification System

AOSIS Alliance of Small Island States

APEI Areas of Particular Environmental Interest

ASMA Antarctic Specially Managed Area

ASPA Antarctic Specially Protected Area

ATBA Area To Be Avoided

ATS Antarctic Treaty System

AU African Union

BBNJ Working Group 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 ("biodiversity beyond national jurisdiction working group")

CARICOM Caribbean Community

CBD Convention on Biological Diversity

CCAMLR Commission for the Conservation of Antarctic Marine Living Resources

CCSBT Commission for the Conservation of Southern Bluefin Tuna

CHM Common heritage of mankind

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

CLCS Commission on the Limits of the Continental Shelf

CMS Convention on Migratory Species

COFI FAO Committee on Fisheries

COP Conference of the Parties

CPPS Comisión Permanente del Pacífico Sur [Permanent Commission for the South Pacific]

DG MARE Directorate-General for Maritime Affairs and Fisheries of the European Commission

DOALOS Division for Ocean Affairs and the Law of the Sea

DOSI Deep-Ocean Stewardship Initiative

EBSA Ecologically or Biologically Significant Marine Areas

EC European Commission

EEZ Exclusive Economic Zone

EIA Environmental impact assessment

ENB Earth Negotiations Bulletin

EU European Union

FAO United Nations Food and Agriculture Organization

GEF Global Environment Facility

GFCM General Fisheries Commission for the Mediterranean and Black Sea

IATTC Inter-American Tropical Tuna Commission

ICCAT International Commission for the Conservation of Atlantic Tunas

ICJ International Court of Justice

ICP United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

ICPC International Cable Protection Committee

IGC Intergovernmental conference

ILBI International legally binding instrument

IMO International Maritime Organization

IOTC Indian Ocean Tuna Commission

IPCC Intergovernmental Panel on Climate Change

IPRs Intellectual property rights

ISA International Seabed Authority

ITLOS International Tribunal on the Law of the Sea

ITPGRFA International Treaty on Plant Genetic Resources for Food and Agriculture

IUCN International Union for the Conservation of Nature

IUU Illegal, unreported and unregulated fishing

IWC International Whaling Commission

LDCs Least Developed Countries

LLDCs Landlocked Developing Countries

LSMPA Large-Scale Marine Protected Area

MAP Mediterranean Action Plan

MCS Monitoring, control and surveillance

MGRs Marine genetic resources

MoU Memorandum of Understanding

MPA Marine Protected Area

MSP marine spatial planning

MSR Marine scientific research

NAFO North Atlantic Fisheries Organisation

NAMMCO North Atlantic Marine Mammal Commission

NEAFC North East Atlantic Fisheries Commission

NDCs Nationally Determined Contributions

NPFC North Pacific Fisheries Commission

OSPAR The Convention for the Protection of the Marine Environment of the North-East Atlantic (Oslo-Paris Convention)

PrepCom Preparatory Committee

PSIDS Pacific Small Island Developing States

PSMA Port State Measures Agreement

PSSA Particularly Sensitive Sea Area

R&D Research and development

RFB Regional fishery body

RFMO Regional Fisheries Management Organisation

SA Special Area

SBSTTA Subsidiary Body on Scientific, Technical and Technological Advice

SDGs Sustainable Development Goals

SEA Strategic Environmental Assessment

SEAFO South East Atlantic Fisheries Organisation

SIDS Small Island Developing States

SIOFA South Indian Ocean Fisheries Agreement

SPAMI Specially Protected Area of Mediterranean Importance

SPREP South Pacific Regional Environment Programme

SPRFMO South Pacific Regional Fisheries Management Organisation

Tonne Metric ton; 1,000KG

UN United Nations

UN-OHRLLS United Nations Office of the High Representative for the Least Developed Countries

UNCLOS United Nations Convention on the Law of the Sea

UNEA United Nations Environment Assembly

UNEP United Nations Environment Program

UNESCO United Nations Educational, Scientific and Cultural Organization

UNESCO-IOC Intergovernmental Oceanographic Commission

UNFSA United Nations Fish Stocks Agreement

UNGA United Nations General Assembly

VME Vulnerable marine ecosystem

VMS Vessel Monitoring System

WCFPC Western and Central Pacific Fisheries Commission

1. INTRODUCTION

Marine areas beyond national jurisdiction (ABNJ) cover nearly half of the Earth's surface and host a significant portion of its biodiversity. The remoteness of ABNJ and a lack of knowledge long placed them beyond the reach of human activities. However, scientific and technological advances, coupled with a growing human population and demand for resources, have increased interest in these areas, driving exploration and exploitation.

The international community, increasingly aware of the growing threats to ecosystems in ABNJ, has been informally discussing options to conserve and sustainably use its biodiversity for more than a decade. On 24 December 2017, the United Nations General Assembly (UNGA) decided to convene an intergovernmental conference (IGC) to elaborate an international legally binding instrument (ILBI) for the conservation and sustainable use of the biological diversity of ABNJ.

As States continue to navigate the complex issues at stake and start to negotiate the provisions of a new agreement, it is imperative that all stakeholders have a clear and comprehensive understanding of the history of the process, elements under discussion, State positions to date, and the challenges that lie ahead. *The Long and Winding Road* provides a guide to the discussions for both experienced participants and newcomers to the process.

The following section recalls the basic context: the law of the sea, State jurisdiction in the ocean, the value of ABNJ, and the pressures and threats ABNJ are currently facing. Section 3 provides a short summary of the existing legal instruments and institutions that comprise the current framework for governance of ABNJ, while Section 4 details the gaps in this framework. Section 5 provides a history of the discussions and highlights key issues that were overcome in order to reach a consensus on opening negotiations. Section 6 gives a summary of State positions during the previous rounds of discussions and Section 7 provides an introduction to some of the key issues that States will have to address in negotiating the new agreement.

2. CONTEXT

2.1. The ocean in the global sustainable development agenda

The ocean provides ecosystem services that are fundamental to human survival and wellbeing (WOA I, 2016; Peterson & Lubchenco, 1997). The ocean is the backbone of international trade and communication systems and is at the heart of many recreational and cultural activities. Our seas are the primary source of protein for about 1 billion people,[1] and present a variety of opportunities for sustainable economic growth, from aquaculture to renewable energy (Johnson *et al.*, 2018; Lillebø *et al.*, 2017; Smith *et al.*, 2015).

There is, however, growing recognition that our use of the marine environment and its resources is unsustainable (WOA I, 2016). Traditional maritime activities such as shipping and fishing have intensified and expanded, while a range of new activities have been developing, including in ABNJ. This has contributed to pollution, overexploitation of resources and destruction of habitats. Climate change and ocean acidification are placing further pressure on marine ecosystems, reducing their resilience and compounding existing impacts

1. See World Health Organization, 'Availability and consumption of fish', http://www.who.int/nutrition/topics/3_foodconsumption/en/index5.html.

(Gattuso *et al.*, 2015; Howes *et al.*, 2015; Hoegh-Guldberg, 2010; Cooley *et al.*, 2009).

In 2010, several global objectives relevant to conservation and sustainable use of the ocean and its resources were adopted within the framework of the Convention on Biological Diversity (CBD).[2] Known as the "Aichi Targets", they include that by 2020:[3]

- Incentives harmful to biodiversity, including subsidies, are eliminated, phased out or reformed (Target 3).
- All fish, invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches (Target 6).
- At least 10 per cent of coastal and marine areas are protected (Target 11).

The 2012 Rio+20 Conference outcome document, cognisant of Aichi Target 11, reaffirmed some important goals and principles, with States committing to:

> *"protect and restore, the health, productivity and resilience of oceans and marine ecosystems, to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities having an impact on the marine environment, to deliver on all three dimensions of sustainable development".*[4]

In Rio, States agreed to develop a set of Sustainable Development Goals (SDGs) to bring together the Millennium Development Goals (MDGs) and environmental concerns in one coherent and comprehensive global development agenda. The SDGs were formally adopted in September 2015, providing a framework for sustainability based on an ambitious set of objectives and targets. The standalone goal for the ocean (SDG 14) highlights the conservation and sustainable use of the ocean as one of the world's most pressing global sustainability challenges.

Box 1. SDG 14 targets

14.1 By 2025, prevent and significantly reduce **marine pollution** of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2 By 2020, sustainably manage and **protect marine and coastal ecosystems** to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

14.3 Minimize and address the impacts of **ocean acidification**, including through enhanced scientific cooperation at all levels

14.4 By 2020, effectively regulate harvesting and end **overfishing, illegal, unreported and unregulated fishing and destructive fishing practices** and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics

14.5 By 2020, **conserve at least 10 per cent of coastal and marine areas**, consistent with national and international law and based on the best available scientific information

14.6 By 2020, **prohibit certain forms of fisheries subsidies** which contribute to overcapacity and overfishing, eliminate subsidies that contribute to illegal, unreported and unregulated fishing and refrain from introducing new such subsidies, recognizing that appropriate and effective special and differential treatment for developing and least developed countries should be an integral part of the World Trade Organization fisheries subsidies negotiation

14.7 By 2030, increase the **economic benefits to small island developing States and least developed countries** from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism

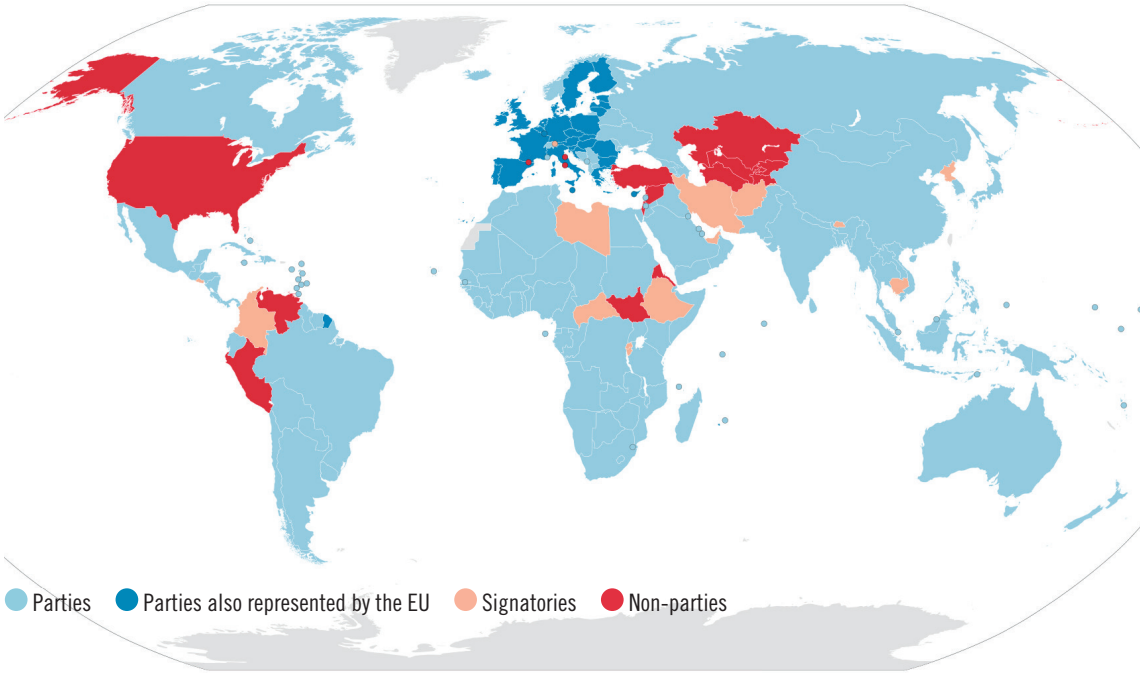
14.a Increase **scientific knowledge, develop research capacity and transfer marine technology**, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries

14.b Provide **access for small-scale artisanal fishers** to marine resources and markets

14.c Enhance the conservation and sustainable use of oceans and their resources by **implementing international law** as reflected in the United Nations Convention on the Law of the Sea, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of "The future we want"

2. Adopted in 1992 and entering into force in 1993, the CBD currently has garnered near universal participation (193 Parties).
3. CBD COP 10, Decision X/2, Strategic Plan for Biodiversity 2011/2020. For further information, see: https://www.cbd.int/sp/.
4. The Future We Want (2012) UNGA Resolution A/66/288, §158.

Figure 1. Parties to UNCLOS



Source: Wikimedia (https://commons.wikimedia.org/wiki/File:United_Nations_Convention_on_the_Law_of_the_Sea_parties.svg)

2.2. State jurisdiction in the ocean

The United Nations Convention on the Law of the Sea (UNCLOS), according to its preamble, aims to establish a "legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment". UNCLOS is widely considered to be the "Constitution for the ocean" (Koh, 1982) and has achieved near-universal participation.[5]

UNCLOS sets out a number of maritime zones under State jurisdiction. These zones are measured from a defined baseline, generally the low-water mark (Article 5).[6] The key areas of State sovereignty and jurisdiction are:[7]

- **Territorial sea**: Out to 12 nautical miles from the baseline (Article 3). The coastal State has the right to set laws, regulate use, and exploit any resource (subject to the right of innocent passage enjoyed by all States) (Articles 17 & 24).[8]
- **Exclusive Economic Zone (EEZ)**: Extends from the edge of the territorial sea out to 200 nautical miles from the baseline (Article 57). The coastal State has "sovereign rights for the purpose of

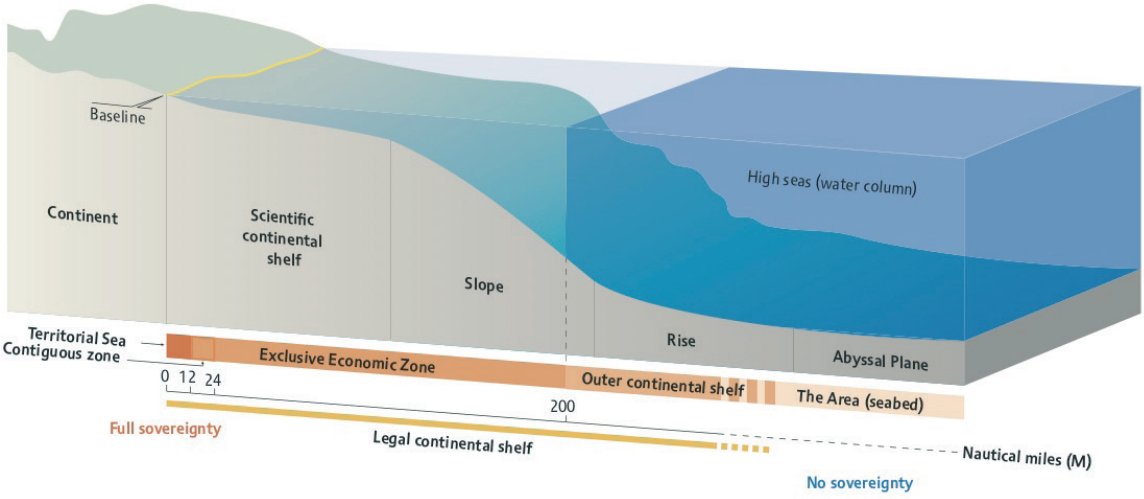
5. There are currently 168 Parties to UNCLOS and the UN General Assembly has regularly stressed its goal of universal participation in its resolutions on oceans and the law of the sea. Participation has grown steadily since its adoption. 19 ratifications have taken place since the first BBNJ Working Group meeting in February 2006 (see Section 5). A chronological list of ratifications is available at: http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm. The following States have not ratified (* denotes States that have nonetheless signed): Afghanistan*, Andorra, Bhutan*, Burundi*, Cambodia*, Central African Republic*, Colombia*, El Salvador*, Eritrea, Ethiopia*, Holy See, Iran (Islamic Republic)*, Israel, Kazakhstan, Korea (People's Democratic Republic)*, Kyrgyzstan, Libya*, Liechtenstein*, Peru, Rwanda*, San Marino, South Sudan, Syrian Arabic Republic, Tajikistan, Turkey, Turkmenistan, United Arab Emirates*, the United States, Uzbekistan, Venezuela.

6. In the case of islands situated on atolls or of islands having fringing reefs, the baseline is the "seaward low-water line of the reef, as shown by the appropriate symbol on charts officially recognized by the coastal State low-water line of the reef" (Article 6). In the case of deeply indented coastlines or fringing islands, straight baselines may be employed, subject to certain conditions (Article 7).

7. In addition to the zones described, UNCLOS also defines internal waters (Article 8), archipelagic waters (Part IV), and the contiguous zone (Article 33). The contiguous zone is a further 12 nautical miles from the territorial sea limit, in which a State can continue to enforce certain laws, if an infringement started, or is about to occur, within the State's territory or territorial waters.

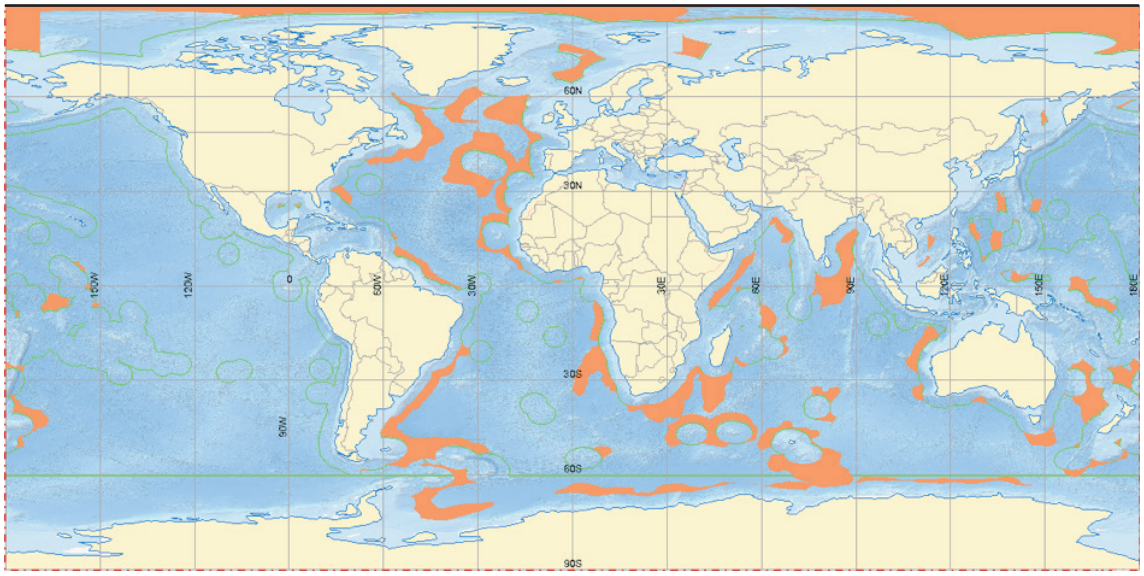
8. "Innocent passage" means passing through waters in an expeditious and continuous manner that is not "prejudicial to the peace, good order or the security" of the coastal State (Article 19).

Figure 2. Maritime zones under UNCLOS



Source: Riccardo Pravettoni (GRID-Arendal)

Figure 3. Global distribution of outer continental shelf



Source: GRID-Arendal (http://www.continentalshelf.org/onestopdatashop/1149.aspx)

exploring and exploiting, conserving and managing the natural resources, whether living or non-living", and may establish artificial islands and structures (Article 56). The coastal State has jurisdiction to protect and preserve the marine environment and to conduct marine scientific research. All States, whether coastal or land-locked, have the freedom of navigation and overflight and may lay submarine pipes and cables (Article 58).[9]

- **Continental shelf**: The natural prolongation of the land territory to the outer edge of the continental margin, or 200 nautical miles from the baseline, whichever is greater (Article 76). Where the continental shelf extends beyond 200 nautical miles, States shall make a submission to the Commission on the Limits of the Continental Shelf (CLCS) to define the outer limits.[10] Coastal

9. In exercising these freedoms, non-coastal States "shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State […] and other rules of international law" (Article 58(3)).

10. Article 76(4). A continental shelf extending beyond 200 nautical miles is often referred to as an "extended continental shelf", though UNCLOS itself does not use this term. The outer limits of the continental shelf may not exceed 350 nautical miles from the baseline or 100 nautical miles beyond the 2,500-metre isobath (i.e. the line connecting the depth

States have exclusive rights to harvest mineral and non-living material and sedentary species from the seabed and subsoil of its continental shelf (Article 77). Other States have the freedom of navigation and overflight (Article 78) and may lay submarine pipes and cables) (Article 79).[11]

2.3. Marine areas beyond national jurisdiction

According to UNCLOS, ABNJ comprise two distinct components: "The Area" and the "high seas".

2.3.1. The Area

"The seabed and ocean floor, and subsoil thereof, beyond the limits of national jurisdiction" are known as "the Area" (Article 1). The Area and its mineral resources have a specific legal status under UNCLOS: they are considered the "common heritage of mankind" (CHM; Article 136).[12] Activities in the Area must be conducted for the benefit of mankind as a whole (Article 140). The International Seabed Authority (ISA) was established in 1994 by an implementing agreement to UNCLOS and is the competent body through which Parties "organise and control activities in the Area, particularly with a view to administering the resources of the Area".[13]

For over 20 years, the ISA has been developing regulations related to seabed mining in the Area. The rules, regulations and procedures that cover prospecting and exploration are gathered in the "Mining Code".[14] The ISA has been working to develop regulations for eventual exploitation of these resources. In August 2017, the ISA published the first set of Draft Regulations on Exploitation of Mineral Resources in the Area,[15] which currently remain under development.[16]

The ISA's mandate includes environmental protection, and it develops norms aimed at ensuring "effective protection for the marine environment from harmful effects which may arise" from activities conducted in the Area. The ISA also has some responsibilities regarding the coordination and promotion of marine scientific research.[17]

2.3.2. The high seas

The high seas encompass the water column beyond the EEZs of coastal States[18] and are governed by the longstanding freedom of the seas principle. Dutch jurist Hugo Grotius formulated the principle in his 1609 book *Mare Liberum* in an effort to secure free navigation. The principle was subsequently reinforced in the 19th century with the establishment of regular shipping lines and further endorsed by the 1958 Geneva Convention on the high seas.[19] Article 87 of UNCLOS provides a non-exhaustive list of these freedoms, including:

- freedom of navigation;
- freedom of overflight;
- freedom to lay submarine cables and pipelines;
- freedom to construct artificial islands and other installations permitted under international law;
- freedom of fishing;
- and freedom to conduct scientific research.

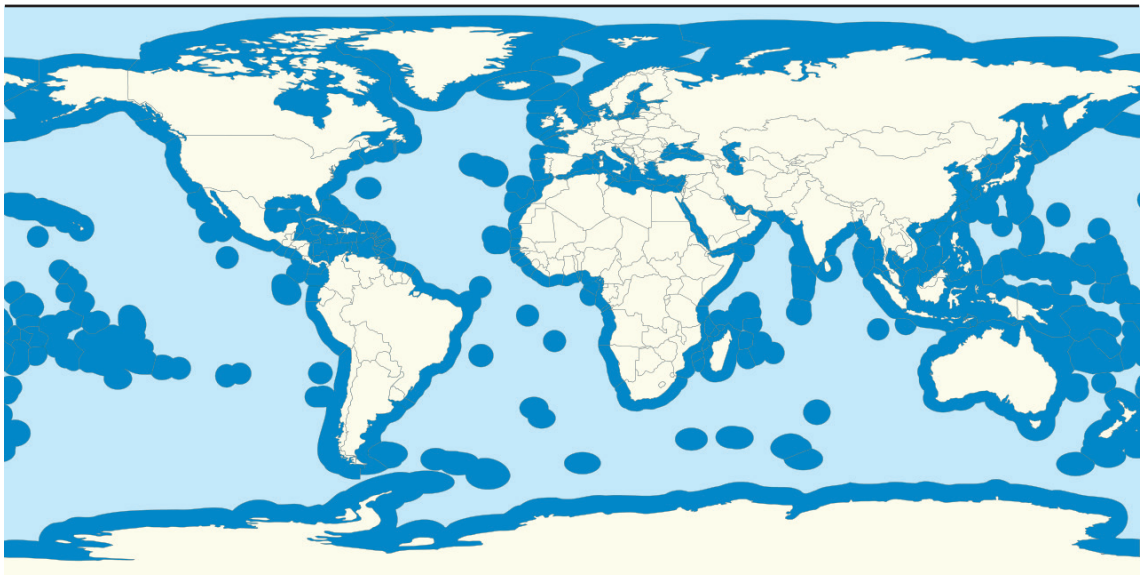
These high seas freedoms "are not absolute rights but are subject to a number of limitations and corresponding duties upon which their legal exercise is pre-conditioned" (Freestone, 2009). As noted by Judge de Castro y Bravo in a 1974 judgment of the International Court of Justice (ICJ):[20]

> *"the principle of the freedom of the high seas is as valid as ever it was, but it does not operate in isolation, it must be applied in accordance with*

of 2,500 meters). UNCLOS, Article 76(5-6). For further information, see the website of the CLCS: http://www.un.org/Depts/los/clcs_new/clcs_home.htm. A list of submissions and their current statuses is available at: http://www.un.org/depts/los/clcs_new/commission_submissions.htm.

11. The coastal State may not impede the laying or maintenance of cables or pipelines (though it may take reasonable measures for the exercise of its rights in relation to the continental shelf and to prevent, reduce and control pollution from pipelines). The coastal State may also establish conditions for the laying of cables or pipelines.
12. Article 133(a) defines "resources" to mean "all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed […]". The CHM status was inspired by a declaration made in 1967 at the UN by the Maltese Ambassador Arvid Pardo and was subsequently proclaimed in a 1970 United Nations General Assembly resolution. For a detailed discussion, see Noyes (2012).
13. Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. This Agreement, adopted in 1994, is the first Implementing Agreement to UNCLOS.
14. The ISA uses the term "Mining Code" to denote "the whole of the comprehensive set of rules, regulations, and procedures issued by the ISA to regulate prospecting, exploration, and exploitation of marine minerals in the Area." Available at: https://www.isa.org.jm/mining-code.
15. See https://www.isa.org.jm/files/documents/EN/Regs/DraftExpl/ISBA23-LTC-CRP3-Rev.pdf .
16. See Draft Regulations on Exploitation of Mineral Resources in the Area, issued 30 April 2018, https://undocs.org/ISBA/24/LTC/WP.1/
17. UNCLOS, Article 143 (2): "[…] the Authority shall promote and encourage the conduct of marine scientific research in the Area and shall coordinate and disseminate the results of such research and analysis when available".
18. I.e. "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State". UNCLOS, Article 86.
19. Available at: http://www.gc.noaa.gov/documents/8_1_1958_high_seas.pdf.
20. Fisheries Jurisdiction Case (UK v Iceland) ICJ 3 (1974).

Figure 4. The high seas



Source: Seas Around Us (http://www.seaaroundus.org/data/#/global). Dark blue areas represent theoretical boundaries to 200 nautical miles, excluding Antarctica. Map does not reflect the current status of claims before the CLCS.

existing circumstances and the views currently held. In the time of Grotius, and up to the end of the Second World War, the principle could be expressed in absolute terms; today, reality is otherwise, and compels us to express it more moderately, and to harmonize it with other secondary principles."

UNCLOS itself places conditions on the exercise of these freedoms, making them subject to a range of obligations and responsibilities to other States and to the marine environment (Young, 2016). The development of international law has also progressively restricted these freedoms through the imposition of new treaty obligations and the application of modern legal principles, such as the precautionary principle.

An emblematic example of such restrictions relates to the freedom of fishing. By the middle of the 20th century, it had already become clear that the theoretical basis of freedom of fishing in the high seas had "become unsound […]. The new methods of fishing made it necessary to take steps for the conservation of the living resources of the high seas".[21] Following the adoption of UNCLOS, "more coastal States claimed their rights and jurisdiction over fisheries in the EEZ, large distant-water fishing fleets were displaced from some of their traditional fishing grounds and the pressure to fish in the high seas grew rapidly and without much control" (Maguire *et al.*, 2006). Reacting to these changes, States adopted the UN Fish Stocks Agreement (UNFSA) in 1995,[22] which explicitly placed conditions on the freedom of fishing by elaborating on the duty to cooperate in order to promote conservation and sustainable use.[23]

2.4. The value of ABNJ

ABNJ provide a wealth of resources and vital ecosystem services, including:[24]

- Provisioning services, such as seafood, raw materials, genetic and medicinal resources;
- Regulating services, such as climate regulation, carbon sequestration, air purification and habitat services;

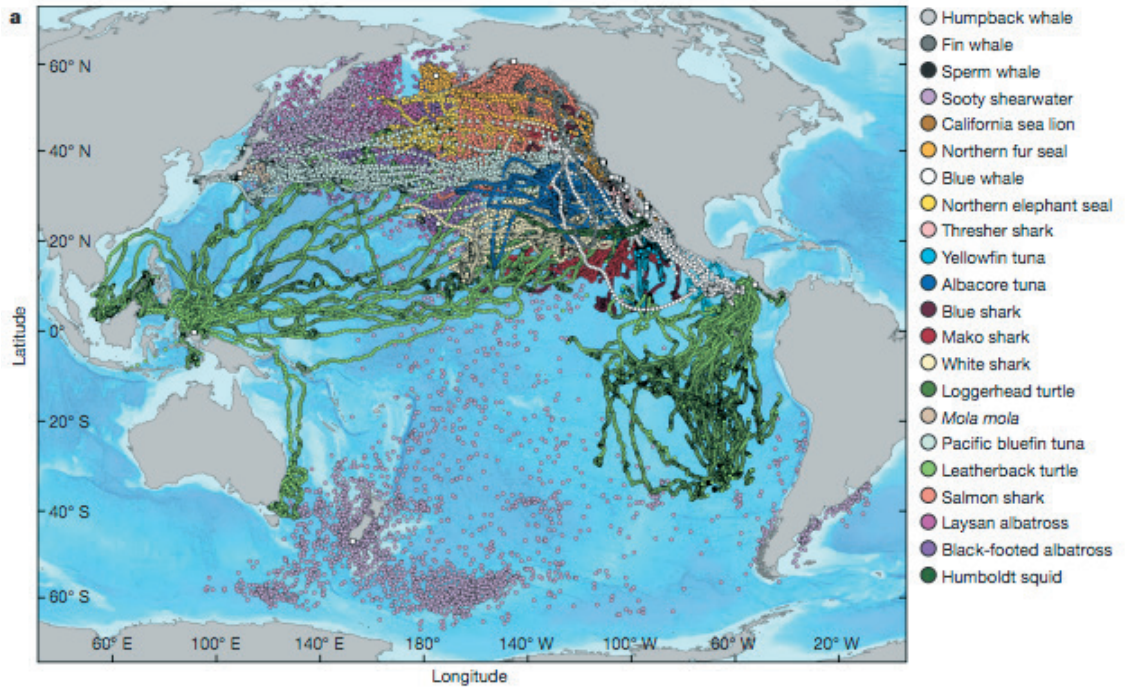
21. Ibid.

22. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. The UNFSA was the second Implementing Agreement to UNCLOS following the 1994 Agreement related to the implementation of Part XI of UNCLOS (regarding seabed minerals). The Agreement entered into force in 2001.

23. The UNFSA defines some guiding principles for the conservation and management of highly migratory and straddling fish stocks, including the application of the precautionary and ecosystem approaches and the protection of biodiversity in the marine environment. States Parties to UNFSA, and their vessels, are required to join the relevant regional fisheries management organisations (RFMOs), or at least agree to abide by their conservation and management measures.

24. These categorisations follow the framework adopted by the Millennium Ecosystem Assessment. See https://www.millenniumassessment.org/documents/document.48.aspx.pdf.

Figure 5. Top predators inhabiting and migrating into the coastal upwelling region off the west coast of North America.



Source: Block *et al.*, 2011 (Census of Marine Life)

- Cultural services, such as recreation and aesthetic enjoyment, spiritual significance and historical value, science and education; and
- Supporting services, such as nutrient recycling and primary production.

These areas contain unique oceanographic and biological features, such as seamounts, hydrothermal vents and cold seeps. They also provide migration routes for many species and extensive bottom habitats that play a range of important roles in wider ocean ecosystems and climatic processes (Snelgrove, 1999).

Many of these ecosystems and migration routes naturally span waters both within and beyond national jurisdiction (Figure 5). Recent technological and scientific advances have greatly improved scientific understanding of this interconnectivity.[25]

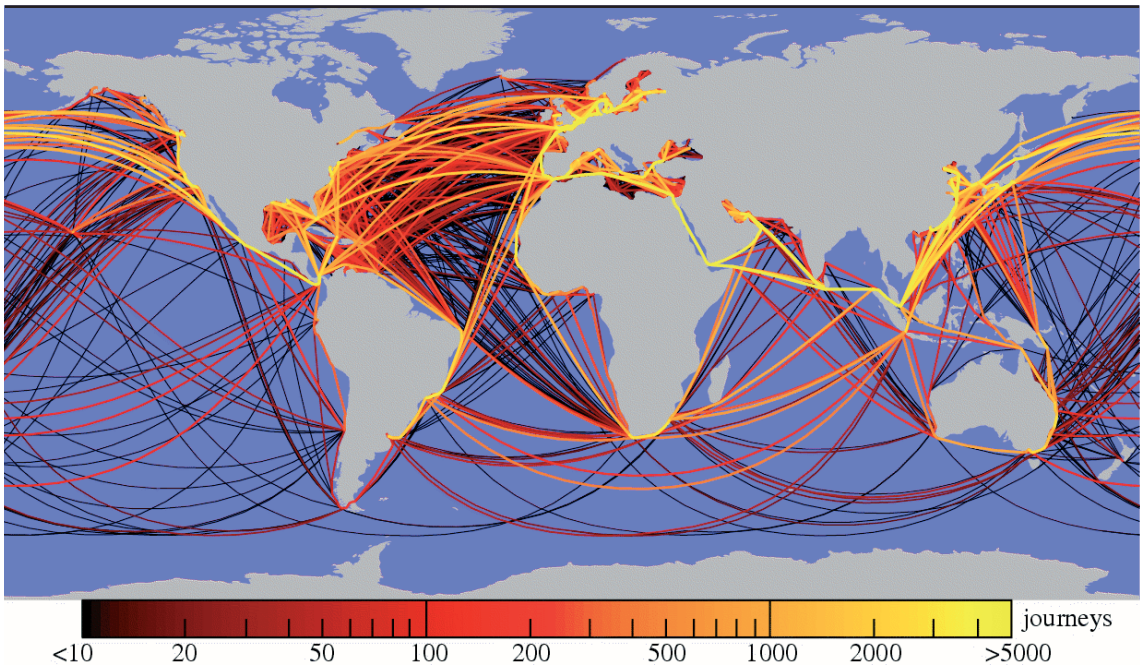
While estimates of the economic value of the ecosystem services provided by the open ocean and deep sea vary widely,[26] the sheer scale of ABNJ likely makes them the most valuable provider of ecosystem services overall (Folkersen *et al.*, 2018; de Groot *et al.*, 2012; Costanza *et al.*, 1997). A report commissioned by the Global Ocean Commission estimated that (Rogers *et al.*, 2014):

- High-seas ecosystems are responsible for almost half of the total biological productivity of the global ocean.
- Nearly half a billion tonnes of carbon, the equivalent of over 1.5 billion tonnes of carbon dioxide, are captured and stored by high-seas ecosystems annually.
- Around 10 million tonnes of fish are caught annually on the high seas, i.e. more than US$16 billion in gross landed value per year.
- The majority of global ocean fish harvests are of species captured both in EEZs and in the high seas, suggesting that overfishing on the high seas is likely to negatively impact nearshore fish catches and vice versa.

25. It has now been demonstrated that many species range farther than was previously thought, occur predictably at specific times, places or habitats, and follow specific migratory corridors (Votier, 2018; Horton *et al.*, 2017; Hussey *et al.*, 2015; Costa *et al.*, 2012; Webster *et al.*, 2002). In this context, the Migratory Connectivity in the Ocean project (MiCO) is seeking to provide policy-relevant information regarding global migratory routes and ecosystem connectivity in ABNJ. See www.mgel.env.duke.edu/mico/.

26. Owing to the diverse scope, purpose and methodology of studies, as well as due a lack of reliable data. Furthermore, there are considerable gaps in scientific knowledge regarding large parts of the ocean. For example, the mesopelagic zone plays a significant role in climate regulation (Hudson *et al.*, 2014; Davison *et al.*, 2013), though few studies have been conducted and the current scientific understanding is limited (St. John *et al.*, 2016).

Figure 6. The trajectories of all cargo ships bigger than 10 000 gross tonnage during 2007



Source: Kaluza *et al.* 2010

2.5. Resources, activities and environmental impacts

Since the adoption of UNCLOS in 1982, human activities in ABNJ have developed exponentially. Existing activities, such as shipping and fishing, have intensified and expanded, while there is growing interest in emerging activities such as seabed mining and bioprospecting (WOA I, 2016; Merrie *et al.*, 2014; Ramirez-Llodra *et al.*, 2011).[27] At the same time, rising sea temperature, deoxygenation, and ocean acidification compound the environmental impacts of human activities and place further pressure on marine ecosystems (Gattuso *et al.*, 2015; Howes *et al.*, 2015; Levin & Le Bris, 2015; Bopp *et al.*, 2013).

2.5.1. Shipping

In 1956, a converted tanker left Newark, New Jersey with fifty-eight 33-foot containers on its deck, launching the container revolution. Today's largest container ships can carry more than 20,000 twenty-foot equivalent unit (TEU) containers. Around 90% of world trade is now carried by the international shipping industry,[28] with 10.3 billion tonnes of cargo loaded in 2016.[29] Shipping has a range of environmental impacts, including air and noise pollution, carbon emissions, discharge of sewage and other wastes, and introduction of invasive species (Wan *et al.*, 2016).[30]

2.5.2. Fishing

Global fisheries catches saw large increases in the 1960s and 1970s due to the expansion of industrial fisheries in developed countries (Norse *et al.*, 2012). Catches declined from the late 1980s onwards, before stagnating in the late 1990s at around 90 million tons per year (FAO 2014; Norse *et al.* 2012). According to the UN Food and Agriculture Organization (FAO), 33.1% of the fish stocks it monitors were overfished in 2015, while a further 59.9% were fished near the maximum sustainable yield (FAO, 2018).[31] The FAO notes that the "situ-

27. A range of additional activies may develop in ABNJ in the coming decades, e.g. open ocean aquaculture, ocean cleanup efforts, rocket launches at sea, recovery of shipwrecks, and sea-based server farms.

28. IMO Maritime Knowledge Centre, International Shipping Facts and Figures – Information Resources on Trade, Safety, Security, Environment, 2012, http://www.imo.org/en/KnowledgeCentre/ShipsAndShippingFactsAndFigures/TheRoleandImportanceofInternationalShipping/Documents/International%20Shipping%20-%20Facts%20and%20Figures.pdf.

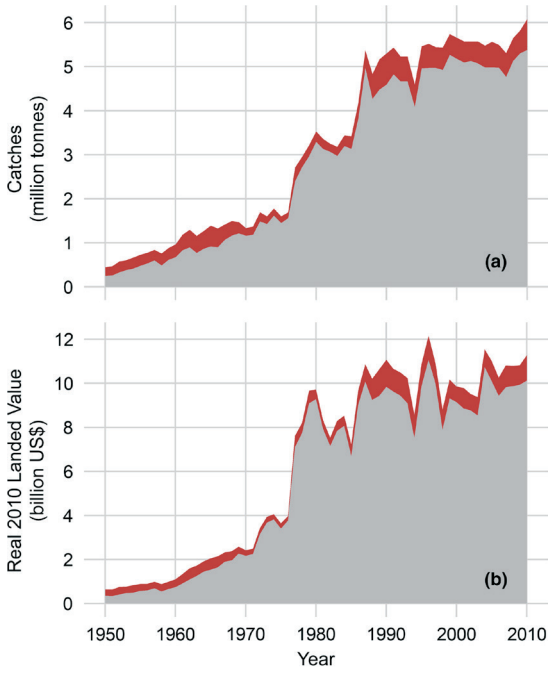
29. UNCTAD, Review of Maritime Transport 2017, http://unctad.org/en/PublicationsLibrary/rmt2017_en.pdf?user=46.

30. For an overview, see the World Shipping Council website: http://www.worldshipping.org/industry-issues/environment.

31. FAO figures are based on catches reported by fishing States. Recent research suggests that these catches are significantly underreported and that true catches are likely to be much

ation seems particularly acute for some highly migratory, straddling and other fishery resources that are fished solely or partially in the high seas" (FAO, 2018), with these stocks being overfished at around twice the rate of those within national jurisdictions (Dunn, 2018).[32]

Figure 7. High seas fisheries production and value



Source: Dunn *et al.*, 2018

High seas catches grew from approximately 450,000 tonnes (US$639 million) in 1950 to around 5,165,000 tonnes (US$10.6 billion) in 1989, far outpacing global growth in coastal zone catches and value in the same period (Dunn *et al.*, 2018; Pauly & Zeller, 2016). Since 1990, catch and value of high seas fisheries have remained relatively stable (FAO 2016), yet fishing effort more than doubled between 1990 and 2006 (Merrie *et al.*, 2014).

High seas fisheries can have significant environmental impacts. In addition to depleting stocks of target species, non-target species are also heavily impacted. For example, 63% of migratory sharks —often caught as bycatch—are threatened or near threatened (Fowler, 2014), as are three quarters of all oceanic shark and ray species (Dulvy *et al.*, 2008).

Box 2. The search for new stocks

It has been estimated that the mesopelagic or "twilight" zone (200-1000 meters) holds a biomass of up to 10 billion metric tons (Irigoien *et al.*, 2014). The potential for fishing in this zone is being investigated (Prellezo, 2018; Norweigan Institute of Marine Research, 2017; Thorvik, 2017). Commercial exploitation of these stocks could affect the mesopelagic zone's role in the global carbon cycle (Hudson *et al.*, 2014; Davison *et al.*, 2013), yet data and scientific understanding of mesopelagic ecosystems and species are highly limited (St. John *et al.*, 2016). Further research and appropriate precautionary management practices would be required to ensure sustainable development of these new fisheries.

Deep sea bottom fisheries have been subject to particular scrutiny because target species are especially susceptible to overfishing and their exploitation entails considerable bycatch. Thus the "serial collapses that took 50 years in coastal marine fisheries takes only 5-10 years in the deep-sea […] and a sustainable combination of low catches with limited ecosystem impact is a difficult, almost impossible, balance to achieve" (Norse *et al.*, 2012).

Only a small number of countries flag vessels that fish in ABNJ. One analysis based on data from Global Fishing Watch[33] estimates that six flag States account for over 75% of the global high seas fishing fleet and 80% of effort (Sala *et al.*, 2018).[34]. High seas fishing receives an estimated US$4.2 billion in subsidies per year. Without these subsidies, over half of all high seas fishing may be unprofitable.[35]

higher (Victorero *et al.*, 2018; Golden *et al.*, 2016; Pauly & Zeller, 2016).

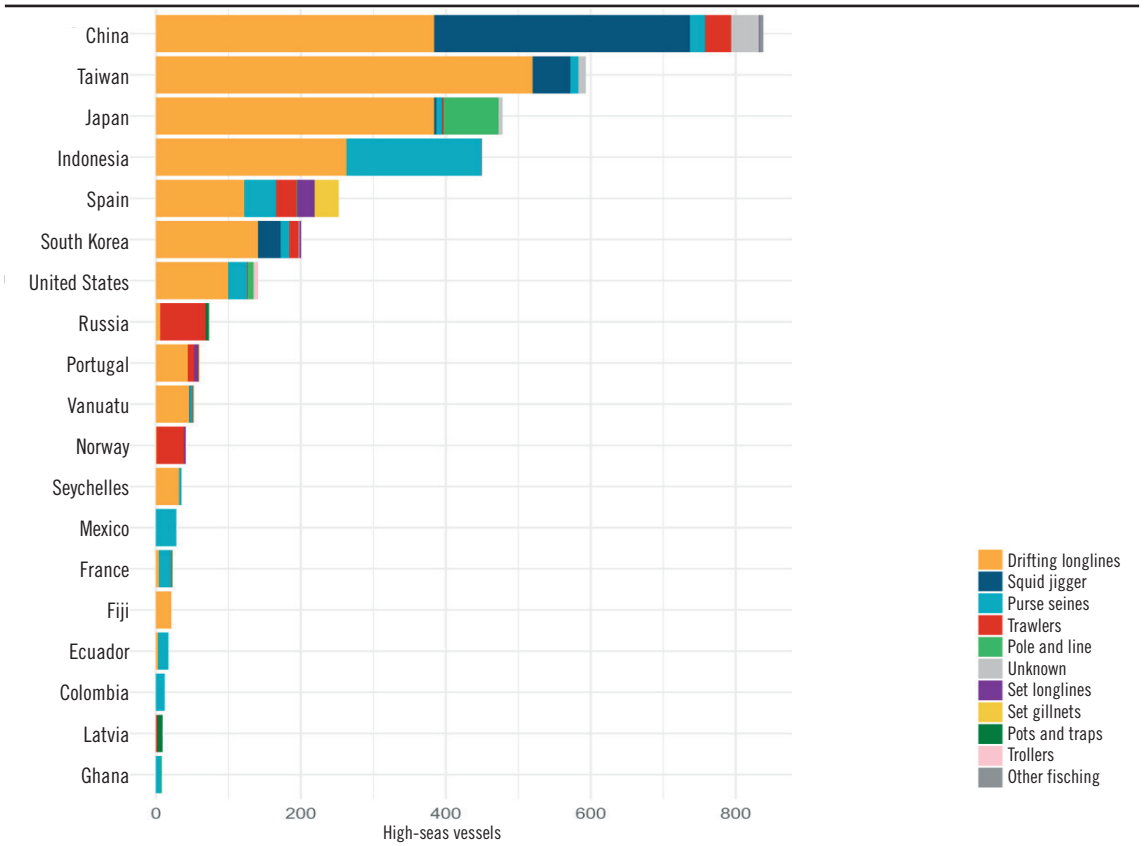
32. The FAO notes that tunas in particular are "of great importance because of their high economic value and extensive international trade, and their sustainable management is subject to great challenges owing to their highly migratory and often straddling distributions. In 2015, among the seven principal tuna species, 43 percent of the stocks were estimated to be fished at biologically unsustainable levels." Nonetheless, "market demand for tuna is still high, and tuna fishing fleets continue to have significant overcapacity." (FAO, 2018)

33. Global Fishing Watch (GFW) is an "independent, international non-profit organisation […] committed to advancing ocean sustainability and stewardship through increasing transparency". GFW aims to offer "data and near real-time tracking of global commercial fishing activity, supporting new science and research, and boosting the global dialogue on ocean transparency" (see http://globalfishingwatch.org/). GFW primarily uses automatic identification system (AIS) data to map fishing patterns. Not all fishing boats carry AIS, but those that do account for a large proportion of catch, especially far from shore (it is estimated that vessels with AIS account for over half the fishing effort more than 100 nautical miles from shore, and as much as 80% of the fishing in the high seas. See http://globalfishingwatch.org/map-and-data/technology).

34. Inferred from AIS and VMS data, measured in kilowatt-hours.

35. Bottom trawling and squid jigging are generally the least profitable and so are most likely to be dependent on subsidies for their continuation. By contrast, high value species such as tuna and sharks caught by drifting longliners and purse seiners are the most likely to be profitable. This analysis is based on 2014 average fuel prices. Fuel prices have almost halved since then, leading to increased profitability.

Figure 8. High seas vessels by flag State and gear type



Source: Sala *et al.*, 2018

There is also concern that high seas fishing is being supported by exploitative labour practices and criminal activities, such as smuggling of weapons, drugs and humans (Sala *et al.*, 2018).

2.5.3. Seabed mining

Potentially valuable mineral and metal resources are now known to occur across the ocean on abyssal plains, hydrothermal vents and seamounts. Discovered in the late 19th century by the oceanographic research vessel HMS *Challenger*, seabed mining did not seem feasible until the 1960s. Rising demand for minerals and metals, along with the depletion of land-based resources, has since led to growing interest in exploiting these resources, in particular: polymetallic nodules; seafloor massive sulfides; and cobalt-rich crusts (Miller *et al.*, 2018).[36] Exploration for mineral resources in the Area is underway. Twenty-nine contracts for exploration have been signed between contractors and the International Seabed Authority (ISA) (see Annex 1).[37]

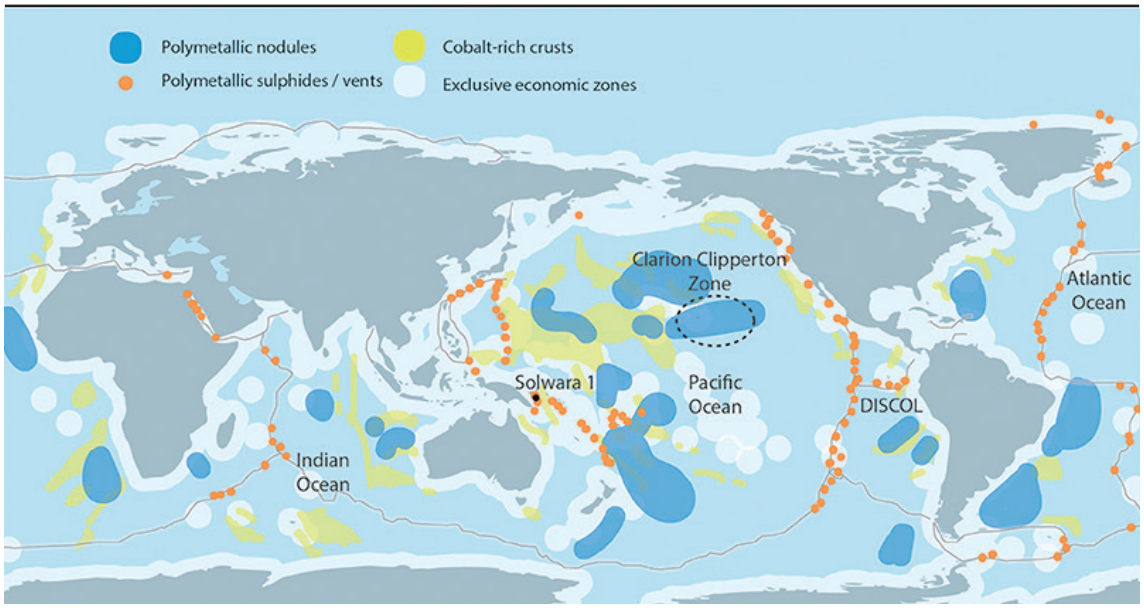
Seabed mining may have some economic and environmental advantages over land-based mining, as it does not require permanent mine or transport infrastructure and affects local communities less directly (Hoagland *et al.,* 2010). However, seabed mining is likely to have a wide range of impacts on marine ecosystems, including: disturbance of the benthic community where nodules are removed; plumes impacting the near-surface biota and deep ocean; and deposition of suspended sediment on the benthos (Miller *et al.*, 2018; Van Dover *et al.*, 2017; Levin *et al.*, 2016; Allsopp *et al.*, 2013; ISA, 2008; Markussen, 1994). Impacts may be widespread and long-lasting, with extremely slow recovery rates expected for most ecosystems (Levin *et al.*, 2016; Van Dover *et al.*, 2017).

In this context, many have expressed the need for caution or even a moratorium on seabed mining activities (Cuyvers *et al.*, 2018; Levin *et al.*, 2016). For example, the European Parliament

36. Miller at al. (2018) note that there is also "interest in extracting methane from gas hydrates associated with marine sediment on continental slopes and rises (in addition to beneath terrestrial permafrost). Other continental shelf resources of commercial interest include diamonds, ironsands (rich in titanomagnetite and lime-soda feldspars for steel production), and phosphorites."

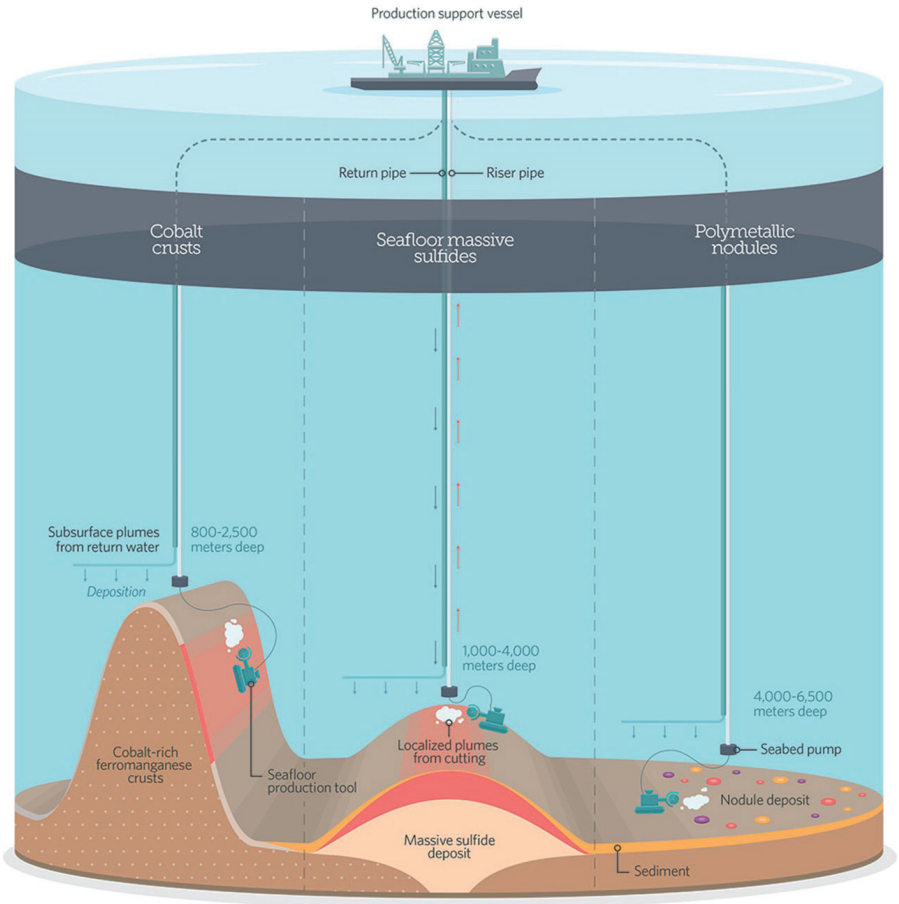
37. The contracts are for exploration in the Clarion-Clipperton Fracture Zone (Pacific Ocean), the Western Indian Ocean, and on the Mid-Atlantic Ridge.

Figure 9. Location of main marine mineral deposits



Source: Miller *et al.*, 2018

Figure 10. Types of seabed mining



Source: Pew Charitable Trusts (http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/02/deep-sea-mining-the-basics)

recently called "on the Commission and the Member States to support an international moratorium on commercial deep-sea mining exploitation licences until such time as the effects of deep-sea mining on the marine environment, biodiversity and human activities at sea have been studied and researched sufficiently and all possible risks are understood".[38]

2.5.4. Marine scientific research

Marine scientific research (MSR) is generally conducted at a smaller scale than industrial activities and the overall impacts are thought to be minimal (Bernal & Simcock, 2015; Hubert, 2011). Nonetheless, "any observation of a natural system has the risk that it will disturb that system" (Bernal & Simcock, 2015), especially where those ecosystems are particularly sensitive to anthropogenic interference or where deliberate perturbation of the marine environment forms part of the scientific investigation (Verlaan, 2007).

Activities conducted in the course of MSR that may have an environmental impact include dredging, sampling, trawling, and the use of remotely operated vehicles and high intensity lighting. Environmental risks can be reduced or eliminated through proper design and the research community has undertaken a number of efforts in this regard (Bernal & Simcock, 2015). The International Ship Operators Forum has developed a Code of Conduct for Marine Scientific Research Vessels,[39] which calls for operators to follow environmentally responsible practices and adopt a precautionary approach in taking mitigation measures. Members of the InterRidge project[40] have adopted a "statement of commitment to responsible research practices at deep-sea hydrothermal vents"[41] that calls on researchers to avoid activities that will impact the sustainability of populations or lead to long-lasting and significant alteration of vent sites.

A survey conducted by the Deep-Ocean Stewardship Initiative (DOSI) found that scientists support the development of a code of conduct for collecting and curating deep sea biological samples in order to minimise environmental impacts, standardise formats for data recording and maximise use of marine samples for different purposes.[42]

Box 3. Marine science in the negotiations

States have frequently reiterated that decisions regarding conservation and sustainable use must be taken based on "best available science". The contribution of MSR to the management of ABNJ specifically could include: advancing human knowledge of deep sea biodiversity; establishing baselines; informing environmental impact assessments; providing advice on tools for area-based conservation; and enhancing understanding of cumulative impacts.

In turn, the negotiations provide the international community with an opportunity to strengthen the overall framework for MSR. The need for increased cooperation on marine science has been recognised as a priority by UN Member States, as evidenced by:

- The annual UNGA resolution on oceans and law of the sea, which has repeatedly called upon States to cooperate in order to advance MSR (Harden-Davies, 2018).
- The first Global Ocean Science Report (2017), which assessed the status and trends in ocean science around the world.[43]
- The declaration of 2021-2030 as the Decade of Ocean Science for Sustainable Development.[44]

Aside from being a key enabler and beneficiary of an ILBI, the scientific community might also play a role in the negotiations themselves. Science has a long history of catalysing cooperation in international spaces, as its universality makes it a unifier that can bring a degree of stability to international relations (Harden-Davies, 2018): ocean science could therefore be a unifying focus for the new agreement.

2.5.5. Bioprospecting

Extreme environments in ABNJ, such as submarine trenches, cold seeps, seamounts, and hydrothermal vents, have given rise to the evolution of organisms with unique characteristics. These organisms are sources of novel genes that could be of both scientific and commercial interest. Bioprospecting, i.e. the search for such genes and the development of commercial products from them, has increased in ABNJ in recent years (Broggiato *et al.*, 2014; Arnaud-Haond *et al.*, 2011).

As with any marine scientific research activities, bioprospecting may introduce light and noise to otherwise undisturbed environments, affect water temperature, and produce pollution (such as debris or discharge from vessels and equipment).

38. European Parliament resolution of 16 January 2018 on international ocean governance: an agenda for the future of our oceans in the context of the 2030 SDGs (2017/2055(INI)).
39. Available at https://www.irso.info/wp-content/uploads/International_RV_Code_final.pdf.
40. A non-profit organization promoting mid-ocean ridge research that can only be achieved by international cooperation. InterRidge is currently supported by four full-member nations (China, France, Norway and USA) and six associate member nations (Canada, Germany, India, Japan, Korea and UK). See https://www.interridge.org/about.
41. Available at http://www.interridge.org/IRStatement.
42. DOSI, Deep-sea marine scientific research and genetic resources in areas beyond national jurisdiction: submission (2016). Available at https://www.un.org/depts/los/biodiversity/prepcom_files/DOSI.pdf.
43. UNESCO-IOC, Global Ocean Science Report: The current status of ocean science around the world (2017).
44. See https://en.unesco.org/ocean-decade.

Inadvertent movement or introduction of organisms can also lead to contamination. Nonetheless, the likely impacts of bioprospecting are currently understood to be low (Hunt & Vincent, 2006).

Box 4. Patenting marine genes

The first patent related to a marine species was registered in 1988. As of October 2017, a total of 12,998 genetic sequences from 862 marine species had been patented. Of these, 73% are from microbial species, 16% from fish and 3% from molluscs. 98% of all patent sequences have been registered by actors in ten countries (49% in Germany, 13% in the United States and 12% in Japan). 47% of all marine sequences included in gene patents have reportedly been registered by BASF, the world's largest chemical manufacturer, headquartered in Germany. The combined share of 220 other companies accounts for 37% of patents, while universities and their commercialization partners have registered 12%.

Source: Blasiak *et al.*, 2018

2.5.6. Pollution and marine litter

Marine pollution includes pollution from: land-based sources (e.g. chemicals, particles, industrial, agricultural and residential waste); vessels; exploration and exploitation of natural resources; atmospheric pollution; and dumping. The vast majority of marine pollution, around 80%, comes from land-based sources.[45] Eutrophication (the enrichment of waters by nutrients) is a result of such pollution and causes algal blooms that can lead to extensive dead-zones, while potentially toxic chemicals are taken up by plankton and concentrated upward within ocean food chains.[46]

Shipping and other activities generate potentially harmful underwater noise pollution (Williams *et al.*, 2015), while lost and abandoned fishing gear ("ghost gear") can cause considerable damage to marine species and ecosystems (Richardson *et al.*, 2018; Global Ghost Gear Initiative, 2017). There are currently few measures in place to monitor and reduce such occurrences (Gilman, 2015).

The advent of inexpensive and durable plastics has precipitated a marked increase in plastic pollution (UNEP, 2016; GESAMP, 2015; Thevenon, 2014; Derraik, 2002). Most plastics do not enter waste recycling systems, leaving large quantities to eventually be deposited into marine ecosystems. Living organisms are affected through direct ingestion of plastic waste, or through exposure to chemicals within plastics. There is also growing scientific understanding of the deleterious effects of microplastics, i.e. fragments of plastic, often invisible to the human eye, that are easily ingested and accumulated in the bodies and tissues of marine organisms (UNEP, 2016). Additionally, marine litter is known to damage and degrade habitats and is a possible vector for the transfer of alien species.[47]

2.5.7. Submarine cables

The ocean lies at the heart of global telecommunications systems, hosting around 1 million km of fibre-optic cables that carry more than 98% of international internet, data, video and telephonic traffic. Deep-ocean cables, which typically have a diameter of 17–22 mm, are generally laid on the seabed; whereas those laid at depths above 1,500 m are generally buried (The International Cable Protection Committee, 2016).[48]

While installation of submarine cables can disturb the benthic environment, this is a one-time procedure and disturbance is limited.[49] Marine mammals can become entangled in cables and there is a risk that sharks and other species may bite them, but such incidences have been significantly reduced or eradicated in recent years as a result of improvements to cable design and laying techniques (Carter *et al.*, 2009). The submarine cable industry makes efforts to reduce or avoid impacts on vulnerable deep-water ecosystems by using modern seabed mapping and navigation systems to identify sensitive areas to be avoided (Carter *et al.*, 2009). Overall, studies suggest that cables have a negligible environmental impact.

Given the foregoing, the International Cable Protection Committee (ICPC) has "respectfully submitted that whatever instrument that may emerge from the BBNJ process, submarine cables should be exempted and the current successful legal system provided in UNCLOS for submarine cables should not be undermined" (The International Cable Protection Committee, 2016).

2.5.8. Greenhouse gas emissions

There is now a widely accepted scientific and political consensus that anthropogenic greenhouse gas

45. UNGA, 'Oceans and the Law of the Sea, Report of the Secretary-General' (2011), §154.
46. Global Partnership on Nutrient Management, 'Building the Foundations for Sustainable Nutrient Management' (UNEP, 2010).
47. See HELCOM, 'Marine Litter', http://www.helcom.fi/action-areas/marine-litter-and-noise/marine-litter/.
48. This depth provides protection from damage caused by other human activities (e.g. bottom trawling and ships' anchoring can displace or damage cables). Shallow-water cables may be placed on the seabed in areas unsuitable for burial.
49. Further disturbance may result from repair operations, but repair on cables in ABNJ is rare, with an average of four repairs annually recorded worldwide (The International Cable Protection Committee, 2016).

emissions, primarily from the burning of fossil fuels, are causing global warming. These emissions are causing measurable physical and chemical changes in the oceans through ocean warming, sea-level rise and acidification, impacting human activities and health (Hoegh-Guldberg & Poloczanska, 2018; Henson *et al.,* 2017; Sunday *et al.,* 2017; WOA I, 2016; Gattuso *et al.,* 2015; Howes *et al.,* 2015; Weatherdon *et al.,* 2015).[50]

At the Paris climate conference in 2016, world leaders agreed to strengthen the global response to climate change, including by:

> *Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.*

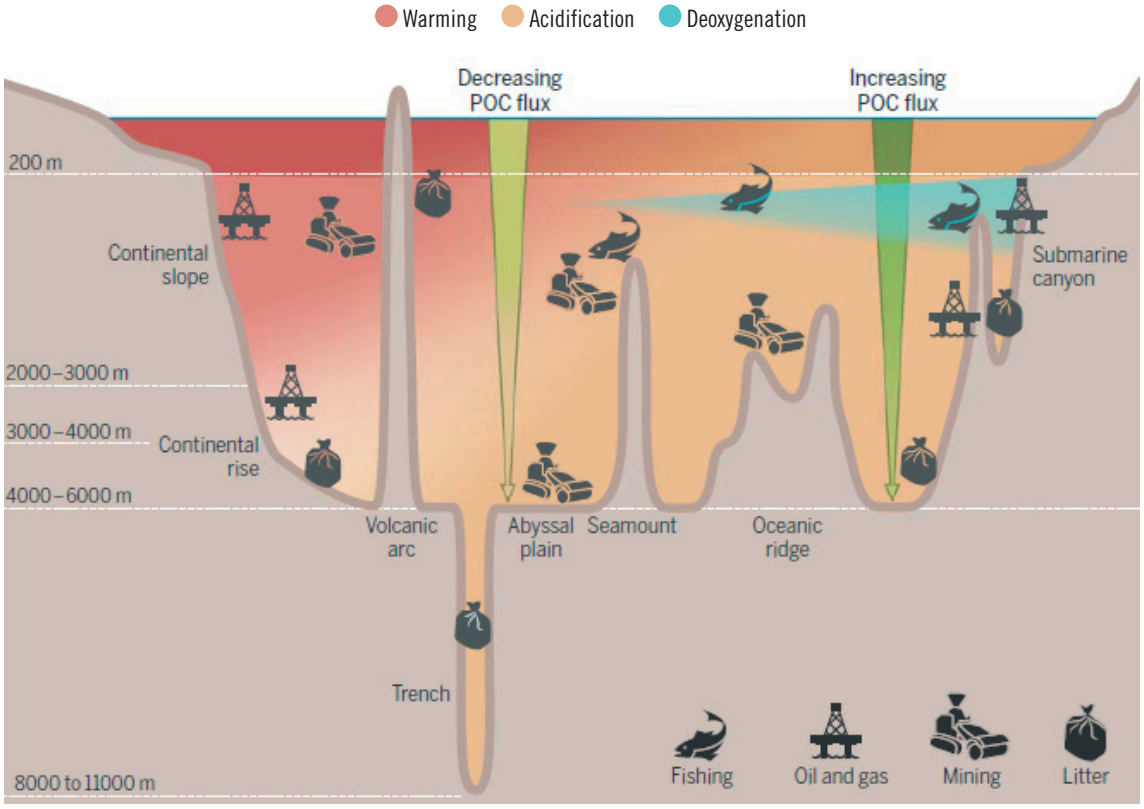
Many States have included the ocean as part of their "nationally determined contributions" to the climate mitigation effort (NDCs) (Gallo *et al.*, 2017). Proposals have also been made to use the ocean to mitigate the effects of greenhouse gas emissions and geoengineering technologies are being researched,[51] such as carbon capture and storage and ocean fertilisation[52] (Boyd, 2013; Lukacs, 2012; Rayfuse *et al.*, 2008).

50. Recognising the need to further advance scientific understanding of these issues, at its 43rd Session (April 2016) the IPCC decided to prepare a Special Report on the Ocean and Cryosphere in a Changing Climate. It is expected that the report will be presented to the 51st Session of the IPCC in September 2019.

51. "Geoengineering proposals aim to intervene in the climate system by deliberately modifying the Earth's energy balance to reduce increases of temperature and eventually stabilise temperature at a lower level than would otherwise be attained". Royal Society, Geoengineering the Climate: Science, Governance and Uncertainty (2009) RS Policy document 10/09, https://royalsociety.org/~/media/Royal_Society_Content/policy/publications/2009/8693.pdf

52. I.e. adding nutrients to the ocean with the aim of increasing the rate at which atmospheric carbon dioxide is transferred to the deep sea. Research involving the addition of nutrients to the ocean with the aim of increasing the rate at which atmospheric carbon dioxide is transferred to the deep sea is now regulated under the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1972) and its Protocol (1996, amended in 2006), at least with respect to States Parties to these instruments.

Figure 11. Impacts of human activities on the deep ocean*



Source: Levin and Le Bris, 2015

*POC flux refers to the transportation of particulate organic carbon (POC) from the sea surface to the deep ocean, thereby playing an important role in regulating atmospheric carbon dioxide concentrations.

3. EXISTING FRAMEWORK FOR CONSERVATION AND SUSTAINABLE USE OF MARINE BIODIVERSITY IN ABNJ

3.1. Duties and obligations regarding marine biodiversity in ABNJ

UNCLOS provides for some general environmental duties, applicable to both the high seas and the Area including:

- The "obligation to protect and preserve the marine environment" (Article 192);
- The duty to conserve and manage the living resources of the high seas (Articles 116-119);
- The duty to prevent, reduce and control pollution of the marine environment.[53]
- The duty to take the measures "necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life" (Article 194);
- The duties of States to cooperate with other States both at the regional and global levels.[54]

Under the Convention on Biological Diversity (CDB), Parties are responsible for ensuring that "activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction"(Article 3)[55] and must cooperate, directly or through competent international organizations, to ensure the conservation and sustainable use of marine biodiversity (Article 5).

53. I.e. Articles 194-196 on the measures to prevent, reduce and control pollution of the marine environment, the duty not to transfer damage or hazards or transform one type of pollution into another and the use of technologies or introduction of alien or new species; and Articles 207-212 on the international rules and national legislation to prevent, reduce and control pollution from (i) land-based sources, (ii) seabed activities subject to national jurisdiction, (iii) activities in the Area, (iv) dumping from vessels, (v) the atmosphere.

54. Article 197 on the cooperation on a global or regional basis and Articles 242-244 on international cooperation with respect to marine scientific research.

55. The CBD applies, in relation to each Party, "in the case of processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its national jurisdiction or beyond the limits of national jurisdiction" (Article 4 (b)). The CBD therefore expressly applies to processes and activities that may affect biodiversity in ABNJ, though not to the components of biodiversity themselves. While the extent of the CBD's mandate in ABNJ has been debated (Gjerde & Rulska-Domino, 2012), Parties have, in practical terms, limited the role of the CBD in relation to ABNJ to the provision of scientific and technical information and advice.

3.2. Sectoral governance frameworks

A number of relevant international instruments pre-date UNCLOS, with many additional instruments adopted since its entry into force. The ocean governance framework is therefore often characterised as fragmented (Blanchard, 2017; Töpfer *et al.*, 2014; Druel *et al.*, 2013; Tladi, 2011). This is especially the case in relation to ABNJ where a number of international agreements or instruments may be applicable. These agreements mostly cover a particular sector or issue, though they are sometimes developed on a geographical basis. The following is a non-exhaustive list of key bodies and instruments:

- Most fishing in ABNJ is managed at the regional level by States cooperating through Regional Fisheries Management Organisations (RFMOs). RFMOs generally either manage straddling and highly migratory fish stocks[56] ("tuna RFMOs") or high seas fish stocks ("non-tuna RFMOs").
- Legally binding instruments relevant to the management of fisheries in ABNJ have been adopted under the auspices of the FAO, such as the Port State Measures Agreement (PSMA).[57] The FAO also supports fisheries management through a range of activities and instruments, including: the Code of Conduct for Responsible Fisheries (1995); guidelines for fisheries management;[58] and plans of action to tackle specific issues[59] (Friedman *et al.*, 2018; Harrison *et al.*, 2017; FAO, 2016).
- Exploration and exploitation of the mineral resources of the Area are regulated by the ISA (see Section 2.3.1).
- Shipping is regulated through international conventions adopted in the framework of the International Maritime Organisation (IMO).

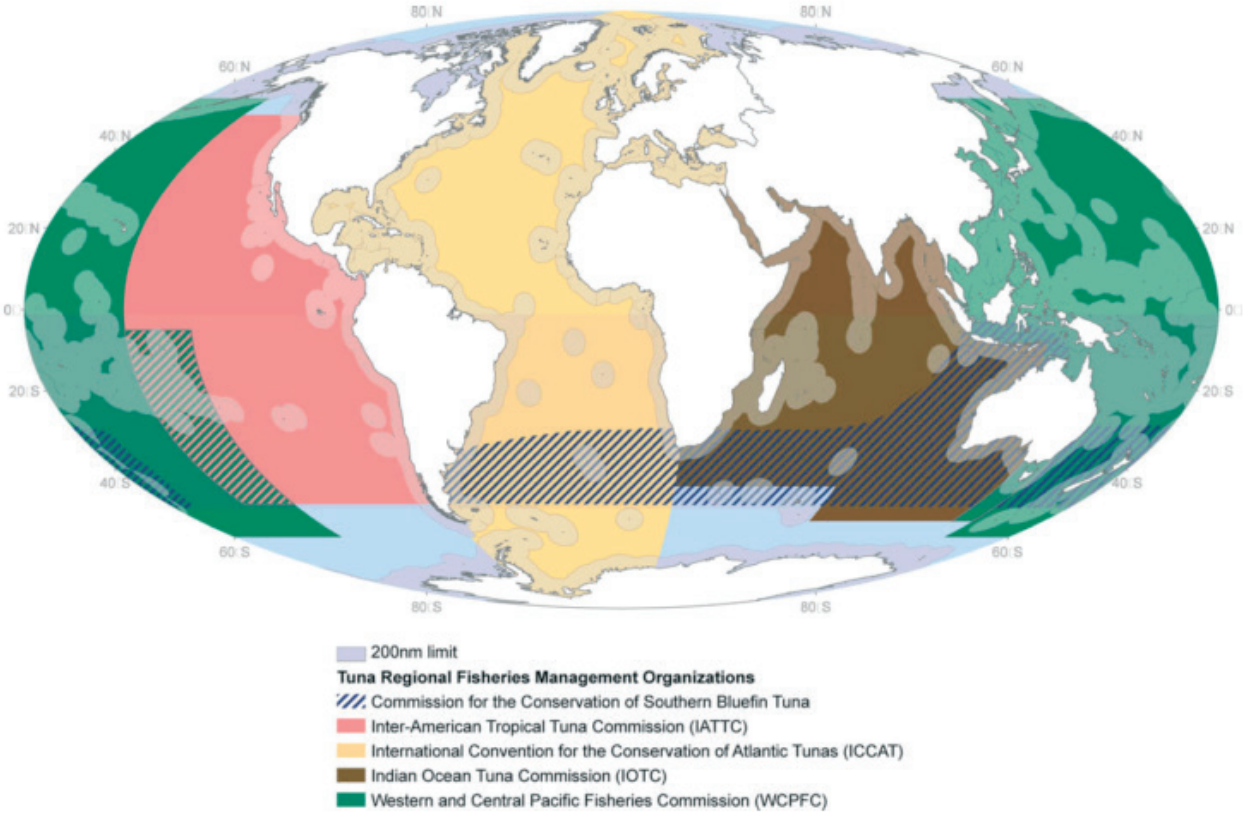
56. Generally tuna and tuna-like species, though these RFMOs may also manage other target species. There are also RFMOs focussed on managing specific non-tuna species, including the North Atlantic Salmon Conservation Organisation (NASCO) and the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CCBSP).

57. Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2009, entered into force in 2017). The PSMA is the first binding international agreement to specifically target IUU fishing and aims to prevent vessels engaged in IUU fishing from using ports and landing their catches.

58. E.g. International Guidelines for the Management of Deep-sea Fisheries in the High Seas (2009) and International Guidelines on Bycatch Management and Reduction of Discards (2011).

59. E.g. International Plan of Action on Conservation and Management of Sharks (2000) and International Plan of Action on IUU Fishing (2001).

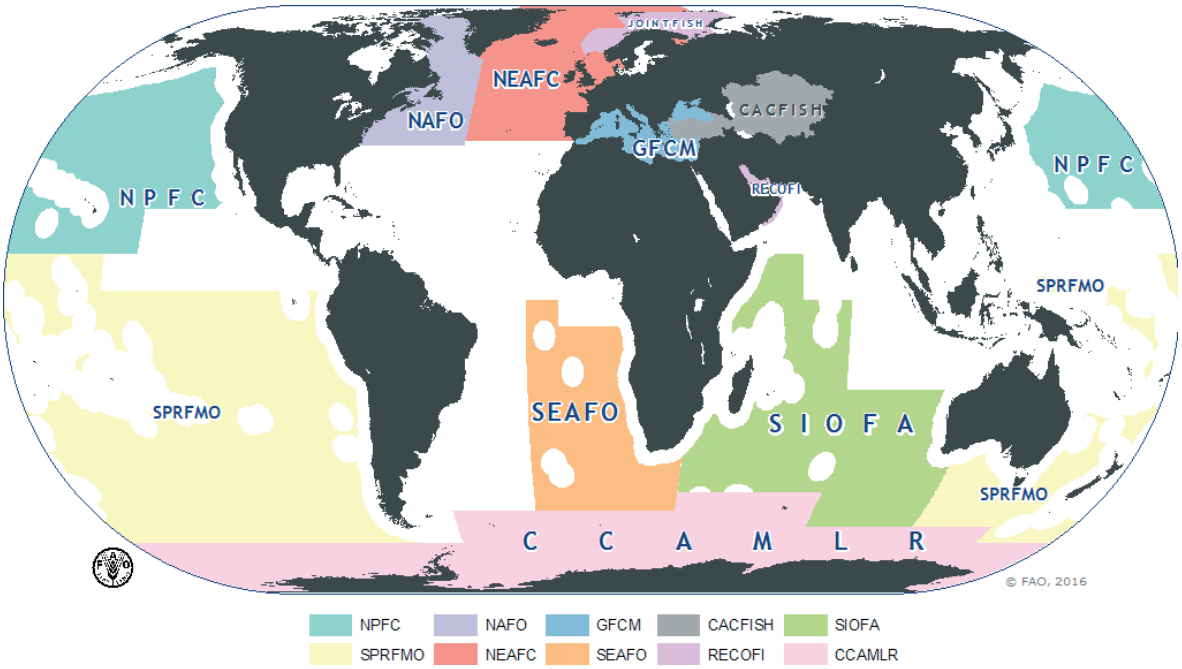
Figure 12. Tuna RFMOs*



Source: Ban *et al.* 2014

*Areas in light blue indicate no RFMO exists; all fisheries in the Southern Ocean are managed by CCAMLR.

Figure 13. General RFMOs and arrangements



While the IMO's original mandate was principally concerned with maritime safety, it has adopted a wide range of environmental measures.[60] The Marine Environment Protection Committee (MEPC) addresses issues including: the control and prevention of ship-source pollution covered by the MARPOL treaty;[61] ballast water management; anti-fouling systems; ship recycling; pollution preparedness and response; and identification of Special Areas (SAs) and Particularly Sensitive Sea Areas (PSSAs) (See Annex II).

- Marine science is discussed and coordinated at the global level under the auspices of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation (UNESCO-IOC).
- Through the Convention for Biological Diversity (CBD), States developed a scientific process to describe "ecologically or biologically significant marine areas" (EBSAs)[62] and have also adopted voluntary guidelines for the consideration of biodiversity in environmental impact assessments (EIA) and strategic environmental assessments (SEA) in ABNJ.[63]
- The World Heritage Convention[64] provides for the designation of World Heritage Sites.[65] Such sites are legally protected by international treaties and States are required to adopt measures and provide resources for their protection. There is currently no procedure for inscribing sites in ABNJ,[66] though UNESCO has published a report considering how the Convention could be applied (Freestone *et al.*, 2017).

A number of species-oriented conservation instruments are also in place, such as:

- The International Whaling Commission (IWC)[67] which has instituted a moratorium on commercial whaling (1986) and established two sanctuaries in the Indian Ocean (1979) and Southern Ocean (1994).
- The Convention on Migratory Species (CMS), which has largely focussed on national jurisdiction, where States are expected to cooperatively develop measures to protect habitats and remove obstacles to migration. A number of binding agreements relating to marine species have also been made within the framework of the CMS.[68]
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which imposes trade controls on listed species (including those taken from ABNJ).[69] While listing of marine species was initially limited (Wells & Barzdo, 1991), Parties have "increasingly turned to CITES to help ensure sustainability in our Oceans"[70] by listing endangered species of fish, including seahorses, rays, turtles and sharks (Cardeñosa *et al.*, 2018; Kuo & Vincent, 2018; Vincent & Foster, 2017; Vincent *et al.*, 2013).
- The North Atlantic Marine Mammal Commission (NAMMCO), through which four Parties[71] cooperate for the conservation, management and

60. As the custodian of the 1954 International Convention for the prevention of pollution of the sea by oil (OILPOL Convention), the IMO assumed responsibility for pollution issues soon after it began functioning in 1959. The IMO has since adopted 21 environment-related agreements. See http://www.imo.org/en/OurWork/Environment/Pages/Default.aspx and http://www.imo.org/en/MediaCentre/MeetingSummaries/MEPC/Pages/Default.aspx.
61. The London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (1972) and its 1996 London Protocol.
62. To date, 14 regional expert workshops have described more than 300 EBSAs.
63. CBD Decision XI/18 on Marine and Coastal Biodiversity, 5 December 2012, UNEP/CBD/COP/DEC/XI/18, https://www.cbd.int/doc/decisions/cop-11/cop-11-dec-18-en.pdf.
64. Convention for the Protection of the World Cultural and Natural Heritage (1972, entered into force 1975).
65. These are sites of "outstanding universal value", determined according to a set of criteria by the UNESCO World Heritage Committee (i.e. they have cultural, historical, scientific or other significance) and listed by Parties to the Convention.
66. While the definitions of 'natural' and 'cultural' heritage in the Convention do not appear to limit protection of heritage to areas under national jurisdiction, provisions regarding the nomination process do seem to restrict the nomination of sites to those "situated on the territory" of any of its States Parties. In 2011, the General Assembly of States Parties endorsed the audit of the Convention's global strategy, which included a recommendation calling upon the parties to "reflect upon appropriate means to preserve sites that correspond to conditions of outstanding universal value, which are not dependent on the sovereignty of States Parties".
67. Established by the International Convention for the Regulation of Whaling (1948).
68. Including on: Cetaceans of the Mediterranean Sea, Black Sea and Contiguous Atlantic Area; Small Cetaceans of the Baltic, North-East Atlantic, Irish and North Seas; Seals in the Wadden Sea; African-Eurasian Migratory Waterbirds; and Albatrosses and Petrels.
69. The species covered by CITES are listed in three Appendices, according to the degree of protection they need. See https://www.cites.org/eng/disc/how.php. All import, export, re-export and "introduction from the sea" (IFS) of listed species has to be authorized through a licensing system. According to the Convention, IFS concerns "specimens taken in the marine environment not under the jurisdiction of any State" (Article I(c)). A prior grant of an IFS certificate is required for the trade in such specimens (Articles III 5 & IV 6-7). In granting a certificate, Parties must consider whether the specimen was acquired and landed in a manner consistent with applicable measures under international law and whether it was taken in the course of IUU fishing. See https://www.cites.org/eng/prog/ifs.php.
70. 'Our Oceans, Our Future', Statement by John Scanlon, CITES Secretary-General (8 June 2017) https://www.cites.org/eng/news/sg/World-Oceans-Day-2017.
71. Faroe Islands, Greenland, Iceland, and Norway.

study of marine mammals in the North Atlantic and advise governments on the conservation status, sustainable removals and responsible hunting methods of marine mammals.

3.3. Regional initiatives

UNCLOS recognises the importance of global and regional cooperation with regard to the marine environment, stipulating that States, "shall cooperate on a global basis and, as appropriate, on a regional basis" for the protection of the marine environment.[72] The regional approach to marine environmental protection can increase the likelihood of political consensus among parties sharing a similar history, culture and interests in the region, and can provide an appropriate scale for the implementation of an ecosystem approach to conservation (Wright *et al.*, 2017b; Rochette *et al.*, 2014; Rochette & Chabason, 2011). In this context, a number of regional initiatives have been established with the aim of advancing the conservation and sustainable use of marine biodiversity in ABNJ (Druel *et al.,* 2012; Rochette *et al.,* 2014; Rochette *et al.,* 2015).

3.3.1. Marine protected areas within Regional Seas Programmes

The United Nations Conference on the Human Environment (Stockholm, 1972) led to the creation of the United Nations Environment Programme (UNEP) "to serve as a focal point for environmental action and coordination within the United Nations system".[73] In 1974, UNEP made the oceans a priority action area at its first session[74] and initiated the Regional Seas Programme (UNEP 1982). Today almost 150 States across 18 regions participate in such programmes (Rochette *et al.*, 2015).

Four programmes currently have a specific mandate in ABNJ (Campbell *et al.*, 2017),[75] and parties have progressively taken a greater interest in ABNJ (Rochette *et al.*, 2014). Three have presided over the establishment of MPAs:

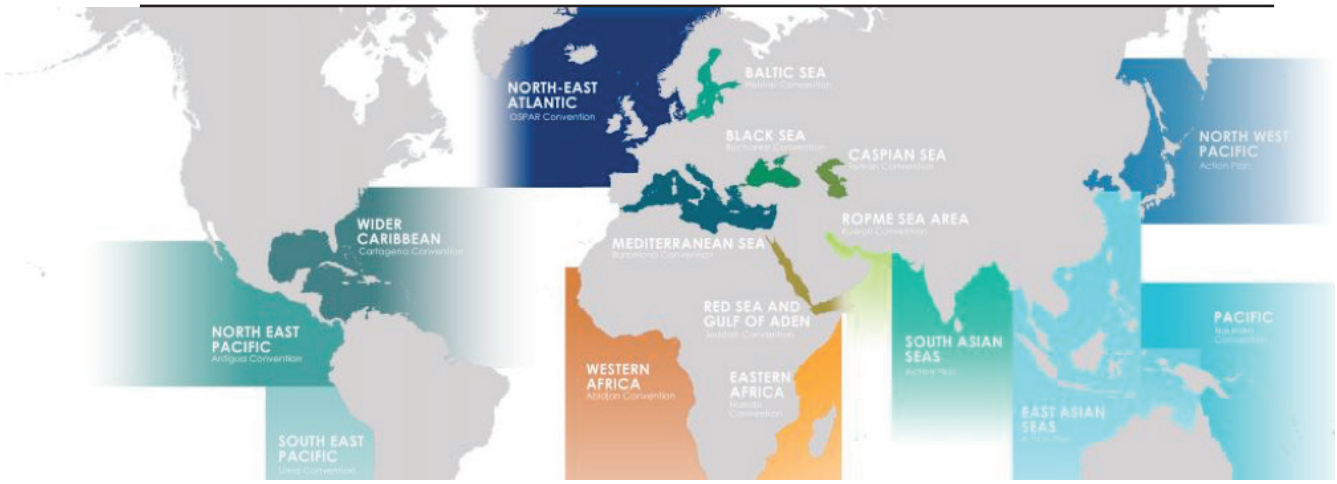
- In the Mediterranean, three States (France, Italy and Monaco) established the Pelagos Sanctuary for marine mammals in 1999 (see 2.2.1),[76] which was recognised as a Specially Protected Area of Mediterranean Importance (SPAMI) under the Barcelona Convention in 2001 (Scovazzi, 2011).[77]
- In the Southern Ocean, the Commission the Conservation of Antarctic Marine Living Resources (CCAMLR) adopted its first MPA on the South Orkney Islands continental shelf in 2009 (Brooks, 2013)[78] and agreed to work towards a coherent and representative network of MPAs by 2012. In 2016, a 1.55 million km² area of the Ross Sea was designated as an MPA.[79] Parties have not been able to reach agreement on various proposals to establish further MPAs (Reese, 2017; Brooks, 2013).
- In the North East Atlantic, Parties to the OSPAR Convention established a network of six MPAs in ABNJ in 2010 (Freestone *et al.*, 2014; O'Leary *et al.*, 2012);[80] a seventh MPA was agreed in 2012.[81]

States in other regions have also begun considering extending their governance efforts to ABNJ:

- In the South Pacific, the Permanent Commission for the South Pacific (CPPS) adopted the Galapagos Declaration (2012), whereby signatories commit to promote coordinated action regarding their interests in living and non-living resources in ABNJ (Durussel *et al.*, 2017).[82]

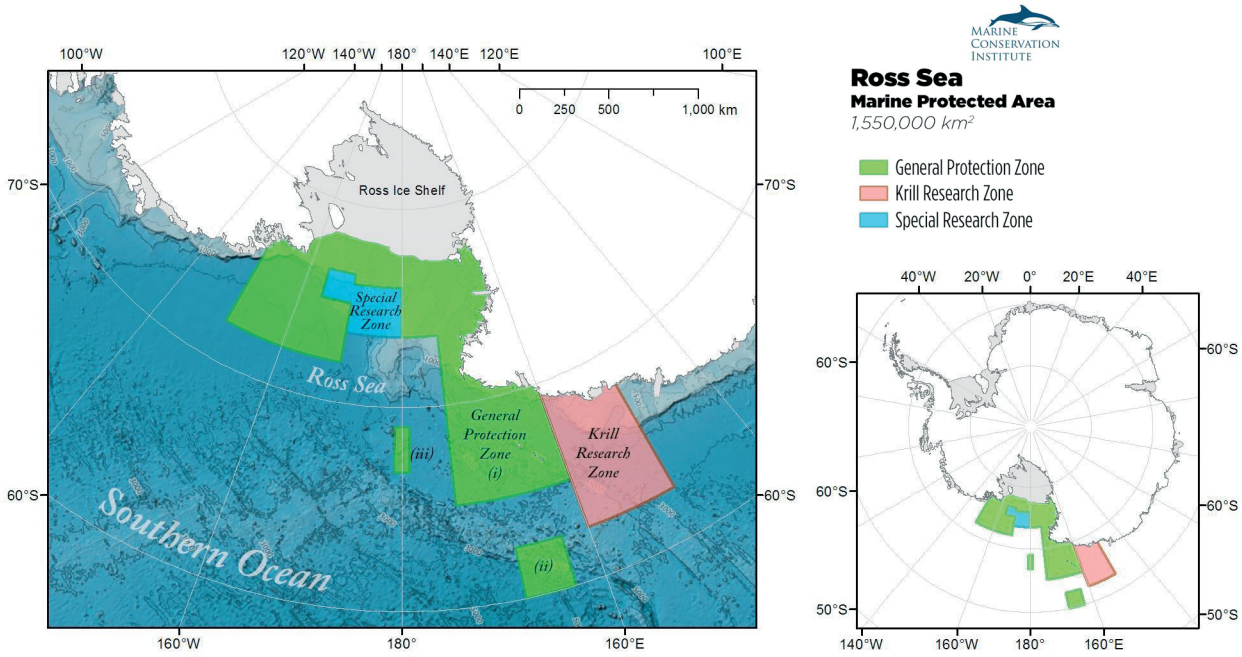
72. UNCLOS, Article 197.
73. UNGA Resolution 2997 (XXVII) of 15 December 1972, http://www.unep.org/scienceinitiative/GC_decisions/UNGAResolution2997(XXVII).doc.
74. UNEP, Report of the governing council on the work on its second session, 11-22 March 1974, United Nations, New York, Decision 8(II).
75. Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean 1995 (Barcelona Convention); Convention on the Conservation of Antarctic Marine Living Resources 1980 (CCAMLR); Convention for the Protection of the Marine Environment of the North-East Atlantic 1992 (OSPAR Convention); Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986 (Nouméa Convention).
76. The Pelagos Sanctuary incorporates the territorial waters of the three founding States, but also ABNJ. The situation of the Mediterranean Sea is particular in that there is no point located at a distance of more than 200 nautical miles from the closest land or island. Therefore, "any waters beyond the limits of national jurisdiction (high seas) would disappear if all the coastal States decided to establish their own exclusive economic zones (EEZ)" (Scovazzi, 2011). Despite Mediterranean States increasingly choosing to declare their EEZs, parts of the Mediterranean Sea remain ABNJ (IUCN, 2011).
77. UNEP/MAP, Report of the twelfth ordinary meeting of the Contracting Parties to the Convention for the protection of the Mediterranean Sea against pollution and its protocols 14-17 November 2001, UNEP(DEC)/MED IG.13/8, 30 December2001, Annex IV.
78. CCAMLR, CM 91-03 (2009) Protection of the South Orkney Islands Southern Shelf, http://archive.ccamlr.org/pu/E/e_pubs/cm/11-12/91-03.pdf.
79. Conservation measure 91-05 (2016): Ross Sea region marine protected area.
80. OSPAR Commission, Decisions 1-6, 2010; OSPAR Commission Recommendations 12-17, 2010.
81. OSPAR Commission, 2012 Status Report on the OSPAR Network of Marine Protected Areas (2013), http://www.ospar.org/documents/dbase/publications/p00618/p00618_2012_mpa_status%20report.pdf.
82. Permanent Commission for the South Pacific, Commitment to Galapagos for the XXI Century, VIII Meeting of Ministers of Foreign Affairs, Puerto Ayora, Galápagos, Ecuador, 17 August 2012, http://cpps.dyndns.info/asambleas/x_asamblea/

Figure 14. Regional Seas Programmes



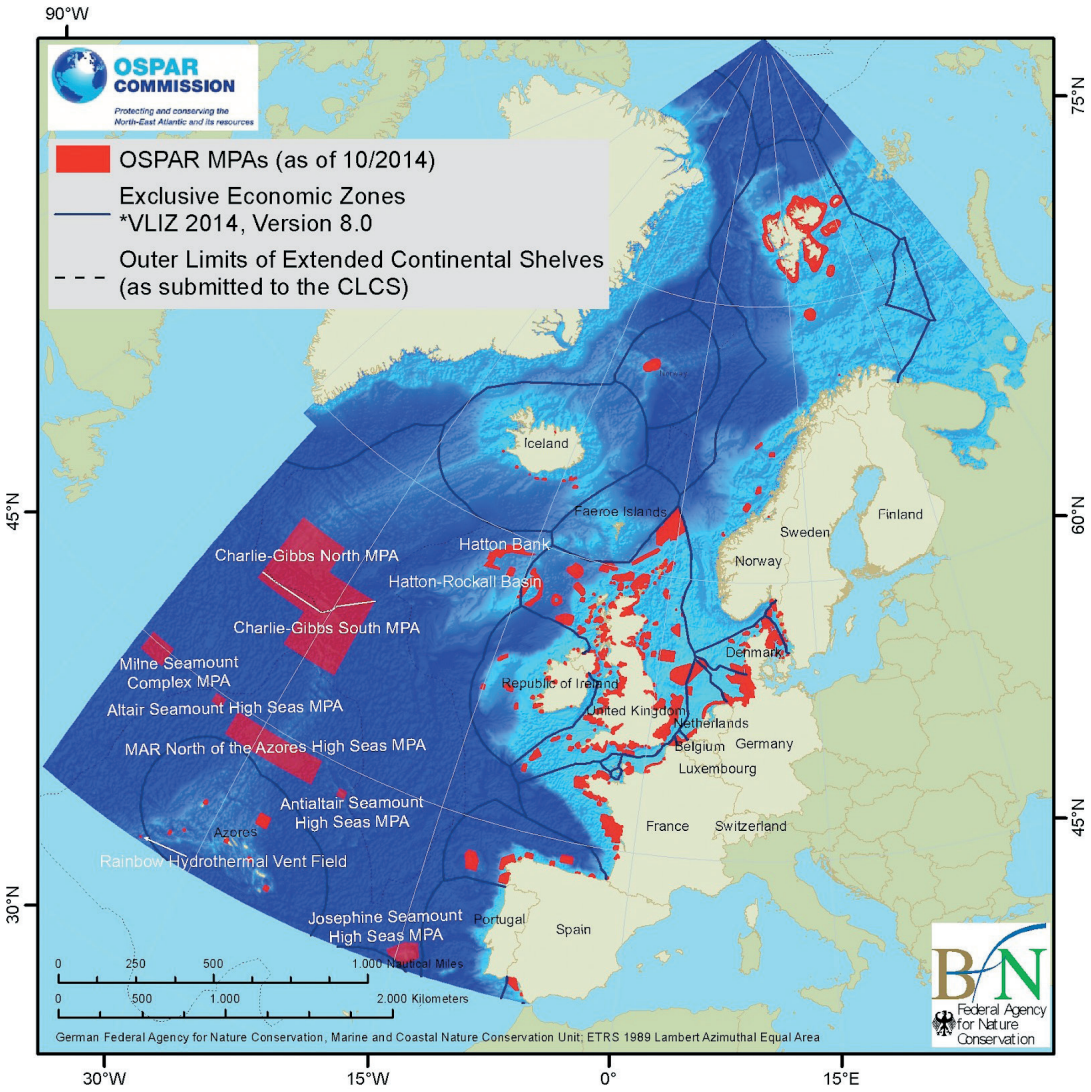
Source: UNEP (https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/un-environment.)

Figure 15. The Ross Sea MPA*



Source: Marine Conservation Institute (https://blog.marine-conservation.org/wp-content/uploads/2016/10/Ross-sea-final.jpg).* General Protection Zones are closed to all commercial fishing. Fishing in the two research zones allows for limited research fishing, strictly controlled by CCAMLR under advice from the Commission's Scientific Committee and approved by consensus.

Figure 16. The OSPAR MPA network



Source: German Federal Agency for Nature Conservation

- In the Southeast Atlantic, Parties to the Abidjan Convention[83] adopted a decision in 2014 requesting the Secretariat to "set up a working group to study all aspects of the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction within the framework of the Abidjan Convention".[84]
- In the Western Indian Ocean, Parties to the Nairobi Convention[85] adopted a decision in 2015 urging States to "cooperate in improving the governance of areas beyond national jurisdiction, building on existing regional institutions including the Nairobi Convention and developing area based management tools such as marine spatial planning" (Wright & Rochette, 2017).[86]

Commitment%20of%20Galapagos%20for%20the%20XXI%20Century.pdf.

83. Abidjan Convention for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the Atlantic Coast of the West, Central and Southern Africa Region (1981, entered into force in 1984).

84. Decision CP11/10 Conservation and Sustainable use of the Marine Biodiversity of the Areas Located beyond National Jurisdictions, UNEP (DEPI)/WACAF/COP.11/Rev1, http://cop11.abidjanconvention.org/media/documents/Report/COP11%20-%20%20Final%20Report%20En.pdf.

85. The Nairobi Convention for the Development, Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (1995, entered into force in 1996).

86. It should be noted that neither the Abidjan nor the Nairobi conventions currently have a mandate covering ABNJ.

There appears to be growing momentum for the extension of Regional Seas mandates and activities to ABNJ. In 2016, the United Nations Environment Assembly (UNEA) adopted a resolution that encouraged parties to Regional Seas conventions to consider the possibility of increasing the regional coverage of those instruments.[87] The Scientific and Technical Advisory Panel of the Global Environment Facility (GEF) has also recommended that the GEF support the development of area-based management tools (ABMTs) in ABNJ and enhance the capacity of relevant bodies to "act as platforms for integrated conservation and management of ABNJ that are adjacent to their existing regional mandates" (Ringbom & Henriksen, 2017). A number of large international projects are also seeking to support regional bodies and initiatives in considering options and developing tools for management of biodiversity in ABNJ.[88]

Box 5. Towards cooperation and coordinated management: the Collective Arrangement in the North-East Atlantic

The OSPAR Commission has begun to address the need for cooperation with the development of a "Collective Arrangement" between competent authorities in its region (OSPAR & NEAFC, 2015), underpinned by a set of more formal Memoranda of Understanding (MoUs) (NEAFC and OSPAR, 2015; Johnson, 2013). The Collective Arrangement seeks to foster the development and implementation of appropriate management measures to be applied in the region by the appropriate organisations. The OSPAR Commission and the North East Atlantic Fisheries Commission (NEAFC) have endorsed the Collective Arrangement, and discussions with the ISA and IMO are ongoing. Although promising, it has proved "time and labour intensive, particularly in the global bodies, IMO and ISA, to move such an idea forward, with organisations' different levels of technical scrutiny and sometimes complex and mutually incompatible annual meeting cycles" (Freestone *et al.*, 2014). In May 2018, the 4th meeting of the Collective Arrangement was held in Berlin and gathered representatives from OSPAR and NEAFC, as well as ICCAT, NAMMCO, Abidjan and Cartagena conventions.[89]

However, such initiatives are subject to significant limitations. Any measures taken can only be binding upon parties to the regional organisation[90] and regional organisations lack a regulatory mandate for many human activities in ABNJ (such as fishing, navigation and mining). Cooperation and coordination with relevant global and regional organisations is therefore essential for developing the holistic cross-sectoral management needed to ensure conservation and sustainable use of marine biodiversity.

3.3.2. Coalition-based regional initiatives

In addition to the Regional Seas initiatives, there have been efforts to establish more comprehensive management regimes, including MPAs, through coalitions of States and other partners. The two main efforts in this category are the Pelagos Sanctuary of the Sargasso Sea Commission.

The Pelagos Sanctuary for Mediterranean Marine Mammals, designated in 1999, aims to protect the Mediterranean's eight resident cetacean species.[91] In 2001, the Sanctuary was recognised as a Specially Protected Area of Mediterranean Importance (SPAMI).[92] A joint management plan was approved in 2004 and additional steps have been taken to ensure the protection of marine mammals in the area, including restrictions on fishing with towed dredges and bottom trawlnets,[93] refraining from conducting naval exercises in the area, and the discontinuation of discharge of certain wastes in Sanctuary waters. A few shipping companies have also accepted to use the real time plotting of cetaceans (REPCET) system to avoid collisions,[94] and the founding States have committed to seeking recognition as an IMO Particularly Sensitive

87. United Nations Environment Assembly of the United Nations Environment Programme, 2015.

88. E.g. the FAO/GEF Common Oceans program (see http://www.fao.org/in-action/commonoceans/en/) and the IKI STRONG High Seas project (see https://www.prog-ocean.org/our-work/strong-high-seas/).

89. See https://www.ospar.org/news/international-cooperation-in-areas-beyond-national-jurisdiction-in-the-north-east-atlantic. ICCAT: International Commission for the Conservation of Atlantic Tunas (established by The International Convention for the Conservation of Atlantic Tunas 1966, entered into force in 1969); Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region 1983 (entered into force in 1986).

90. I.e. there is no international mechanism for the designation of legally binding MPAs – see Section 4.3.

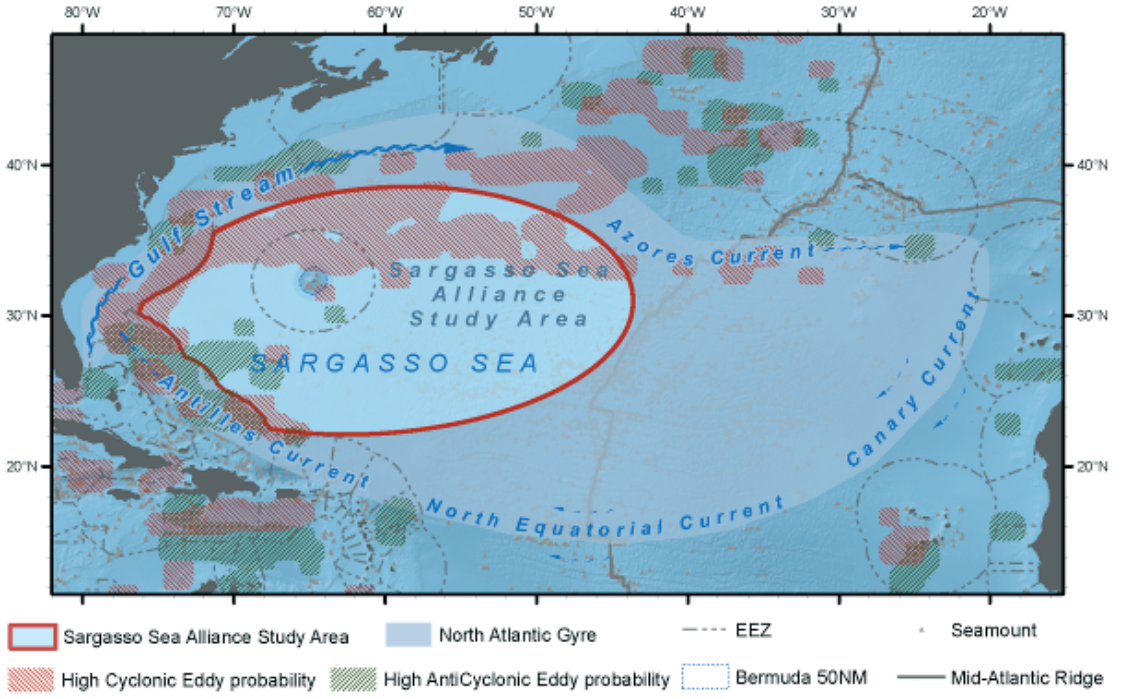
91. Agreement concerning the creation of a marine mammal sanctuary in the Mediterranean 1999, http://www.ecolex.org/server2.php/libcat/docs/TRE/Full/En/TRE-001399.txt. For further information, see http://www.sanctuaire-pelagos.org/en/about-us/presentation. See also Notarbartolo-di-Sciara *et al.* (2008).

92. Under the Barcelona Convention, specifically the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean 1995 (SPA/BD Protocol). See: UNEP/MAP, Report of the twelfth ordinary meeting of the Contracting Parties to the Convention for the protection of the Mediterranean Sea against pollution and its protocols, Monaco, 14-17 November, 2001, UNEP(DEC)/MED IG.13/8, 30 December2001, Annex IV.

93. GFCM Recommendation on Establishment of Fisheries Restricted Areas in order to Protect the Deep Sea Sensitive Habitats (2006) REC-GFCM/30/2006/3, ftp://ftp.fao.org/Fi/DOCUMENT/gfcm/web/GFCM_Recommendations.pdf. There are no particular regulations for pelagic fishing.

94. See: http://www.repcet.com/docs/SE_2014_01_03_Pres-REPCET_en.pdf

Figure 17. Sargasso Sea Alliance study area



Source: SSA (For further information, see: http://www.sargassoalliance.org/)

Sea Area (PSSA, see 4.3; Mayol *et al.,* 2013; Mangos & André 2008). Concerns have been expressed regarding the efficacy and implementation of the management and conservation tools developed in the Sanctuary (Notarbartolo di Sciara, 2009).

The Sargasso Sea Commission was established in 2014 by the *Hamilton Declaration on Collaboration for the Conservation of the Sargasso Sea* and is intended to exercise a stewardship role for the Sargasso Sea surrounding the EEZ of Bermuda (Freestone 2014). The Declaration is a non-binding agreement to collaborate to pursue conservation measures through existing regional and international organisations. Originally adopted and signed by Bermuda, Azores, Monaco, the United Kingdom (UK) and the US, there are now 10 signatories. The Commission builds upon the earlier efforts of the Sargasso Sea Alliance, a partnership between the Government of Bermuda, NGOs, scientists and private donors (Freestone *et al.,* 2014). In 2012, the Parties to the CBD recognized the Sargasso Sea as an EBSA based on the unique habitat provided by its abundant sargassum seaweed.[95] Since then, the North Atlantic Fisheries Organization (NAFO) has closed seamounts in the area to deep sea bottom fishing and efforts are ongoing to encourage the International Commission for the Conservation of Atlantic Tunas (ICCAT) to adopt the Sargasso Sea as a case study in implementing ecosystem-based fisheries management. The Commission has advanced the management and conservation of European eels through listing under the Convention for Migratory Species (CMS). A range of additional conservation and management actions are being considered,[96] though Commission reports suggest that broader efforts for comprehensive management are hampered by the lack of common principles, criteria and evidentiary standards for conservation measures (Freestone & Gjerde, 2016).

95. Decision XI/17 on Marine and Coastal Biodiversity: Ecologically or Biologically Significant Marine Areas (2012) UNEP/CBD/COP/DEC/XI/17, p.23, item 13, https://www.cbd.int/doc/decisions/cop-11/full/cop-11-dec-en.pdf.

96. These include: proposing recognition of the Sargasso Sea as a UNESCO World Heritage Site, were a process for listing sites in ABNJ to be established; promoting ecosystem-based management of tuna fishing activities through ICCAT; possible regulation of navigation routes, discharges or reporting through IMO, including the possible designation of a PSSA with associated protective measures; coordination and cooperation with ISA with respect to mining activities; and initiation of coordination and cooperation with relevant actors.

4. GAPS IN THE EXISTING FRAMEWORK

4.1. Absence of a comprehensive set of overarching governance principles

UNCLOS envisages a role for overarching principles in ocean governance[97] and a range of principles, derived from UNCLOS and other sources[98] are potentially applicable to ABNJ. Principles have been a frequent, if peripheral, discussion at the international level, with States calling for the use of principles in defining the parameters of a new agreement. Principles could help balance the need for a fixed legal document with the need for flexibility, support practical implementation, and guide future decision-making processes.

States often refer to principles contained in UNCLOS, the CBD and international declarations, specifically: precaution; cooperation; accountability; transparency; intergenerational and intragenerational equity; the ecosystem approach; and stewardship. However, a standalone declaration of principles for ABNJ does not yet exist. Numerous efforts have been made to highlight the importance of principles and comprehensively identify those that might apply to ABNJ (Freestone 2008; Houghton 2014; IUCN).

Consolidation and reaffirmation of these principles to establish minimum standards for decision-making processes and activities in ABNJ could help harmonise regional initiatives and sectoral regimes, as well as guide the development of management efforts within sectoral bodies. Incorporation of modern governance principles would also "unequivocally confirm" their applicability to ABNJ and "provide a sound basis for developing a coherent regime" (Houghton, 2014), as well as further cementing the role of principles in fostering integrated decision-making.

4.2. A fragmented legal and institutional framework

While each of the instruments and institutions introduced in the previous section presents an opportunity to advance conservation and sustainable use, they "bear no real relationship to one another and operate independent of each other without an overarching framework to ensure structure, consistency and coherence" (Tladi, 2011).

This fragmentation has left gaps in the framework: not all human activities in ABNJ are adequately regulated; not all regions are covered; and some organisations exercise their mandate with limited reference to modern governance principles, such as the ecosystem approach, the precautionary principle, or the need for transparent and open decision-making processes. This hinders the implementation of integrated and multi-sectoral measures. The establishment of MPAs in ABNJ provides a good example of the challenges (see Section 4.3).

This fragmentation also hinders the efforts of competent organisations to coordinate and cooperate with each other. As underlined by the Global Oceans Commission (2013): "In such a highly fragmented landscape, policy coherence and effective international cooperation at and between global and regional levels are essential to achieving common objectives […] Over the years, efforts have been made to improve coordination and coherence […] These efforts have not generally met with great success." Successful interplay between different organizations requires that they operate in sync, based on a common purpose and set of principles, within a non-hierarchical framework (Mahon *et al.*, 2015). The current structure of ABNJ governance makes development of such cooperative practices extremely challenging.[99]

There are however some examples of frameworks that have been able to develop a certain level of cooperation between different actors and authorities: e.g. the efforts of OSPAR to establish MPAs in North-East Atlantic ABNJ (see Box 5) and, more formally, the Antarctic Treaty System (ATS)[100] and CCAMLR in the Southern Ocean

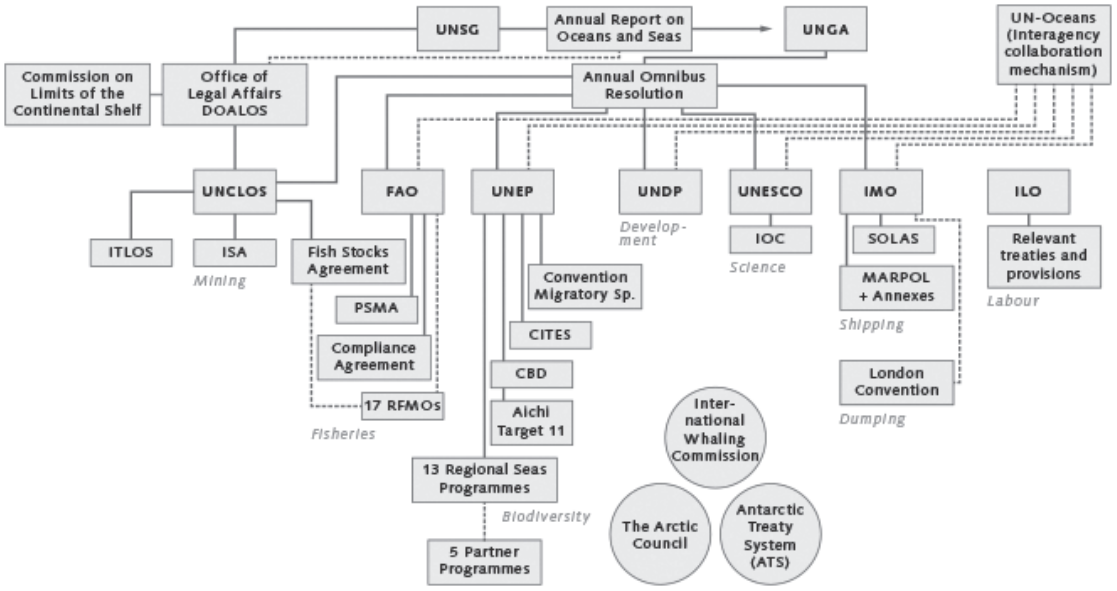
97. E.g. the preamble to UNCLOS states, "matters not regulated by this Convention continue to be governed by the rules and principles of general international law".

98. Such as environmental treaties, customary international law, and soft-law sources such as UNGA resolutions.

99. One example of these challenges is the ISA's approval in 2017 of a 15-year seabed mineral exploration contract covering part of the Mid-Atlantic Ridge. The area contains the Lost City hydrothermal field, a unique range of 60-metre-tall calcium carbonate chimneys. UNESCO and IUCN have highlighted that the site might meet the criteria for World Heritage status, but the ISA did not consult UNESCO, the IUCN or OSPAR, whose area of competence is close to the contract area (Wright *et al.*, 2018). Both UNESCO and the international scientific community have expressed their strong concerns regarding approval of the contract and the lack of consultation.

100. I.e. the various instruments in place regulating relations among States in the Antarctic. The Antarctic Treaty was signed in 1959 and entered into force on 23 June 1961. The Treaty is supplemented by the Protocol on Environmental Protection to the Antarctic Treaty (1991 – Madrid Protocol), and two additional conventions dealing with the Conservation of Antarctic Seals (1972) and the Conservation of Antarctic Marine Living Resources (1980). A further Convention on the Regulation of Antarctic Mineral Resource Activities (1988) was negotiated but never entered into force; it has now been superseded by the Madrid Protocol.

Figure 18. Simplified schematic of the international marine governance framework



Source: World Ocean Review (https://worldoceanreview.com/en/wor-4/politics-and-the-oceans/on-the-difficulty-of-governing-the-sea/ocean-governance-in-a-wide-arena/)

(Nyman, 2018; Hughes & Grant, 2017; Brooks, 2013; Druel *et al.*, 2012).

4.3. Absence of a global framework to establish MPAs in ABNJ

Marine Protected Areas have long been considered an important tool for biodiversity conservation and it is widely acknowledged that ecologically connected networks of MPAs will be crucial for sustaining high seas ecosystems (O'Leary *et al.*, 2018; O'Leary and Roberts, 2018; Ceccarelli & Fernandes, 2017; Green *et al.*, 2014; Grüss *et al.*, 2014; Scales *et al.*, 2014; Sumaila *et al.*, 2007) and increasing resilience to climate change (Roberts *et al.*, 2017).

An MPA may be defined as:[101]

"an area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings".

Or, more broadly:[102]

"A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values".

Box 6. IUCN Protected Area Categories

Ia Strict Nature Reserve: Human visitation, use and impacts are strictly controlled and limited.

Ib Wilderness Area: Large unmodified or slightly modified area, protected and managed to preserve natural condition.

II National Park: Large natural or near natural area set aside to protect species and ecosystems, providing for environmentally and culturally compatible, spiritual, scientific, educational, and recreational opportunities.

III Natural Monument or Feature: Usually small protected area with high visitor value guarding a specific natural monument.

IV Habitat/Species Management Area: Area managed with the aim of protecting particular species or habitats.

V Protected Landscape/ Seascape: A protected area where the interaction of people and nature has produced a distinct character with significant, ecological, biological, cultural and scenic value.

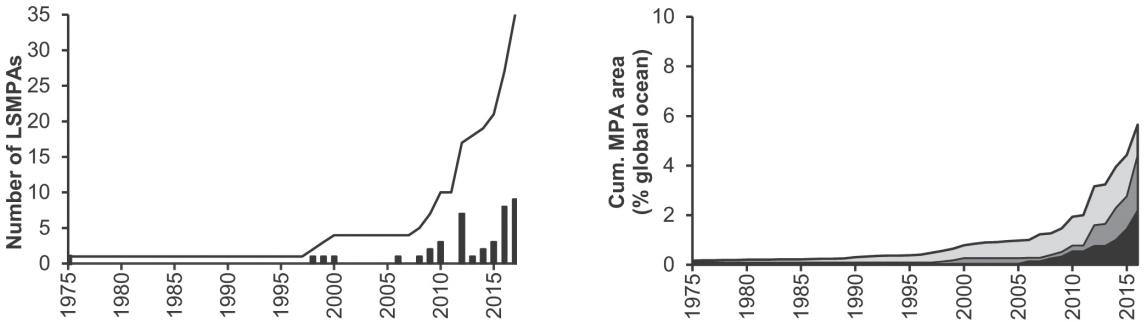
VI Protected area with sustainable use of natural resources: Ecosystem and habitat protected alongside associated cultural values and traditional natural resource management systems.

Source: Dudley, 2008

101. SBSTTA 8, Report of the Ad Hoc Technical Expert Group on Marine and Coastal Protected Areas; Note by the Executive Secretary, 2003, UNEP/CBD/SBSTTA/8/INF/7, https://www.cbd.int/doc/meetings/sbstta/sbstta-08/information/sbstta-08-inf-07-en.pdf.

102. Guidelines for applying the IUCN Protected Areas Categories to MPAs (2012) Best Practice Protected Area Guidelines Series No.19, http://cmsdata.iucn.org/downloads/uicn_categoriesamp_eng.pdf.

Figure 19. Global trends in MPA coverage



Source: O'Leary *et al.*, 2018b, Left: Number (bars) and cumulative number (line) of LSMPAs designated or promised globally (1975–January 2018; No LSMPAs existed prior to 1975). Right: Cumulative percent coverage of all MPAs (light gray), LSMPAs (dark gray), and strongly or fully protected LSMPAs (black) designated and promised globally (1975–2016).

The international community has committed, in numerous global forums, to establish a network of MPAs covering a significant percentage of the global ocean. The Aichi Biodiversity Targets and the UN Sustainable Development Goals, for example, demand protection of 10% of the world's ocean—although some scientists argue that at least 30% is necessary (O'Leary *et al.*, 2016). As of 2018, there are approximately 13,000 MPAs worldwide, with a median size of approximately 2.5 km² (O'Leary *et al.*, 2018), totalling 3.7% of the global ocean.[103]

There has been a trend towards the establishment of large-scale MPAs (LSMPAs) in recent years (i.e. >100,000 km²). LSMPAs can comprise diverse and biologically connected ecosystems, are well suited to protect migratory species and accommodate range shifts due to climate change and other factors, and often provide strong protection from human stressors (O'Leary *et al.*, 2018). Research has demonstrated the potential of LSMPAs for the protection and recovery of pelagic and benthic habitats and species (O'Leary *et al.*, 2018; Ceccarelli & Fernandes, 2017).

Given the foregoing, there is a strong interest in the establishment of MPAs in ABNJ - yet there is currently no global mechanism to make this possible. The prevailing approach to conservation and sustainable use at the global level is sectoral and several international organisations already have certain "area-based management tools" (ABMTs) at their disposal (Annex 2), such as:

- The IMO can identify Particularly Sensitive Sea Areas (PSSA) that, for recognised ecological, socio-economic or scientific reasons, may be vulnerable to damage by international maritime activities.[104] PSSAs are designated by non-legally binding resolutions from the IMO Marine Environment Protection Committee (MEPC) and therefore have no immediate effect. Associated protective measures may subsequently be adopted to protect the area.[105] No PSSAs have been designated in ABNJ.
- The ISA can designate Areas of Particular Environmental Interest (APEI) and preservation reference zones.[106] The ISA has designated nine APEIs in the Clarion-Clipperton Zone (North Central Pacific).[107]
- RFMOs can designate closures of certain fisheries and use other fisheries-related management tools to protect or restore the stocks they manage (see Section 7.6.2). Pursuant to UNGA resolutions, RFMOs are required to close vulnerable marine ecosystems (VMEs) to fishing where there is a risk of significant adverse impacts from bottom fishing (see Annexes 4 & 5; Gianni *et al.*, 2016; Wright *et al.*, 2015).[108]

103. See http://www.mpatlas.org/map/mpas/.

104. IMO, Revised guidelines for the identification and designation of Particularly Sensitive Sea Areas (PSSAs) (2005) A.982(24), http://www.imo.org/en/OurWork/Environment/PSSAs/Documents/A24-Res.982.pdf.

105. E.g. designation of the PSSA as a Special Area under Annexes I-V of the MARPOL Convention, where discharges from ships are more strictly controlled or prohibited; a SOx-emission control area; declaration of the proposed PSSA as an 'area to be avoided' by ships.

106. ISA, Decision of the Council of the International Seabed Authority relating to amendments to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area and related matters (2013) ISBA/19/C/17, §V.31.6, http://www.imo.org/en/OurWork/Environment/PSSAs/Documents/A24-Res.982.pdf.

107. ISA, Decision of the Council relating to an environmental management plan for the Clarion-Clipperton Zone (2012) ISBA/18C/22, http://www.isa.org.jm/files/documents/EN/18Sess/Council/ISBA-18C-22.pdf.

108. In particular UNGA Resolution 61/105 on Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments

As previously highlighted, some efforts have been made to conserve marine biodiversity in ABNJ through the creation of MPAs, though these are only binding on Parties, or on other States or bodies on a voluntary basis, and only apply to a limited number of activities (see Section 3.3).

Box 7. Applying IUCN's global conservation standards to MPAs

An effective MPA should:

- Be conservation focused with nature as the priority.
- Have defined goals and objectives which reflect these conservation values.
- Be established with suitable size, location, and design that deliver the conservation values.
- Have a defined and fairly agreed boundary management plan or equivalent, which addresses the needs for conservation of the MPA's major values and achievement of its social and economic goals and objectives.
- Be supported by the necessary resources and capacity to ensure effective implementation.

Source: IUCN WCPA, 2018

4.4. Legal uncertainty regarding the status of marine genetic resources in ABNJ

Marine genetic resources (MGRs) and bioprospecting are not explicitly covered by UNCLOS as they were relatively new concepts at the time the Convention was negotiated. As a result there is a "lack of clarity on the applicable regime relating to bioprospecting and equitable use" of MGRs in ABNJ (Gjerde *et al.,* 2008). This has precipitated an ideological divide between States that argue MGRs form part of the Common Heritage of Mankind (CHM) and those that argue that they are covered under the freedom of the high seas principle.

The G77,[109] China and others have argued for the application of the CHM principle to MGRs found in the Area, drawing a parallel with mineral resources. They have argued for the establishment of an access and benefit-sharing (ABS) mechanism, inspired by that developed for the Area,[110] and a mechanism for the management of these resources on behalf of all humankind, with special consideration for the needs of developing countries. On the other hand, some States have argued that the freedom of the high seas principle applies to MGRs in ABNJ. As a consequence, they argue that access to these resources is on a "first come first served" basis and that there is no obligation to share the benefits derived from their exploitation. Many States, including the EU, Australia and New Zealand, have taken an intermediary position in this debate, recognising the gaps in the current framework and the need for benefit-sharing, without recognising MGRs as CHM.

Box 8. The Common Heritage of Mankind debate

A 1970 UNGA resolution regarding the principles governing the seabed in ABNJ stated that its "resources" are Common Heritage of Mankind and exploitation should therefore be "carried out for the benefit of mankind as a whole".[111] However, this resolution did not define "resources", nor did it explicitly exclude any specific resources from its scope. As a result, it is unclear whether the resolution applies to all the resources of the Area, including marine genetic resources. If the resolution is interpreted as including MGRs, then the benefits arising from their exploitation would have to be shared between all States. Although the Preamble to UNCLOS recalls this resolution and affirms the desire of Parties to develop the principles embodied therein, the Convention specifies "resources" of the Area subject to the CHM principle are "all solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules".[112]

In 2010, Parties to the CBD adopted the Nagoya Protocol,[113] through which they seek to establish international rules on "fair and equitable sharing of the benefits arising from the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies and by appropriate funding".[114] The Nagoya Protocol, though conceived in the context of MGRs within national jurisdiction, "leaves open the possibility for the future negotiation of a multilateral

(2006) A/RES/61/105, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/500/73/PDF/N0650073.pdf.

109. Despite its name, the G77 has 134 Member States. For a list of G77 Members, see Annex 6.

110. UNCLOS, Article 82. Notably §4: "The payments or contributions shall be made through [the ISA], which shall distribute them to State Parties to this Convention, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States, particularly the least developed and the land-locked among them".

111. UNGA resolution 2749 (XXV) of 12 December 1970.

112. UNCLOS, Article 133(a). Indeed the historical focus of UNCLOS in this regard was on polymetallic nodules, rather than MGRs, which were not considered to a potentially exploitable or lucrative resource at the time the Convention was drafted.

113. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity, adopted in 2010, https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf. For further information, see: https://www.cbd.int/abs/.

114. Nagoya Protocol, Article 1.

benefit-sharing mechanism, which could, if States so chose, provide the basis for future benefit-sharing arrangement in regards of marine genetic resources from areas beyond national jurisdiction" (Vierros *et al.*, 2015).[115] Nonetheless the starting point for discussion of ABS in the ABNJ context has been that MGRs do not fall within the scope of the Nagoya Protocol (Greiber *et al.*, 2012) and that that this issue should be resolved under the auspices of UNCLOS, rather than the CBD.

The precise definition of bioprospecting and whether it could fall under the existing UNCLOS regime for MSR[116] has also been debated within the UNGA.

4.5. Lack of global rules for EIAs and SEAs in ABNJ

Environmental Impact Assessments (SEAs) and Strategic Environmental Assessments (SEAs) are tools intended to integrate environmental considerations into decision-making. The 1987 Goals and Principles of Environmental Impact Assessment of the United Nations Environment Programme (UNEP) define EIA as "an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development".[117] SEA is a broader assessment process for plans, programmes and policies (as opposed to specific project proposals).

EIA is the main tool utilised by many regulatory authorities across the world to ensure that environmental protection goals are met in approving projects (Morgan, 2012; Sadler, 1996), providing "clear, well organized information on the environmental effects, risks, and consequences of development options and proposals" (Partidário, 2003). SEA typically involves the setting of an overarching environmental vision and objectives for an area (Noble, 2000). A range of alternative courses of action can then be developed with a view to achieving these objectives and can be assessed against specific criteria within the context of the broader environmental vision and objectives (Warner, 2016).

Box 9. Common elements of EIA processes

Screening to determine whether an activity is likely to cause significant environmental effects

Scoping available data and key issues; identifying additional studies needed for the assessment[118]

Baseline studies on the status of the receiving environment

Assessment of impacts and identification of **mitigation options**

Environmental reporting, generally in the form of an environmental impact statement and supporting documentation

Submission and consenting, wherein the regulatory authority assesses the proposed activity, determines whether it is permitted and under what conditions

UNCLOS requires that States "observe, measure, evaluate and analyse, by recognized scientific methods, the risks or effects of pollution of the marine environment" (Article 204) and obliges them to carry out assessments when they have "reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment".[119] States are required to publish reports of the results obtained from such processes or "provide such reports at appropriate intervals to the competent international organizations, which should make them available to all States"(Article 205).

However, UNCLOS does not provide any guidance or minimum standards for EIAs, nor does it specify a reporting mechanism through which States may communicate the results of EIA processes. There are also no global requirements or mechanisms in place for cumulative impact assessment or the conduct of SEAs in ABNJ.

Some intergovernmental organisations have developed specific requirements to conduct EIAs for particular human activities in ABNJ, including: (i)

115. Article 10 of the CBD allows for Parties to create a global multilateral benefit-sharing mechanism for genetic resources obtained in transboundary situations or for situations where it is not possible to grant or obtain prior informed consent.

116. See UNCLOS, Part XIII, in addition to Article 87 and 143.

117. Decision 14/25 of the Governing Council of UNEP, 17 June 1987.

118. There may also be a formal process for engaging with consultees.

119. UNCLOS, Article 206. The obligation to conduct EIA may also form part of customary international law, including for activities in ABNJ. The International Court of Justice has held: "it may now be considered a requirement under general international law to undertake an environmental assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource". Pulp Mills on the River Uruguay (Argentina v. Uruguay) [2010] ICJ Rep. 14, 83 paragraph 204. ITLOS, referring to this judgment, held that it "may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction; and the [ICJ]'s references to 'shared resources' may also apply to resources that are the common heritage of mankind". Seabed Disputes Chamber of ITLOS, Advisory Opinion on Responsibilities and Obligations of States Sponsoring Persons and Entities with respect to Activities in the "Area" (Case 17, 2011) paragraph 148.

several RFMOs for deep sea bottom fisheries; (ii) the ISA for the exploration of the seabed minerals in the Area; and (iii) the Parties to the London Convention and its Protocol for the dumping of wastes and ocean fertilisation.[120] However, there are no specific requirements for EIAs for a wide range of activities.[121] At the regional level, the Antarctic Treaty System (ATS) has developed requirements for EIA for activities having more than a minor or transitory impact. The OSPAR Commission has also developed some requirements.

These provisions are among the most poorly implemented of the Convention and "incidence of environmental impact assessment processes and ongoing monitoring of the effects of marine pollution in marine areas beyond national jurisdiction is relatively low" (Warner, 2009). In 2010, the UNGA requested the Secretary-General to provide information on EIAs with respect to activities in ABNJ on the basis of information provided by States and competent international organizations.[122] This information was reported in 2011, though few States and competent international organizations provided information and much of it focussed on the aforementioned sectoral provisions.[123]

4.6. Limited capacity building and technology transfer

UNCLOS devotes an entire chapter to the capacity development and transfer of marine technology. According to Article 268, States shall promote:

(a) *the acquisition, evaluation and dissemination of marine technological knowledge and facilitate access to such information and data;*

(b) *the development of appropriate marine technology;*

(c) *the development of the necessary technological infrastructure to facilitate the transfer of marine technology;*

(d) *the development of human resources through training and education of nationals of developing States and countries and especially the nationals of the least developed among them;*

(e) *international cooperation at all levels, particularly at the regional, subregional and bilateral levels.*

This section also contains detailed provisions on how to achieve these objectives, most notably through international cooperation[124] and the establishment of national and regional marine scientific and technological centres. These provisions are complemented by general international guidance on capacity development, such as the IOC Criteria and Guidelines on the Transfer of Marine Technology (2003).[125]

The implementation of these provisions nonetheless remains limited. The 11th meeting of the Open-ended Informal Consultative Process on Oceans and the Law of the Sea (ICP) in 2010 was devoted to "Capacity-building in ocean affairs and the law of the sea, including marine science". Here it was noted by several delegations that this section of UNCLOS is "the part with the greatest gap in implementation".[126]

For example, in the context of MGRs and bioprospecting the gap between developed and developing countries is particularly evident: 10 developed countries account for more than 98% of the patents associated with a gene of marine origin (Blasiak *et al.*, 2018);[127] training is lacking; access to expensive technologies and relevant data is limited; and only a handful of countries possess the large research vessels required for expeditions in ABNJ (Juniper, 2013).

4.7. Gaps in the framework for management of high seas fisheries

Fisheries management is ultimately reliant on flag States who: (i) participate in RFMOs, through which parties cooperate for the management of fisheries resources and adopt conservation and management measures; and (ii) are responsible for regulating the conduct of vessels flying its flag.

120. London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (1972) and its 1996 Protocol.

121. Including: "seabed activities other than mining, (e.g. cable and pipelines, seabed installations, marine scientific research, bioprospecting, sea-based tourism); high seas activities other than dumping and some fishing (e.g. shipping, marine scientific research, floating installations (e.g. wave, nuclear, CO_2 mixers)); impacts of high seas fishing activities on outer continental shelves of coastal nations (e.g. deep sea fishing impacts on sedentary species and resources, vulnerable benthic ecosystems); impacts of outer continental shelf activities on high seas (e.g. seismic testing noise); military activities; new or emerging uses of the seas" (Gjerde *et al.*, 2008).

122. UNGA resolution 65/37A, para 167.

123. § 139-159.

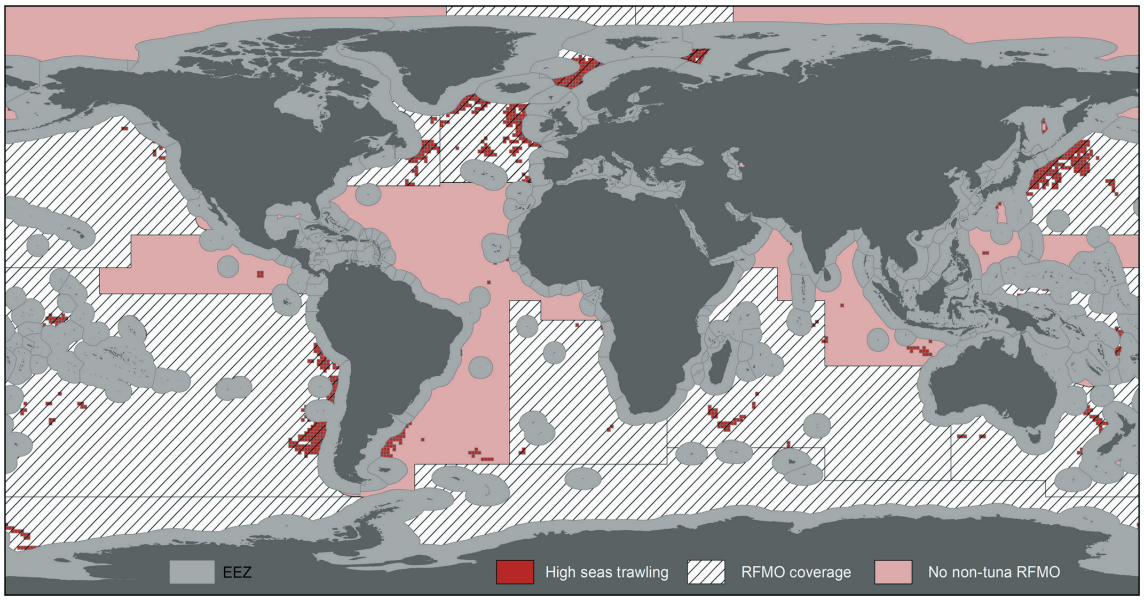
124. UNCLOS also mentions the special role of the ISA in this respect (Articles 273 and 274).

125. Available at http://unesdoc.unesco.org/images/0013/001391/139193m.pdf.

126. See Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its eleventh meeting (2010) A/65/164, §28, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N10/462/32/PDF/N1046232.pdf.

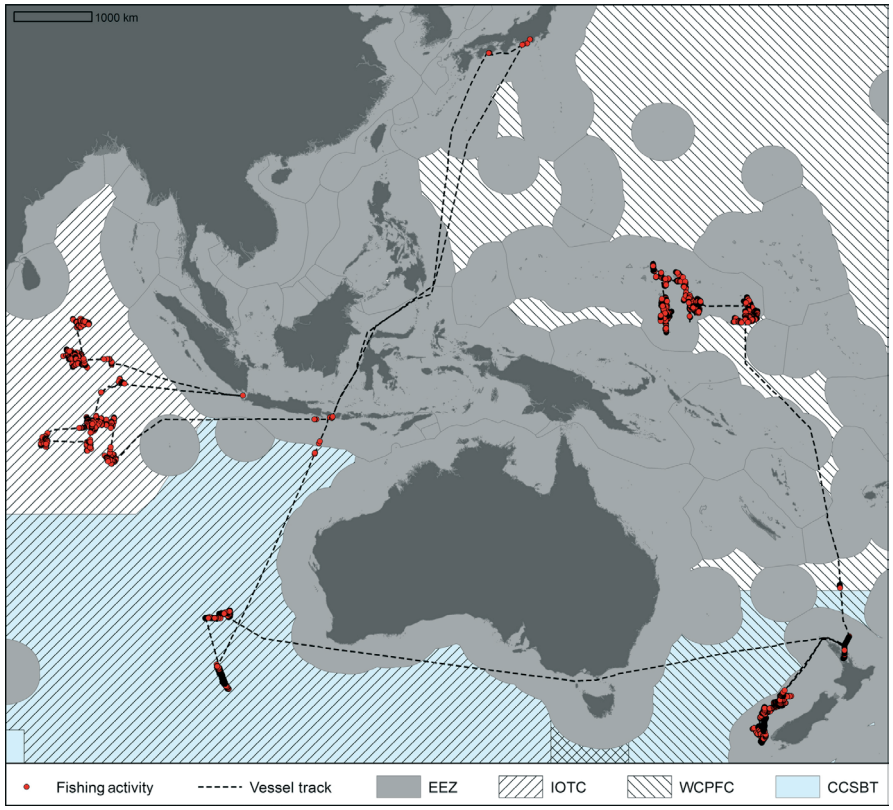
127. The US, Germany, Japan, France, the UK, Denmark, Belgium, the Netherlands, Switzerland and Norway.

Figure 20. High seas trawling not regulated by a competent RFMO



Source: Dunn *et al.*, 2018

Figure 21. Example of the need for strong inter-RFMO cooperation*



Source: Dunn *et al.*, 2018

* The need for strong inter-RFMO cooperation to regulate vessels fishing in the area of competence of multiple RFMOs and countries is illustrated by the AIS tracks of a Japanese longliner identified through the Consolidated List of Authorized Vessels. The vessel fished in the Federated States of Micronesia's EEZ for four months before heading to port at Auckland, New Zealand. It continued fishing within New Zealand's EEZ for 2 months, before returning to port in Auckland and then travelling to the high seas west of Australia. There it fished for 2 months in waters that are under management of both the Indian Ocean Tuna Commission (IOTC) and the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) before it headed back to Japan, stopping at Denpasar, Bali, Indonesia. It remained in port in Japan until December, when it travelled back to the Indian Ocean to fish in the high seas south of India until March 2016.

The absence of a clear definition of what constitutes the requisite "genuine link" between a flag State and the vessels it registers has facilitated the development of so-called "flags of convenience" (see Section 4.9), allowing illegal, unreported and unregulated (IUU) fishing to flourish (Bartolo, 2016; Miller & Sumaila, 2014; Gallic & Cox, 2006).[128]

At the same time, gaps remain in the RFMO framework, notably:

- Several parts of the ocean are not yet covered by an RFMO with the mandate to regulate deep sea fisheries (Figure 20).[129]
- RFMOs primarily address straddling and highly migratory fish stocks.[130] As such, RFMOs generally do not manage:
  - Discrete deep-sea fish stocks (i.e. those that are not straddling or highly migratory);[131]
  - Other target species, such as sharks or squid;[132]
  - Non-target species (i.e. bycatch).
- RFMOs were historically mandated to manage the exploitation of specific fish stocks and therefore only accounted for anthropogenic impacts to those stocks. Most RFMOs now have broader mandates and there has been considerable progress in the application of ecosystem-based management in recent years, but approaches to biodiversity still vary greatly and are generally not aimed at the conservation and sustainable use of marine biodiversity as a whole. As a consequence, many components of biodiversity that are impacted by fisheries are not effectively managed (Juan-Jordá *et al.,* 2018; Blanchard, 2017; Gilman *et al.,* 2014a; Cullis-Suzuki & Pauly, 2010).
- Parties to RFMOs are generally States with a fishing interest in the respective region; provision is often not made for membership of non-fishing States or the representation of such States' interests where they are concerned with sustainable use and conservation of biodiversity, rather than with the management of a particular stock.[133]
- RFMOs may be ill-equipped to effectively respond to the management challenges posed by climate change (Pentz *et al.*, 2018; Pentz & Klenk, 2017).

4.8. Mixed performance of Regional Fisheries Management Organisations (RFMOs)

Given the status of fish stocks and the potential impacts of fishing on marine biodiversity, the performance of RFMOs has been the subject of considerable analysis in the academic literature.[134] Earlier analyses noted that "the priority of RFMOs—or at least of their member countries—has been first and foremost to guide the exploitation of fish stocks. While conservation is part of nearly all their mandates, they have yet to demonstrate a genuine commitment to it on the water" (Cullis-Suzuki & Pauly, 2010). While RFMOs are increasingly conducting performance reviews[135]

128. The High Seas Task Force has noted that: "There is a clear and compelling link between IUU fishing on the high seas and fishing vessels flagged to what are commonly called open registers". Ministerially-led Task Force on IUU Fishing on the High Seas (High Seas Task Force), Closing the Net: Stopping illegal fishing on the high seas (2006), http://www.illegal-fishing.info/uploads/HSTFFINALweb.pdf.

129. I.e. the Arctic, parts of the Atlantic and Pacific oceans, and the Indian Ocean. These regions are, however, covered in relation to tuna fisheries.

130. The UNFSA provisions only directly apply to straddling and highly migratory fish stocks and they are only legally binding on States who are party to the Agreement.

131. Deep sea bottom fisheries were allowed to develop without the establishment of a RFMO, in part due to the failure of the UNFSA to directly cover discrete high seas bottom fisheries (Gianni 2005). The 2006 UNFSA Review Conference "encouraged States, as appropriate, to recognize that the general principles of the Agreement should also apply to discrete fish stocks in the high seas" (see Outcome of the Review Conference (2006) § 2). See also Takei (2013).

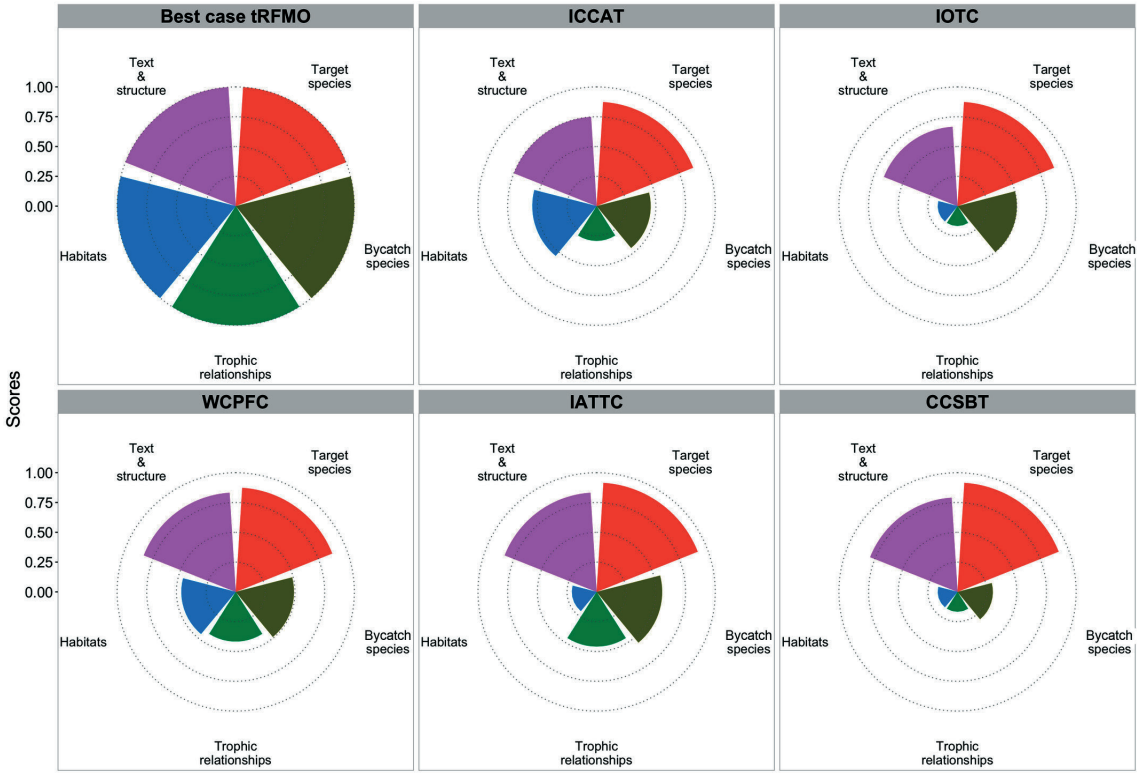
132. For example, IOTC acknowledges that sharks are frequently caught as bycatch and that some fleets actively target both sharks and IOTC species simultaneously. These shark species are all listed on the IUCN Red List as near threatened, vulnerable, or endangered. Parties are required to report shark catch at the same level of detail as for species directly under the IOTC mandate, but a stock assessment is available for only one of the seven main shark species caught in the area. IOTC acknowledges that Resolution 12/09, which prohibits retaining sharks and promotes live release, is "largely ineffective for species conservation" in many cases due to high mortality rates. See http://www.iotc.org/science/status-summary-species-tuna-and-tuna-species-under-iotc-mandate-well-other-species-impacted-iotc.

133. Furthermore, although RFMOs are reasonably transparent (Clark *et al.*, 2015), it is nonetheless "difficult to grasp these organizations' activity as a whole […] the technical nature and sheer variety of measures adopted by RFMOs often hinder understanding of a subject that is already complex in and of itself." (Oanta, 2018). This makes it challenging for a non-fishing State to attempt to advance a non-fishing interest through the existing RFMO framework.

134. In considering RFMO performance, it is important to recall that responsibility for the development of effective management measures and compliance with these measures ultimately lies with flag States. As such, even RFMOs that exemplify best practices "still exhibit compliance shortfalls [because] RFMOs cannot be expected to completely prevent or eliminate infractions by its members" (Koehler, 2018).

135. 15 RFMOs have undergone performance reviews; six have conducted a second performance review (CCSBT, ICCAT, IOTC, NASCO, NEAFC, SEAFO). The FAO notes that RFMOs are "increasingly using four criteria to review their performance: assessment of the conservation and management of fish stocks; the level of compliance with and enforcement of international obligations; the status of current legal frameworks, financial affairs and organization; the level of cooperation with other international organizations and

Figure 22. Progress of tuna RFMOs in implementing an ecosystem-based approach to fisheries management



Source: Juan-Jordá *et al.*, 2018

and it is now generally acknowledged that considerable progress has been made in recent years (Friedman *et al.*, 2018; Pons *et al.*, 2018), there nonetheless remains concern that RFMOs are not taking the management actions necessary to ensure the conservation and sustainable use of marine biodiversity.

With regard to pelagic fisheries, e.g. tuna, recent studies have shown that, although many of the elements necessary for ecosystem-based management are already present in RFMO frameworks, they have been "implemented in an ad hoc way, without a long-term vision and a formalized plan" (Juan-Jordá *et al.*, 2018). As a result, tuna RFMOs have made considerable progress on research monitoring target species, but much less progress regarding bycatch species, ecosystem properties, trophic relationships and habitats (see Figure 22). Recent expert surveys suggest that tuna RFMOs have generally focussed their efforts on research, with limited implementation of concrete management and enforcement measures (Pons *et al.*, 2018).

States taking management decisions through RFMOs have frequently acted counter to the advice of their scientific bodies[136] and RFMO effectiveness appears to be highly dependent on external factors (Pons *et al.*, 2018).[137] There has also been "reluctance on the part of many States and RFMOs to close high seas areas to protect VMEs" (Gianni *et al.*, 2011) and considerable gaps remain in the implementation of the UNGA bottom fisheries resolutions (Gianni *et al.*, 2016) and integration of broader biodiversity concerns (Gilman *et al.*, 2014). Effective cooperation between RFMOs also remains limited.[138]

non-member States. These reviews are being institutionalized and undertaken with increasing regularity and frequency." (FAO, 2018)

136. For example, "throughout the histories of the International Commission for Conservation of Atlantic Tunas and the Western and Central Pacific Fisheries Commission, policymakers have followed the advice of their scientists only 39% and 17% of the time, respectively" (Galland *et al.*, 2018).

137. I.e. RFMOs tend to engage less in research, management and enforcement where there is a greater number of member countries, greater economic dependency on tuna resources, lower mean per capita gross domestic product, a greater number of fishing vessels, and smaller vessels.

138. A number of efforts have been undertaken in this regard. Meetings conducted between Regional Fishery Bodies (RFBs) since 1999 evolved into the Regional Fishery Body Secretariats' Network (RSN), established 2005, which is aimed at discussion and information exchange. The meetings are held at

4.9. Flag State responsibility and the "genuine link"

According to UNCLOS, "every State, whether coastal or land-locked, has the right to sail ships flying its flag on the high seas" on the condition that there is a "genuine link between the State and the ship" (Articles 90-91). UNCLOS does not specify what constitutes a "genuine link" or provide guidance on attributing nationality (a "flag") to a ship. In this context, the practice of "open registries", "flags of convenience", or "flags of non-compliance" has emerged, whereby States with little interest in effectively regulating vessels provide registration, generally for a fee.

International environmental and safety standards are easily avoided through the flags of convenience system as little or no effective monitoring, control and surveillance (MCS) is conducted by the flag State. Such unregulated vessels can conduct IUU fishing, avoid IMO safety and environmental regulations, and engage in criminal activities free from any controls imposed by a responsible flag State (Bartolo, 2016; Telesetsky, 2015; Miller & Sumaila, 2014). Conscious of this problem, States negotiated an agreement on stricter rules for flagging in 1986, though it never entered into force.[139] The issue of effective State control over their nationals in ABNJ (whether through companies, individuals, or ships) is once again starting to gain momentum, as evidenced by:

- The establishment by the IMO of a sub-committee on flag State Implementation;[140]
- Implementation of a voluntary IMO Member State Audit Scheme, now transitioning to a mandatory audit scheme;[141]
- Work within the FAO on the establishment of a global record of fishing vessels;[142] and
- An Advisory Opinion delivered in 2015 by the International Tribunal on the Law of the Sea (ITLOS) on the responsibilities and obligations of coastal and flag State duties to ensure sustainable fisheries management.[143]

5. HISTORY OF THE INTERNATIONAL DISCUSSIONS

5.1. The UNGA as the global political arena

Although certain issues relating to the conservation and sustainable use of marine biodiversity in ABNJ have been discussed in various international forums, the UNGA is the only global political arena with a clear mandate to consider the question as a whole. This central role is often emphasised in UNGA resolutions on Oceans and the Law of the Sea,[144] and is also recognised by other international bodies and conventions.[145]

There are two main reasons for the UNGA's central role. Firstly, it is near-universal in nature. Secondly, discussions related to the Law of the Sea, and to UNCLOS in particular, have historically been held under the auspices of the UNGA, supported by a special division of the UN Office of Legal Affairs which serves as the UNCLOS Secretariat (Division for Ocean Affairs and the Law of the Sea, DOALOS). A State need not be Party to UNCLOS to participate in the discussions held within the UNGA framework.

5.2. The BBNJ Working Group (2006-2015)

In 2004, the UNGA created the *Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine*

the initiative of the RFBs, with venue and secretariat services being provided by the FAO. The Kobe process, launched at the initiative of Japan in 2007, sought to harmonize the activities of the five tuna RFMOs regarding scientific research, market issues, MCS, the impact of bycatch, and support for developing countries. The last meeting took place in 2011 and no plans currently appear to be in place for further development of the process. The Tuna Compliance Network was launched in 2017 with the aim of facilitating communication and cooperation between the compliance officers of the five tuna RFMOs, supported by the FAO/GEF Common Oceans program.

139. UN Convention on Conditions for Registration of Ships 1986. The Convention only has 15 Contracting Parties, none of them being a major maritime nation. The last ratifications were in 2005. See: https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XII-7&chapter=12&lang=en.

140. See http://www.uscg.mil/imo/fsi/.

141. See http://www.imo.org/en/OurWork/MSAS/Pages/AuditScheme.aspx.

142. See http://www.fao.org/fishery/global-record/en.

143. Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC Advisory Opinion), Advisory Opinion of Apr. 2, 2015, ITLOS, https://www.itlos.org/fileadmin/itlos/documents/cases/case_no.21/advisory_opinion/C21_AdvOp_02.04.pdf.

144. For example, UNGA Resolution A/RES/67/78 of 11 December 2012 states the UNGA "reaffirms its central role relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction" (§180).

145. For example, a CBD Decision underlines "the United Nations General Assembly's central role in addressing issues relating to the conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction". CBD Decision X/29 on Marine and Coastal Biodiversity, 21.

biological diversity beyond areas of national jurisdiction ("BBNJ Working Group").[146] Discussions at the BBNJ Working Group focused on weaknesses and gaps in the current international framework and whether these necessitate the adoption of a new instrument (Druel *et al.*, 2013).

5.2.1. The 2006 and 2008 sessions: ideological divide and status quo

The BBNJ Working Group first met in 2006 and again in 2008. An ideological divide regarding the legal status of MGRs found in the Area was immediately apparent during the first session and subsequently became a defining issue during Working Group meetings. The G77, joined by China, advocated for the application of the CHM principle to MGRs found in the Area. These States argued that benefits arising from the exploitation of MGRs should be shared between all countries. This position has been strongly opposed by some other States, which assert that access to MGRs falls under the freedom of the high seas.

Other issues also received attention, such as the application of the precautionary approach and the establishment of MPAs in ABNJ. Recognising that a regulatory gap existed in UNCLOS with respect to the protection of marine biodiversity in ABNJ, the EU stated as early as 2004 that in principle it would support the development of a new instrument.[147] In 2006 the EU called for the adoption of an Implementing Agreement to UNCLOS.[148] At that time, this call was welcomed by a few NGOs, but did not garner wider support.

5.2.2. The 2010 and 2011 sessions: the Package Deal

The BBNJ Working Group was invited to make recommendations to the UNGA for the first time in 2010[149] and subsequently met on an annual basis. In the 2010 meeting a number of proposals were made by States to advance the conservation and sustainable use of marine biodiversity in ABNJ. This included: (i) the proposal to develop an UNCLOS Implementing Agreement; (ii) the adoption of modern management principles (e.g. through a UNGA resolution); (iii) the adoption of a UNGA resolution on EIAs for all human activities that may have significant adverse impacts on marine biodiversity in ABNJ; and (iv) the establishment of a standard model for regional cooperation through a MoU on designation of MPAs in ABNJ. Ultimately not all States agreed to these proposals, and they were not reflected in the final outcome.[150]

Discussions in 2011 were almost entirely devoted to a possible multilateral agreement under UNCLOS on the conservation and sustainable use of marine biodiversity in ABNJ. For the first time, a common position was reached as the result of a compromise between the EU and the G77/China and Mexico. Joined also by other States favourable to the possibility of negotiating a new agreement, such as Australia and New Zealand, they agreed to work towards the establishment of an intergovernmental negotiating process on a "Package Deal" that would "address the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, in particular, together and as a whole":[151]

- marine genetic resources, including questions on the sharing of benefits;
- measures such as area-based management tools, including marine protected areas;
- environmental impact assessments;
- capacity-building and the transfer of marine technology.

The opening of the negotiations for a new agreement was not retained in the final recommendations of the 2011 Working Group, largely due to opposition by a few States, including the US, Canada, Japan, Iceland and Russia. It was nonetheless agreed that "a process be initiated, by the General Assembly, with a view to ensuring that the legal framework for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction effectively addresses those issues by identifying gaps and ways forward, including through the implementation of existing instruments and the possible development of a multilateral agreement under [UNCLOS]".[152]

States also agreed that intersessional workshops be held, aimed at improving the understanding of issues and clarifying key questions. Overall, the 2011 meeting was a watershed moment in the discussions of the Working Group that fundamentally shifted the negotiation framework.

146. UNGA resolution 59/24 of 17 November 2004, §73.

147. EU Statement to the ICP, 8 June 2004.

148. See EU Presidency statement of 13 February 2006, http://eu-un.europa.eu/articles/en/article_5691_en.htm.

149. See UNGA resolution 64/71 of 4 December 2009, § 146.

150. Recommendations of the BBNJ Working Group had to be adopted by consensus.

151. Letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, Document A/66/119, §I.1(a) and (b), http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf.

152. Letter dated 30 June 2011 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, Document A/66/119, §I.1(a), http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N11/397/64/PDF/N1139764.pdf.

Box 10. The Package Deal approach to multilateral negotiations

Structuring negotiations around a package of issues derives from the history of the UNCLOS negotiations, during which such a process was successfully deployed.[153] The Package Deal approach can be summarised as "nothing is agreed until everything is agreed" (Danilenko, 1993). It implies that "acceptance by a State of a particular provision is conditioned on the results of bargaining in other areas of negotiations satisfying its requirements. It also implies that in principle all compromises achieved in the course of the negotiations are considered as preliminary arrangements depending on the overall assessment of negotiations as a whole" (Danilenko, 1993). Such an approach may encourage compromise as participants are incentivised to accept the "resolution of a particular issue or issues, despite shortcomings, because of the relatively favourable disposition of another issue or issues, not necessarily directly related" (MacDougal & Burke, 1987).

5.2.3. The 2012 session: slow progress

The 2012 meeting of the BBNJ Working Group was a stark reminder that there was still a long way to go before any formal negotiations could begin. Most of the discussions focused on the preparation of the intersessional workshops, and the final recommendations mostly addressed the practical organisation of two workshops before the 2013 meeting.[154]

5.2.4. Rio+20

Discussions regarding opening negotiations took place in the preparatory meetings to the 2012 United Nations Conference on Sustainable Development ("Rio+20") and the possibility of making a concrete commitment was hotly debated during the conference.

Many States, including the EU, were hoping that a political consensus could be reached to open negotiations.[155] The first "zero draft" of the outcome document stated: "we agree to initiate, as soon as possible, the negotiation of an implementing agreement to UNCLOS that would address the conservation and sustainable use of marine biodiversity in [ABNJ]".[156] However, some States did not agree to this proposal and the necessary consensus was not reached. Ultimately, the final text said that States would: "commit to address, on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including by taking a decision on the development of an international instrument".[157] A deadline was agreed, according to which a decision on whether to develop a new agreement would be taken before the end of the 69th session of the UNGA (i.e. September 2015).

5.2.5. The 2013 meeting and workshops: scientific and procedural discussions

Discussions continued in 2013 through two intersessional workshops on MGRs and on conservation and management tools.[158] While the workshops primarily aimed at providing information to delegations, they also gave States a welcome opportunity to further develop their positions and engage in informal exchanges.

During the 6th meeting of the BBNJ Working Group, States focused on procedural issues. They discussed the establishment of a process that would allow them to take a decision regarding the launch of the negotiations before the end of the 69th session of the UNGA.[159] To this end, States agreed to recommend to the UNGA that at least three four-day meetings of the Working Group take place to discuss the scope, parameters and feasibility of an international instrument under UNCLOS.

5.2.6. The 2014 meetings: a solid coalition for the opening of the negotiations

The first of these three meetings was held in April 2014. Delegations engaged "for the first time in an interactive substantive debate that created momentum for more detailed deliberations".[160]

153. The decision to adopt a Package Deal approach for the negotiations of UNCLOS was taken "because different States displayed extremely divergent attitudes to issues under consideration" and "successful negotiations on all major problems required the adoption of a "Package Deal" approach as a special technique of tradeoffs between different areas of bargaining" (Danilenko, 1993). This approach was also seen in the development of the CBD (which addresses both conservation and sustainable use, and includes equitable benefit sharing of genetic resources).

154. Letter dated 8 June 2012 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, Document A/67/95, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N12/372/82/PDF/N1237282.pdf.

155. A precedent for such a development had been set by the political agreement reached during the first Rio Conference in 1992 to call for an intergovernmental UN conference on highly migratory and straddling fish stocks, which resulted in the UNFSA.

156. The Future We Want (Zero Draft, 10 January 2012) paragraph 80, http://www.uncsd2012.org/content/documents/370The%20Future%20We%20Want%2010Jan%20clean%20_no%20brackets.pdf.

157. The Future We Want (2012) UNGA Resolution A/66/288.

158. For an overview of the presentations delivered during the workshops, see: http://www.un.org/depts/los/biodiversityworkinggroup/biodiversityworkinggroup.htm.

159. The possibility of opening negotiations for a new instrument earlier than the final August 2015 deadline was not discussed.

160. IISD, Summary of the Seventh Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction (2014), http://www.iisd.ca/oceans/marinebiodiv7/brief/brief_marinebiodiv7e.html.

The informal Co-Chairs' overview of issues highlighted a number of themes under discussion, including: the overall objective and starting point for negotiations; the relationship of a potential new agreement to other instruments; and the guiding approach to negotiations, including the Package Deal. The April 2014 meeting was lauded by NGOs for its transparent proceedings.

The June 2014 meeting saw increasing convergence among States on a number of issues. There was broad support for maintaining the deadline set at Rio+20 and avoiding the prolongation of the BBNJ Working Group process (Wright *et al.,* 2014). States agreed that UNCLOS provides the authority for any international agreement and should therefore form the basis of any negotiations, and that any future negotiations should be based on the Package Deal agreed in 2011.

While only a handful of States and regional groupings had previously been actively engaging in discussions at the BBNJ Working Group, the second of these three meetings in June 2014 saw a number of regions take the floor to more explicitly declare their support for the opening of negotiations; in particular the African Union, the Caribbean Community (CARICOM), and the Pacific States.

5.2.7. January 2015: recommendation to establish a Preparatory Committee

This process culminated at the final meeting in January 2015, where States recommended to the UNGA that it should "decide to develop an international legally-binding instrument under the Convention on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction".[161] Specifically, it was recommended that the UNGA:

> *"Decide that negotiations shall address the topics identified in the package agreed in 2011, namely the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, in particular, together and as a whole, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity building and the transfer of marine technology."*

There were a number of final obstacles to reaching this consensus (Rochette *et al.,* 2015). States clashed over the question of whether the new process should lead to "an international legally-binding instrument" or more broadly "an international instrument" (the wording used in the Rio+20 outcome document).[162] The latter formulation was favoured by the US, Russia and Japan, and would have paved the way for a soft-law document. The EU, the G77/China, and many individual States fought to include an explicit mention of a legally binding instrument.

States agreed to recommend the establishment of a Preparatory Committee (PrepCom), but disagreed on the precise nature of its mandate. States also disagreed as to whether the PrepCom would automatically lead to the convening of an intergovernmental conference, or if the UNGA should take a decision on the convening of such a conference depending on the outcome of the PrepCom.[163] Ultimately, it was agreed that the PrepCom would "make substantive recommendations to the General Assembly on elements of a draft text of an international legally binding instrument".[164] States also held different positions regarding the level of detail in which substantive issues should be mentioned in the recommendations. The final outcome states that the negotiations should address the topics identified in the package agreed in 2011 and that the new agreement should not undermine existing instruments.

5.3. The Preparatory Committee (2016-2017)

The recommendations of the BBNJ Working Group were formally approved by UNGA Resolution 69/292 in June 2015.[165] A Preparatory Committee (PrepCom) was then established and convened four times in 2016 and 2017 in order to prepare

161. Recommendations of the 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 to the sixty-ninth session of the General Assembly (23 January 2015), http://www.un.org/Depts/los/biodiversityworkinggroup/documents/AHWG_9_recommendations.pdf.

162. The Future We Want (2012) UNGA Resolution A/66/288, §162.

163. Ultimately, no deadline was set for the convening of the intergovernmental conference, but a target date of the end of the 72nd session of the UNGA was set for deciding on the convening of and a start date for such a conference, taking account of the PrepCom report.

164. Recommendations of the 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 to the sixty-ninth session of the General Assembly (23 January 2015), http://www.un.org/Depts/los/biodiversityworkinggroup/documents/AHWG_9_recommendations.pdf.

165. UNGA Resolution of 19 June 2015 on Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, A/RES/69/292, http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N15/187/55/PDF/N1518755.pdf.

substantive recommendations on elements of a draft text.[166]

5.3.1. First session: Unpacking the package

The pace quickened at the first PrepCom meeting, as delegations dove directly into topical discussions. Under the guidance of Chair Eden Charles (Trinidad and Tobago), States began to "unpack the package", offering detailed positions on the four Package Deal elements as well as on cross-cutting issues such as scope, relationship with existing instruments and bodies, guiding principles and approaches, and institutional aspects. For the first time, delegations exchanged detailed views on how a new agreement could work, including the ecological and practical interlinkages necessary to build a truly integrated approach to conservation and sustainable use.[167] The meeting was praised for its increased accessibility and transparency compared with the Working Group meetings, allowing for the participation of many NGOs and inter-governmental organisations.[168]

This meeting is perhaps most notable for an important breakthrough on MGRs. Despite continued disagreement on the legal status of MGRs in ABNJ, both developed and developing countries "emphasized equity as the ultimate rationale for this element"—the 2011 package referred to "benefit-sharing questions", as opposed to "fair and equitable benefit-sharing".[169] Developing country delegates appeared to show increasing willingness to discuss a "pragmatic" or "sui generis" approach that could build on the complementarity between common heritage and high seas freedoms, rather than entrenching the view that they are mutually exclusive.

5.3.2. Sessions 2 & 3: Delving into details

The aim for the second session was to encourage concrete and detailed discussions and proposals, with Chair Charles calling for "specific language proposals" that could later be translated into "treaty language". In response, delegations offered increasingly detailed proposals on possible elements of an ILBI based to a large degree on the Chair's non-exhaustive list of questions that had been issued intersessionally.[170] An attempt was made to "park" issues on which States were approaching consensus, but ultimately the areas of convergence remained scarce. Instead, many topics requiring further discussion were identified.[171] Delegations requested the preparation of a Chair's non-paper to guide discussions at the next meeting, drawing from statements made during the meetings and from any further submissions received from States in the intersessional period.[172]

At the third session of the PrepCom, new chair Carlos Sobral Duarte (Brazil) no longer attempted to park issues, but invited delegations to continue to share their visions of crucial parts of the agreement.[173] They were guided by the Chair's compilation of submissions following the previous meeting.[174] While there was still little consensus, in some cases the discussion could be narrowed down to a handful of options. An example is the crystallization of the "global," "hybrid" and "regional" governance models for both MPAs and the general structure of ILBI.

The third PrepCom meeting was largely seen as a positive step forward. It concluded with delegations requesting the preparation of a streamlined and updated Chair's non-paper, as well as draft substantive recommendations for consideration by PrepCom 4 in July 2017.[175] The resulting streamlined Chair's non-paper on elements of a draft text provides a compilation of ideas and proposals put forward by delegations, providing a useful reflection of the range and depth of options

166. Ibid. §1(a)-(c).

167. IISD, Summary of the first session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 28 March - 8 April 2016 (11 April 2016) http://www.iisd.ca/oceans/bbnj/prepcom1/.

168. Ibid.

169. Ibid.

170. Chair's indicative suggestions of clusters of issues and questions to assist further discussions in the Informal working groups at the second session of the Preparatory Committee- http://www.un.org/depts/los/biodiversity/prepcom_files/IWGs_Indictive_Issues_and_Questions.pdf

171. Chair's overview of the second session of the Preparatory Committee Annex I: Chair's understandings of possible areas of convergence of views and possible issues for further discussion emanating from the discussions in the Informal working group http://www.un.org/depts/los/biodiversity/prepcom_files/Prep_Com_II_Chair_overview_to_MS.pdf.

172. IISD, Summary of the second session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 26 August - 9 September 2016 (12 September) http://www.iisd.ca/oceans/bbnj/prepcom2/.

173. IISD, Summary of the third session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 27 March - 7 April 2017 (10 April 2017) http://enb.iisd.org/oceans/bbnj/prepcom3/, p. 15.

174. Submissions received from delegations in response to the Chair's invitation made at the second session of the Preparatory Committee, as reflected in paragraph 11 of his overview of the second session of the Preparatory Committee (due by 5 December 2016), and thereafter http://www.un.org/depts/los/biodiversity/prepcom_files/rolling_comp/Prep_Com_webpage_submisions_by_delegations.pdf.

175. IISD, Summary of the third session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 27 March - 7 April 2017 (10 April 2017) http://enb.iisd.org/oceans/bbnj/prepcom3/.

(albeit non-exhaustive) developed during the first three PrepCom sessions.[176] As the same time, it became clear that there was much left to do for the intersessional period before the final PrepCom meeting.

5.3.3. Final session: Toward formal negotiations

During the last session of the PrepCom, little time was dedicated to further substantive discussion, as there was the need to agree on recommendations on the elements of a draft text of an ILBI to be passed on to the General Assembly. States decided to create a document with two sections: (A) non-exclusive elements of a draft ILBI text that generated convergence among most delegations; and (B) main issues on which there is divergence of views. Importantly, it was clarified that Sections A and B do not reflect consensus and that positions expressed during the PrepCom were made "without prejudice to the positions of states during future negotiations".[177]

While most delegations considered that the PrepCom had completed its mandate, some disappointment lingered due to the inability to reach consensus on most substantive issues. Nevertheless, the PrepCom outcome itself was adopted by consensus, recommending that the UNGA take a decision on the convening of an IGC as soon as possible.

5.4. Convening the intergovernmental conference (December 2017)

Taking note of the report of the Preparatory Committee, the UNGA adopted on 24 December 2017 a resolution convening an intergovernmental conference "to elaborate the text of an [ILBI] on the conservation and sustainable use of marine biological diversity of [ABNJ], with a view to developing the instrument as soon as possible".[178] The resolution underwent a complex drafting stage, but was ultimately co-sponsored by 141 States and adopted by consensus. The General Assembly's rules of procedure will apply to the conference, i.e. it will work on the basis of consensus and use a two-thirds majority vote only in the event that every effort to reach agreement by consensus has been exhausted.

5.5. Organizational meeting (April 2018)

An organizational meeting was held in New York from 16 to 18 April 2018. Rena Lee, Ambassador for Oceans and Law of the Sea Issues and Special Envoy of the Minister for Foreign Affairs of Singapore, was elected President of the Intergovernmental Conference (IGC). She will be supported by a bureau composed of 15 Vice-Presidents, three from each regional group.[179] Delegations agreed to adopt a flexible approach, making adjustments to the mode of work when necessary. Many delegations expressed a strong preference for avoiding parallel meetings, especially early in the process. There was a general understanding that the first session should focus on substantive discussions of the package elements rather than being held up by procedural matters. Discussions during the first IGC meeting will be guided by an "aid to discussion" paper prepared by President Lee.[180]

In her closing statement, President Rena Lee echoed the words of the Secretary-General of the Conference, Miguel de Serpa Soares, expressing her hope that the beginning of formal negotiations would be characterized by a "rain of ideas" and a "storm of inspiration".

176. Chair's streamlined non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction. http://www.un.org/depts/los/biodiversity/prepcom_files/Chairs_streamlined_non-paper_to_delegations.pdf

177. IISD, Summary of the fourth session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 10 - 21 July 2017 (24 July 2017) http://enb.iisd.org/oceans/bbnj/prepcom4/, p. 4.

178. Resolution 72/249, International legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

179. Three from each UN regional groups, i.e. the African Group, the Asia-Pacific Group, the Eastern European Group, the Latin American and Caribbean Group, the Western European and Others Group.

180. http://undocs.org/en/A/CONF.232/2018/3.

Figure 23. Summary of key meetings and resolutions (2006-2018)

2006 13-17 February	First meeting of the BBNJ Working Group	Emergence of an ideological divide regarding the legal status of MGRs found in the Area EU called for adoption of a new agreement.
2008 28 April-2 May	Second meeting of the BBNJ Working Group	Continued discussions and development of State positions.
2010 1-5 February	Third meeting of the BBNJ Working Group	Working Group invited to make recommendations to the UNGA. Numerous proposals for advancing conservation and sustainable use.
2011 31 May-3 June	Fourth meeting of the BBNJ Working Group	Common position reached between EU, G77, China, Mexico; creation of the "Package Deal". Intersessional workshops proposed.
2012 7-11 May	Fifth meeting of the BBNJ Working Group	Discussions focused on the preparation of the intersessional workshops.
2012 20-22 June	**Rio+20**	Commitment made to decide on whether to negotiate a new agreement; deadline set (September 2015).
2013 2-3 May	Intersessional workshop on MGRs	Scientific expertise provided to delegations.
2013 6-7 May	Intersessional workshop on conservation and management tools	
2013 19-23 August	Sixth meeting of the BBNJ Working Group	Recommended 3 meetings of Working Group on scope, parameters and feasibility.
2014 1-4 April	Seventh meeting of the BBNJ Working Group; first of three special sessions on scope, parameters and feasibility	Beginning of substantive debate; move towards identification of key issues.
2014 16-19 June	Eighth meeting of the BBNJ Working Group; second of three special sessions	Increasing convergence among States on a number of issues. Broader engagement of States in the process, especially CARICOM, the African Union, and the Pacific States.
2015 20-23 January	Ninth meeting of the BBNJ Working Group; third and final special session	Recommendation to the UNGA to decide to open negotiations.
2015 19 June	**UNGA Resolution 69/292**	Establishment of the Preparatory Committee
2016 28 March-10 April	First meeting of the Prepcom	'Unpacking' the package.
2016 26 August-9 September	Second meeting of the Prepcom	Detailed discussion of State positions.
2017 27 March-7 April	Third meeting of the Prepcom	Narrowing down possible approaches to contentious issues.
2017 10-21 July	Fourth meeting of the Prepcom	Substantive recommendations submitted to the UNGA.
2017 24 December	**UNGA Resolution 72/249**	Convening of an intergovernmental conference
2018 16-18 April	Organizational meeting	Election of President of the intergovernmental conference (Rena Lee, Singapore) and discussions on rules for the negotiations.
2018 4 – 17 September	**1st Intergovernmental Conference (IGC) meeting**	
2019-2020	2nd-4th IGC meeting	

6. VIEWS EXPRESSED DURING MEETINGS OF THE BBNJ WORKING GROUP AND PREPARATORY COMMITTEE

States have expressed a range of positions regarding the need for, and possible content of, a new international legally binding instrument on the conservation and sustainable use of marine biodiversity in ABNJ. The summary provided here is necessarily only an overview of positions previously expressed in meetings and written submissions. State positions will likely continue to evolve, and statements made in the discussions to date are understood to be without prejudice to future deliberations.

States can be categorized broadly according to whether they have made statements generally in favour of a new agreement or have expressed opposition, though in reality positions have been much more complex and nuanced. Initially, States that favoured the negotiation of a new agreement were divided between those focussed on conservation and sustainable use and those focussed on MGRs, although many engaged in both issues. Likewise, while some States were overall doubtful regarding the need for a new instrument, others voiced concerns about particular elements of the Package Deal or the discussions, but otherwise acknowledged the existence of gaps in the current framework and were open to the possibility of negotiating an agreement covering a limited number of specific issues.

6.1. Advocates: advancing the negotiations for a new instrument

Among the groups most prominently and consistently having called for a new instrument were the EU, the G77/China and Mexico, as well as many African, Caribbean, and Pacific States. Despite the varied perspectives and interests of these States, their will and determination ensured advancement towards the negotiation of an ILBI. Over the course of the discussions, there have been many instances where States from these diverse groups have collaborated and cooperated in an effort to advance the discussions. Noteworthy examples of this dynamic include a joint submission from Costa Rica and Monaco, advancing the discussion on MPAs by providing concrete suggestions for a global MPA process,[181] as well as the collaborative effort by Mexico and New Zealand to advance resolution 72/249.

181. http://www.un.org/depts/los/biodiversity/prepcom_files/Costa_Rica_Monaco_BBNJ_Submission_MPAs.pdf.

6.1.1. The European Union: an early and consistent proponent

The EU has been a leading proponent of an ILBI since the beginning of the discussions. The EU was an early advocate for short-term conservation measures[182] and for the development of a new international agreement. Its first proposals for an instrument focussed on the establishment of MPAs in ABNJ,[183] but in agreeing on the 2011 Package Deal, the EU recognized that it would also be necessary to address MGRs and capacity building issues.[184] Throughout the BBNJ Working Group and PrepCom meetings, the EU occupied a middle ground between the competing principles of freedom of the high seas and common heritage of manking (CHM), seeking compromise in order to find pragmatic and practical options for advancing the discussion of access and benefit sharing (ABS).

In 2006, the EU first considered that a new agreement should focus on: biodiversity protection and conservation, including through MPAs; cooperation and coordination between existing competent bodies; and identification of vulnerable ecosystems and species in ABNJ.[185] This early focus on biodiversity protection and MPAs is perhaps best understood in light of its regional context, i.e. the EU and its Member States:

- Had already adopted extensive legislation with regard to environmental protection, including protected areas;[186] and

182. Proposals for short-term measures on conservation included the establishment of multi-purpose pilot MPAs and the development of a standard model for regional cooperation through a memorandum of understanding for MPA designation in ABNJ (IISD, Briefing Note on UNGA WG on Marine Biodiversity (8 February, 2010) http://www.iisd.ca/oceans/marinebiodiv3/brief/brief_marinebiodiv3.pdf, p.4.). Measures were divided into short- and medium-term actions, since, at that time the major issue was the protection of VMEs from destructive fishing practices. However, in light of the fact that this issue was tackled by UNGA Resolution 61/105, and in view of the lengthy duration of the BBNJ discussions, the EU later shifted its focus to the negotiation of a new instrument the main objective.

183. See EU Presidency statement of 13 February 2006, http://eu-un.europa.eu/articles/en/article_5691_en.htm.

184. Following agreement on the Package Deal, the EU "refrained from advocating for a fast-lane for conservation tools. That is, the EU avoided requesting work on EIAs and MPAs as a short-term measure". See: IISD, Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May - 3 June 2011 (6 June 2011) ENB 25(70) http://www.iisd.ca/download/pdf/enb2570e.pdf, p.7.

185. See EU Presidency statement of 13 February 2006, http://www.eu-un.europa.eu/articles/en/article _5691_en.htm.

186. E.g. the Habitats Directive, which aims to ensure the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

- Are parties to a number of regional agreements, within which the establishment of MPAs in ABNJ has increasingly become an important issue.[187]

However, implementation and management of regionally-established MPAs in ABNJ is impeded by the absence of international recognition, their subsequent unenforceability against third Parties, and the difficulty of coordinating and cooperating with other competent organisations to adopt management measures (see Section 4.3). The EU therefore sought to advance these issues at the international level and obtain recognition for existing regionally designated MPAs through a new agreement.

The EU had initially proposed various short-term measures relating to MGRs, EIA and capacity building,[188] but by 2008 it had become clear that widespread support for negotiations would likely not be attained without concrete proposals, particularly on capacity building and technology transfer. The EU therefore suggested several approaches including:[189] (i) the development of international guidance on the use of MGRs in ABNJ; (ii) the sharing of information and knowledge resulting from research on MGRs collected in ABNJ and the increased participation of researchers from developing countries in relevant research projects; (iii) the possible establishment of a multilateral system for MGRs in ABNJ for facilitating access to MGR samples and sharing of benefits (inspired by that developed under the International Treaty on Plant Genetic Resources for Food and Agriculture —ITPGRFA). In 2010, the EU further proposed the integration of the question of fair and equitable benefit sharing for MGRs in ABNJ into a potential new agreement.[190]

Following the compromise reached with the G77 in agreeing on the Package Deal in 2011, the EU supported consideration of the establishment of an ABS regime for MGRs from ABNJ. Without compromising its initial position on the application of the CHM principle, the EU nonetheless agreed that a purely "first come, first served" approach to MGRs is not appropriate. It expressed willingness to discuss ABS, including both monetary and non-monetary benefits.[191] This pragmatic approach, coupled with an agreement to include capacity building and the transfer of marine technology in the Package Deal,[192] was likely essential in securing the support of G77/China for opening negotiations for a new instrument. During the PrepCom meetings, the EU continued to advocate for a pragmatic approach with regards to MGRs and ABS, attempting to shift the debate from principles to practicalities.

During the early discussions, impact assessment was not included in the proposals made by the EU for a new agreement. The EU instead sought to address gaps in the existing legal framework through short-term actions, mentioned above. In 2008, the EU indicated that EIA and SEA "can help to assess and control human impacts on marine biodiversity in ABNJ"[193] and further proposed to develop guidelines, either through the BBNJ Working Group or through the CBD, "for the implementation of EIA/SEA for activities which have a potential to adversely impact marine biodiversity beyond national jurisdiction, including the requirement for prior notification of such planned activities". The EU also suggested the establishment of a mechanism to provide for regular assessments of the state of the marine environment and to give advice with respect to the individual and cumulative impacts of human activities and emerging threats.[194]

187. E.g. within the frameworks of the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic and the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR Convention).

188. The proposals for short-term actions included options for advancing capacity building and transfer of marine technology elements through: the participation of scientists from developing countries in relevant research projects; the establishment of a UN programme of cooperation in the development and transfer of marine technology to be applied on a regional level; specific training for EIAs, MPAs, climate change mitigation and adaptation; and support for research activities in areas of interest for developing countries.

189. EU Presidency Statement, United Nations Sixth Committee: Agenda item 5(d) – Genetic resources beyond areas of national jurisdiction, http://www.eu-un.europa.eu/articles/en/article_7847_en.htm.

190. See, IISD, Briefing Note on UNGA WG on Marine Biodiversity (8 February, 2010) http://www.iisd.ca/oceans/marinebiodiv3/brief/brief_marinebiodiv3.pdf, p.5.

191. IISD, Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May - 3 June 2011 (6 June 2011) ENB 25(70) http://www.iisd.ca/download/pdf/enb2570e.pdf, pp.3-4. The EU wanted to reflect all the possibilities included in Annex I of the Nagoya Protocol of the CBD.

192. This is linked to the MGR discussion, as most developing countries do not benefit from the technology and human expertise necessary to carry out research on the genetic resources found in ABNJ. However, the EU intended capacity building and technology transfer to relate also to the other elements of the package, namely ABMTs and EIA.

193. EU Presidency Intervention, United Nations 6th Committee: Agenda item 5(a) – The environmental impacts of anthropogenic activities on marine biological diversity beyond areas of national jurisdiction (28 April 2008) http://www.eu-un.europa.eu/articles/en/article_7846_en.htm.

194. Ibid. Voluntary guidelines for the consideration of biodiversity in environmental impact assessments annotated specifically for biodiversity in marine and coastal areas, including in ABNJ, were adopted by the Conference of the Parties to the CBD in 2012 (CBD COP 11, Decision XI/18 on Marine and Coastal Biodiversity). These guidelines are limited to a certain amount of technical and scientific advice and do not

During the PrepCom meetings, the EU suggested that global rules, procedures and thresholds could be developed under a new agreement, along with requirements for access to information, public notification, consultation with relevant stakeholders and a requirement for decision-makers to take into account the results of EIAs.[195]

With regards to governance, the EU proposed the creation of a global mechanism for MPAs, recognising that: "In line with the principles of international law, it will be the responsibility of States Parties to the Implementing Agreement to implement the management measures established in the adopted management plan with respect to activities and processes under their jurisdiction which impact on the conservation objectives of an MPA. Where a State Party is a Party to a relevant competent organisation with a competence to manage such activities, the State Party should also promote, support and agree to necessary measures within that organisation."[196]

The EU further noted that nothing in a new agreement should "prevent States Parties from adopting additional and stricter measures […] with regard to their vessels or with regard to activities and processes under their control and jurisdiction."[197]

6.1.2. The G77/China and Mexico: promoting a balanced package[198]

The G77 is a large and varied group, whose 134 Members may also speak separately and submit their individual views for consideration. Thus the G77 did not necessarily maintain unified positions on all issues. During the Working Group meetings, some G77 States made strong statements on the importance of conservation, while others sought to extend the stewardship aspects of the CHM principle more broadly to all biodiversity in ABNJ. China has also expressed views that differ from those of the G77, despite generally aligning itself with G77 positions. Nonetheless, the G77/China presented a unified front on certain key issues, in particular expressing their shared view that the status quo is not acceptable and that a new agreement is essential for the equitable and sustainable use of marine resources.

The group has often expressed their understanding that the CHM principle applies to MGRs found in the Area.[199] Statements to this effect have referred to the CHM principle as encompassing: (i) a principle of non-appropriation; (ii) equitable considerations in particular of the interests and needs of developing States, including the equitable sharing of monetary and non-monetary benefits, transfer of technology and capacity building; and (iii) peaceful use of the designated area and its resources (Wolfrum 2009). However, as South Africa highlighted in the UNGA: "[T]he common heritage of mankind principle is not solely about benefit sharing. [It] is just as much about conservation and preservation. The principle is about solidarity; solidarity in the preservation and conservation of a good we all share and therefore should protect. But also solidarity in ensuring that this good, which we all share, is for all our benefit" (Tladi, 2015).

The 2011 Package Deal itself did not explicitly mention the issues surrounding the application of CHM, but instead dealt with "marine genetic resources, including questions on the sharing of benefits".[200] During the PrepCom meetings, it appeared that members of the G77/China group were willing to allow for a certain level of flexibility on the legal status of MGRs, so long as a suitable ABS regime is adopted and strong advances are made on capacity building and technology

provide guidance on legal and governance issues (see Druel, 2013).

195. Written submission of the EU and its Member States: Environmental Impact Assessments (15 February 2017) http://www.un.org/depts/los/biodiversity/prepcom_files/rolling_comp/EU_Written_Submission_on_Environmental_Assessments.pdf.

196. Written submission of the EU and its Member States: Area-based management tools, including MPAs (14 December 2016) http://www.un.org/depts/los/biodiversity/prepcom_files/rolling_comp/European_Union-area-based_management_tools.pdf

197. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_files/Chair_non_paper.pdf, p.55.

198. For simplicity, this grouping is referred to here as the G77. Mexico, while not part of the G77, has frequently aligned itself with the G77's position calling for the opening of negotiations for a new agreement. In 2011, Mexico joined the EU and the G77/China in reaching the common position that led to the Package Deal.

199. A claim frequently restated, e.g. at the 2004 meeting of the ICP 2004 ICP on "New Sustainable Uses of the Oceans, including the Conservation and Management of the Biological Diversity of the Seabed in Areas beyond National Jurisdiction" and at the 2012 BBNJ Working Group meeting (G77/China statements to BBNJ Working Group, 7 May 2012, http://www.g77.org/statement/2012.html#may).

200. Tladi (2015) notes: "In the interest of moving beyond what might be termed ideological differences, there appears to be an emerging trend to avoid the term [CHM] in favour of a more pragmatic approach. Such an approach purports to give effect to the demands of adherents of the [principle] but relies on the term 'benefit sharing' […] The result of this search for consensus has been an almost imperceptible shift in the deliberations of the Working Group and the UNGA away from discussions based on the [CHM] to that of benefit sharing."

transfer. Indeed, there now seems to be a general agreement that recognition of MGRs as CHM is not a prerequisite for the establishment of benefit-sharing obligations,[201] nor for the possible inclusion of principles that could apply to ABNJ in general (e.g. stewardship, intergenerational equity and solidarity).[202]

Recent discussion of these issues has therefore focused on the goal of active and equitable sharing of benefits arising from MGR exploitation in the Area. The G77 has argued that an equitable ABS regime would not only entail the establishment of a benefit-sharing mechanism, whether monetary or non-monetary, but also the enhancement of capacity building and the transfer of marine technology in order to facilitate access to these resources. In this regard, the G77 has underlined that:[203] "access to genetic resources [...] and the exclusive exploitation by a few have serious global economic and social implications"; "transfer of technology is an essential tool for capacity-building in the sphere of marine science"; and that there is the "urgent need for a continued and enhanced participation of scientists from developing countries in marine scientific research in the Area".

The group's early statements on conservation issues were generally less detailed than those on MGRs, though they regularly reaffirmed the importance of these issues as an integral part of the Package Deal.[204] With respect to ABMTs, a point of contention for some G77 States has been the adoption of measures to conserve marine biodiversity in ABNJ at the regional level through RFMOs and Regional Seas Programmes. A number of G77 States, especially some Latin American Members that are not party to the UN Fish Stocks Agreement (UNFSA), have expressed concerns with regard to the role of RFMOs in ABNJ. Some have argued that certain provisions of the UNFSA amend UNCLOS and are therefore inconsistent with it; in particular provisions on compatibility and high seas enforcement by non-flag States.[205] Some coastal States have also expressed reluctance to accept that RFMOs are the preferred vehicles for the conservation and management of straddling and highly migratory fish stocks, suggesting that coastal States should be given preferential status within these organisations (Molenaar, 2011). Others have argued that RFMOs represent the views of a small number of States with an economic interest in the resource and may not reflect the wider interests of the global community. Notwithstanding these concerns, many G77 and Latin American States participate in various RFMOs, though the role of RFMOs, the way they function, and the rights of coastal States remain sensitive issues.

Similarly, some of the G77 States have expressed concerns with regard to the role played by Regional Seas Programmes in the conservation of marine biodiversity in ABNJ.[206] Upon the designation of the OSPAR MPAs in 2010, for example, some noted that the MPAs represented welcome progress at the regional level,[207] while others expressed concerns regarding their legitimacy and potential role in the future establishment of MPAs in ABNJ.[208]

201. This is evidenced, for example, by the Nagoya Protocol or the FAO International Treaty on Plant Genetic Resources for Food and Agriculture.

202. See, e.g. statement by Dr Dire Tladi, Legal Counsellor, South African Permanent Mission to the UN General Assembly on Oceans and the Law of the Sea, 10 December 2010, http://www.southafrica-newyork.net/speeches_pmun/view_speech.php?speech=2017390. "[T]he common heritage of mankind principle is not solely about benefit-sharing. [It] is just as much about conservation and preservation. The principle is about solidarity: solidarity in the preservation and conservation of a good we all share and therefore should protect. But also solidarity in ensuring that this good, which we all share, is for our benefit." See also Tladi (2015).

203. G77/China statements to BBNJ Working Group, 7 May 2012, http://www.g77.org/statement/2012.html#may.

204. E.g. "all aspects of the issue: conservation, [etc.] are all integral parts of a specific legal regime to be negotiated" and in 2012: "Conservation is one of the integral elements of the issue". See G77/China statements to BBNJ Working Group, 1 June 2011 (http://www.g77.org/statement/getstatement.php?id=110601) and 7 May 2012 (http://www.g77.org/statement/2012.html#may).

205. For example, Argentina has expressed concern over statements made by some delegations seeking to legitimize regional fisheries management mechanisms whose activities Argentina sees as being beyond their mandate, or which assumed authority over vessels flying the flags of countries that are not Party to those organizations. Argentina has voiced similar concern regarding efforts to establish regional regulations over marine biodiversity in ABNJ prior to the development of an ILBI. UN, Adopting Two Texts on Oceans, Seas, General Assembly Also Tackles Sustainable Management, Conservation of Marine Life beyond National Jurisdiction (5 December 2017) https://www.un.org/press/en/2017/ga11985.doc.htm.

206. As noted only 4 Regional Seas currently have a mandate covering ABNJ, and the EU has been promoting the establishment of MPAs networks in at least two of them - the OSPAR Commission and the CCAMLR.

207. For example, during the 2011 meeting, South Africa has "pointed to progress at the regional level, reiterating that a possible legal basis for global action on MPAs should be part of a package including benefit sharing. Brazil noted the need for a legal basis to provide details on the establishment and management of MPAs. Chile stressed the need for guidelines on a common methodology on MPAs". See IISD, Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May - 3 June 2011 (6 June 2011) ENB 25(70) http://www.iisd.ca/download/pdf/enb25702e.pdf.

208. For example, in 2012 Argentina stated: "regional undertakings cannot be seen as a way forward on MPAs". See IISD, Summary of the Fifth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 7-11 May 2012 (14 May 2012) ENB 25(83) http://www.iisd.ca/

Many G77 States have spoken in favour of the creation of a new global governance mechanism during the PrepCom meetings, rather than advocating regional or sectoral approaches.[209] The G77/ China has also repeatedly drawn attention to the constraints and interests shared by the majority of developing states. Concerning impact assessment, for example, the G77/ China stressed that procedures must not be cumbersome for developing states.[210]

6.1.3. Africa, the Caribbean, and the Pacific: strong voices from diverse perspectives

The June 2014 and January 2015 meetings of the BBNJ Working Group saw a number of regional groups become engaged in the discussions and speak out more strongly in favour of a new agreement (Rochette *et al.,* 2015). The African Union noted that current gaps in the legal regime for ABNJ, particularly on ABS, mean that technologically advanced States can exploit marine resources without taking on a concomitant responsibility to protect the environment. CARICOM argued that a binding agreement is the only feasible solution for ensuring that developing States benefit from conservation and sustainable use of resources. The Pacific States called for urgent action to be taken to conserve marine biodiversity in ABNJ.

By the first meeting of the PrepCom in 2016, the African Union, CARICOM and the Pacific Small Island Developing States (PSIDS) had come to occupy a prominent position in the discussions, with statements advocating for their interests, noting their dependence on the ocean and its ecosystems, considerable capacity limitations, and a desire to ensure the conservation and sustainable use of ABNJ. These groups, as well as individual States, have taken an increasingly proactive approach and have contributed their ideas on a variety of topics. In particular, they have stressed the need for advancing capacity building and technology transfer and have argued that provision should be made for groups such as LDCs, SIDS, LLDCs, African states and States particularly vulnerable to climate change.

These States have also often drawn attention to issues that were previously somewhat overlooked in the discussions. The SIDS, for example, called for climate change impacts to form part of the consideration for EIAs and MPAs, and have proposed to include consideration of climate change as a guiding principle for the new agreement.[211] A number of PSIDS have also sought to highlight that many of their nations have longstanding and unique traditional cultures that are inextricably tied to the ocean, which provides the basis of their understanding of their origins, spirituality and ways of life.[212] Such communities play a key role in the management of globally significant migratory species, whose life histories and habitats may straddle EEZs and ABNJ. In this respect they have highlighted how traditional knowledge and practices may be relevant to global ocean governance discussions.

6.2. Facilitators: seeking the middle ground and mediating compromise

6.2.1. Australia & New Zealand

While both Australia and New Zealand have been wary of undermining existing organizations, they have nonetheless been strong proponents of a new agreement and have played an important role in facilitating the process. Australia and New Zealand have advocated for a hybrid model of governance, whereby the ILBI sets global standards and strengthens existing regional and sectoral organizations. They are not opposed to establishing new bodies or mechanisms, as long as a clear gap in the governance framework is addressed. Both Australia and New Zealand have shown overarching concern for ecological issues and have highlighted lessons learned from domestic experiences. Discussing EIAs, both States have agreed that they should be required for activities above a certain threshold and that no activity should be exempt.

Australia and New Zealand have taken a pragmatic approach to MGRs, joining the EU in their call to move past the debate on principles, and instead focus on the practicalities of an ABS mechanism, which could balance the interests of all

vol25/enb2583e.html/.

209. IISD, Summary of the first session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 28 March - 8 April 2016 (11 April 2016) http://www.iisd.ca/oceans/bbnj/prepcom1/, p.9.

210. IISD, Summary of the second session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 26 August - 9 September 2016 (12 September) http://www.iisd.ca/oceans/bbnj/prepcom2/, p.9.

211. IISD, Summary of the fourth session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 10 - 21 July 2017 (24 July 2017) http://enb.iisd.org/oceans/bbnj/prepcom4/, p.7.

212. The Federated States of Micronesia, for example, has championed the need to acknowledge and operationalize the traditional knowledge of indigenous peoples and local communities and has insisted on the role of adjacent coastal States, as well as the need to respect existing measures. UN, As Intergovernmental Conference on Sustainable Use of Marine Biodiversity Begins, Speakers Stress Binding Treaty Critical in Protecting World's Oceans (16 April 2018) https://www.un.org/press/en/2018/sea2069.doc.htm.

parties involved. They want to ensure open access and prevent stifling scientific development, but also acknowledge the need for benefit sharing.

6.2.2. Canada

Canada initially expressed doubts as to the potential added-value of a new instrument, but subsequently suggested that an ILBI could play a valuable role in facilitating consultation, coordination and communication between relevant organizations and bodies.[213] At the organizational meeting, Canada noted the need to "leave the PrepCom dynamic behind" in order to move into an "ILBI development mode".[214]

Concerning MGRs, Canada has supported developing a sui generis regime that is practical, workable and "will address the views and concerns expressed by all sides."[215] Canada has suggested that any benefit-sharing regime should emphasize capacity-building opportunities, such as access to scientific research vessels destined for the high seas, educational opportunities and training programs, and increase accessibility to marine genetic resources in areas beyond national jurisdiction. [216]

On EIAs, Canada has noted that existing internationally agreed standards, such as those found in the Espoo Convention,[217] could provide the starting point for discussions on this topic, particularly in considering relevant definitions and information provided in the EIA reports.[218] Nonetheless, Canada has argued that States should retain final decision-making authority, though cooperation may be needed to ensure that assessments are effective.[219] In stressing the need to base management on the use of best available science, Canada has highlighted the work done by the CBD to describe EBSAs and noted that this may be helpful in identifying priority biodiversity areas.[220]

6.2.3. Norway

Norway, a party to the OSPAR Convention, often highlighted existing regional initiatives and had expressed doubts about the need for a new instrument in the first BBNJ Working Group meetings. By 2015, however, Norway expressed its support for the development of a new agreement and set out some elements on which it saw a convergence of views. Norway deemed the negotiation of an ILBI an opportunity to "strengthen and develop regional cooperative mechanisms, particularly regional seas conventions building on UNFSA."[221] Norway has also noted that an ILBI could indirectly advance conservation and sustainable use by obliging States to pursue the objectives of an ILBI in all relevant bodies to which they are a party.[222]

With respect to MGRs, Norway offered fairly detailed views during the PrepCom meetings and offered pieces of draft text for consideration. Norway highlighted the need to ensure free and sustainable access to genetic materials and to establish an ABS mechanism. It also proposed the inclusion of a clearing-house mechanism, which would require flag States to report on accessed genetic material and potentially provide a sample to a public collection. Norway has expressed its aspiration to establish a "hybrid mechanism to bring the best elements of all existing instruments into a functional whole".[223] Norway also suggested the establishment of ABNJ research programmes with the participation of developing states, inspired by the ITPGRFA,[224] and to "integrate capacity building measures in the benefit-sharing mechanism" by building on the existing relevant provisions of UNCLOS.[225]

6.3. Reluctant to negotiate a new agreement: active and influential participants

A few States have expressed reluctance to negotiate a new agreement. These States have strongly opposed the regulation of MGRs, reflecting the view that access to, and exploitation of, MGRs is part of the suite of high seas freedoms. A number of

213. Ibid., p.19 and p.34.

214. IISD, Summary of the Organizational Meeting for the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (16-18 April 2018) http://enb.iisd.org/oceans/bbnj/org-session/brief/bbnj_org_session.html.

215. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_files/Chair_non_paper.pdf, p.20.

216. Ibid., p.30.

217. Convention on Environmental Impact Assessment in a Transboundary Context (1991, entered into force in 1997).

218. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_files/Chair_non_paper.pdf, p.62.

219. Ibid., p.63.

220. Ibid., p.41.

221. Ibid., p.20.

222. Ibid.

223. Ibid., p.30.

224. Ibid., p.25.

225. Ibid., p.30.

States that flag vessels engaged in fishing in ABNJ have argued that existing regulatory frameworks are sufficient to ensure conservation and sustainable use, such that any new body or management process would almost certainly entail undermining or duplication of existing mandates.

In bringing forward these arguments, these States have sought to demonstrate that a new agreement is not necessary and would not add value to the existing governance landscape. It has been suggested that economic and strategic concerns may be relevant factors in these positions and, "while the State interests adversely affected by any proposal are small in number, this is balanced by the relative strength and influence of the States concerned" (Kaye, 2004). Thus, while no State ultimately sought to impede the advancement to an IGC, it may nonetheless be expected that States that have previously expressed reluctance may still harbour concerns that they wish to see addressed in the negotiations.

6.3.1. US

The US has not ratified UNCLOS,[226] but is a UNFSA Party and a member of many RFMOs.[227] The US has been an active participant during the PrepCom discussions. It has argued that the principle of freedom of the high seas applies to MGRs in ABNJ, cautioning that a new legal regime on MGRs would impede research and development.[228] While opposing monetary benefit sharing, the US has been open to discussing non-monetary forms of benefit sharing.[229] It should be noted that the US has made a distinction between pure scientific research, which it agrees is regulated through UNCLOS, and commercial research or bioprospecting, which it has argued is not covered.

The US has expressed its disappointment with the outcome of the PrepCom process, in particular that it had not fulfilled its mandate of enabling delegations to negotiate consensus-based elements of the draft text of an ILBI. The US delegation was therefore unable to support the resolution to open negotiations, but nonetheless chose not to block consensus.[230]

6.3.2. Japan

Japan has strongly expressed its view that the CHM principle does not apply to MGRs and has warned that private sector investment could be disincentivised by any additional regulation. Japan has cautioned against monetary benefit sharing and has argued that any benefit sharing provisions should not apply to derivatives or to fish exploited as a commodity.[231] Japan has often expressed concerns regarding the integration of a new agreement with existing regional approaches and fisheries bodies, stressing that any body created by a new agreement should not be given a mandate to instruct or override relevant existing bodies. It has therefore expressed its preference for a simple and cost-effective institutional structure that minimises the potential for duplication.

While Japan has expressed openness to the development of ABMTs, including MPAs, they have argued that any measures should make provision for sustainable use and should be time-limited, terminating once the agreed objective has been achieved. Regarding EIAs, Japan has argued that a new instrument should respect existing EIA processes (e.g. by the IMO or ISA), such that EIA should not be required for an activity conducted under guidelines of existing instruments or bodies.[232]

Despite these concerns, Japan joined the majority of States in co-sponsoring the resolution opening the negotiations and expressed that they look forward to contributing to the development of a well-balanced, effective and universal ILBI that is grounded in science and facilitates cooperation with existing frameworks and instruments.[233]

226. Various US Presidents have made several attempts to gain the Senate's advice and consent, but the required two-thirds majority has never been attained. The US appears to apply many of the provisions of the Convention and recognises them as customary international law. A number of compromises were made during the UNCLOS negotiations in order to assuage the concerns of the US, in particular regarding mandatory technology transfer, production policy and decision-making under Part XI of UNCLOS. This led to the negotiation of the Part XI Agreement, which contains an unusual provision implicitly guaranteeing a seat to the US in the Council of the ISA (Section 3, Article 15, of the Annex to the 1994 Agreement guarantees a seat in the Council to "the State, on the date of entry into force of the Convention, having the largest economy in terms of gross domestic product").

227. It is not necessary to be a Contracting Party to UNCLOS in order to become a Party to the UNFSA or to RFMOs.

228. IISD, Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May - 3 June 2011 (6 June 2011) ENB 25(70) http://www.iisd.ca/download/pdf/enb2570e.pdf.

229. See e.g. IISD, Summary of the third session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 27 March - 7 April 2017 (10 April 2017) http://enb.iisd.org/oceans/bbnj/prepcom3/, p. 15.

230. UN, Adopting Two Texts on Oceans, Seas, General Assembly Also Tackles Sustainable Management, Conservation of Marine Life beyond National Jurisdiction (5 December 2017) https://www.un.org/press/en/2017/ga11985.doc.htm.

231. IISD, Summary of the Fourth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 31 May - 3 June 2011 (6 June 2011) ENB 25(70) http://www.iisd.ca/download/pdf/enb2570e.pdf, p.6.

232. Ibid., p.65.

233. IISD, Summary of the Organizational Meeting for the Intergovernmental Conference on an International Legally

6.3.3. Iceland

Iceland has often highlighted the existing efforts of regional organisations, and its statements appear to show a preference for strengthening existing agreements, rather than creating new frameworks. Iceland has expressed opposition to the opening of negotiations and concerns regarding the interaction of any new instrument with existing fisheries regulation. Iceland has acknowledged legal gaps in the current framework with regards to MGRs. At the organizational meeting, Iceland said it was looking ahead to "years of cooperation on this issue", underscored the importance of working on the basis of consensus, and noted that negotiating a successful, universal instrument requires patience and time.

6.3.4. South Korea

South Korea has also expressed concerns regarding the treatment of MGRs in a new agreement, in particular arguing that: the CHM principle does not apply and that a distinction should be made between fish targeted for biodiscovery and fish exploited as a commodity. Korea has furthermore argued that there are no major regulatory gaps to be filled, particularly in relation to fisheries.

6.3.5. Russia

Russia has argued for the negotiations to be limited to clear legal gaps and consensus issues, which it has said exclude EIA and fisheries. Russia has also stated that it is "opposed to the creation of new instruments"[234] and that it may not be possible for a new agreement to coexist with existing regional approaches. In its submission to the Chair in April 2017, Russia restated its position that any issues related to ABMTs, including MPAs, should be addressed within existing international mechanisms, expressing its concern that proposals for a new body would result in the duplication of mandates and terms of reference of existing international mechanisms.

Russia expressed disappointment at the outcome of the PrepCom process, stating: "We are convinced that the PrepCom is not ready for an IGC. We do not see a consensus being formed on the most serious issues".[235] During the April 2018 organizational meeting, Russia stressed that although the UN is moving towards formal negotiations, "we are not prepared"[236] as the PrepCom had not been able to identify consensus-based elements for an ILBI and that resolution 72/249 to open negotiations lacks clarity on a number of issues (including on participation, decision making and modalities for the preparation of a zero draft).

Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (16-18 April 2018) http://enb.iisd.org/oceans/bbnj/org-session/brief/bbnj_org_session.html. UN, Adopting Two Texts on Oceans, Seas, General Assembly Also Tackles Sustainable Management, Conservation of Marine Life beyond National Jurisdiction (5 December 2017) https://www.un.org/press/en/2017/ga11985.doc.htm.

234. IISD, Summary of the Fifth Meeting of the Working Group on Marine Biodiversity Beyond Areas of National Jurisdiction: 7-11 May 2012 (14 May 2012) ENB 25(83), http://www.iisd.ca/download/pdf/enb2583e.pdf.

235. IISD, Summary of the fourth session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 10 - 21 July 2017 (24 July 2017) http://enb.iisd.org/oceans/bbnj/prepcom4/, p. 5.

236. IISD, Summary of the Organizational Meeting for the Intergovernmental Conference on an International Legally Binding Instrument under the UN Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, 16-18 April 2018, http://enb.iisd.org/oceans/bbnj/org-session/.

7. DELIVERING AN INTERNATIONAL LEGALLY BINDING AGREEMENT

The following sections are intended to provide a brief introduction to some of the issues that will be at the core of the negotiations.

7.1. Marine Genetic Resources & Access and Benefit Sharing

Box 11. Key issues relating to MGRs

The legal status of marine genetic resources While convergence appears to be emerging regarding the need to take a pragmatic approach that focusses on the practicalities of ABS, the question of the legal status of MGRs may nonetheless continue to be a point of contention at the IGC.

The complexity of biodiscovery The road from sampling to commercialisation may take anywhere from 5-20+ years and requires huge investments in research and development, yet most research will not result in a commercial product or any financial benefit. Any new legal or institutional mechanisms will have to account for a long and complex chain of discovery, wherein: there is often no clear delineation between pure MSR and bioprospecting; MGRs found in ABNJ may also be found within national jurisdictions; and products may ultimately be developed from derivatives of MGRs.

The form of benefit sharing While many have welcomed the discussion of pragmatic approaches to ABS, a number of questions remain. Will benefit sharing be mandatory or voluntary? Will benefits include monetary benefits? How can an ILBI ensure enforcement of benefit-sharing provisions?

Striking a balance Negotiations for a new agreement will have to ensure that benefits accrue to all, while also not burdening MSR with regulations that could impede science.

The most vociferous disagreement surrounding MGRs has been whether to apply the Common Heritage of Mankind (CHM) or the freedom of the high seas as the governing principle. While some States defend the CHM approach, others warn that the resulting financial and administrative burdens could stall scientific research to the detriment of all. To circumvent the stalemate, others have proposed a pragmatic approach focused on drawing up a concrete ABS mechanism based on equitable principles.

The final report of the PrepCom to the UNGA indicates that there was general convergence that an ABS regime will need to cover three issues: (i) access to the resources; (ii) benefit sharing, including objectives, principles and approaches to guide benefit sharing as well as modalities; and (iii) monitoring of the utilization of MGRs in ABNJ. The Report of the PrepCom to the UNGA records general agreement that the objectives of benefit sharing would contribute to the conservation and sustainable use of marine biodiversity in ABNJ and build the capacity of developing countries to access and use MGR. Linking a benefit-sharing regime with the other elements of the Package Deal, the report also states that principles for benefit sharing should include being beneficial to current and future generations and promoting marine scientific research and research and development.[237]

However, there is still no agreement on how MGRs should be defined. Disagreement continues over whether to include derivatives, and over whether to differentiate between fish as MGRs and fish as a commodity (or even exclude fish completely). Moreover, it remains to be determined whether ex situ, in silico and in vitro MGRs are included in the definition,[238] and therefore within an ABS mechanism.

The regulation of *in situ* access raises questions not only of equity, but also of geographic scope[239] and sustainability, while facilitation of any form of access (whether *in situ, ex situ* or *in silico)* could provide a clear benefit to the international scientific community by promoting scientific research. Addressing *in vitro* access points to future challenges for governing MGRs: at present there are many technical and financial barriers to generating molecules of interest *in vitro* or synthesising compounds in a lab, however rapid advances in science mean this may soon be feasible. This will make it challenging to trace MGRs through long and complex R&D chain.

With regards to benefit sharing, both monetary and non-monetary benefits have been discussed.[240] It has been argued that the monetary benefits from the development of commercially viable products from MGRs should be distributed on a fair and equitable basis. Key procedural questions

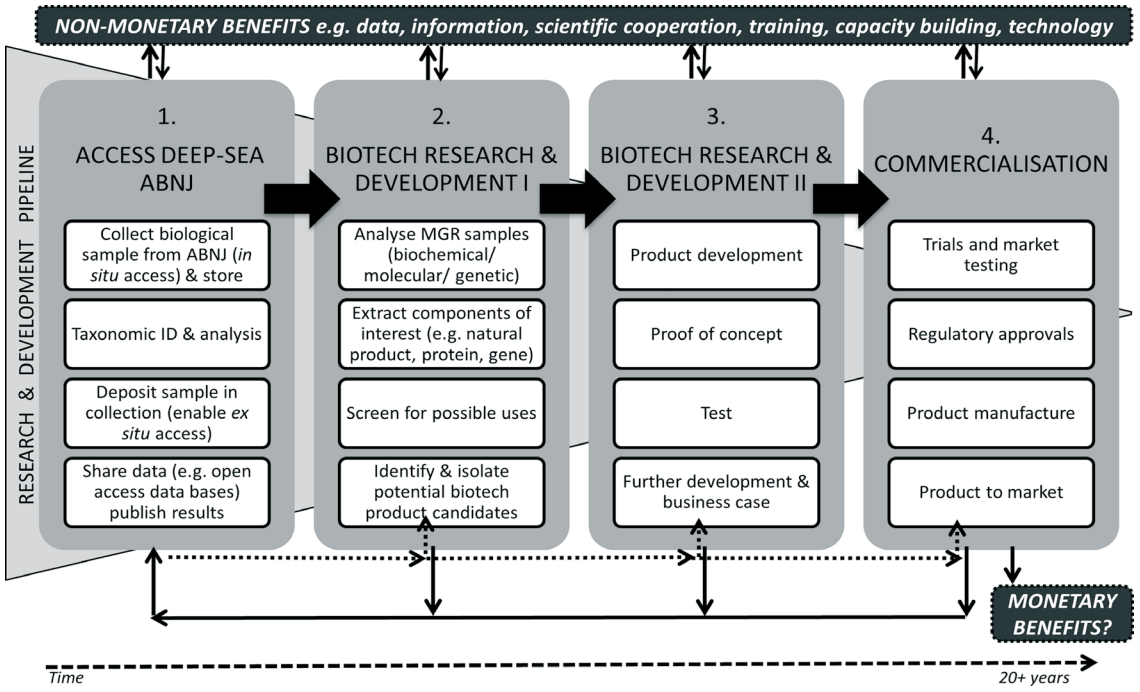
237. Report of the Preparatory Committee established by General Assembly resolution 69/292: Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (31 July 2017) http://www.un.org/ga/search/view_doc.asp?symbol=A/AC.287/2017/PC.4/2.

238. In terms of regulating access to MGRs, a distinction is generally made between *in situ, ex situ, in silico*, and *in vitro* access. *In situ* refers to samples of MGRs collected in their natural setting, while *ex situ* refers to samples previously collected in ABNJ and subsequently stored in "biorepositories". *In silico* refers to access to any knowledge associated with the MGRs, such as observational or experimental data and other findings. *In vitro* refers to MGRs that are generated in a laboratory using *in silico* data.

239. Sampling takes place in both the Area and the water column, while some resources are "transboundary", i.e. existing in and migrating between both maritime areas. MGRs from both spaces should be covered by an ABS system.

240. The Nagoya Protocol provides indicative lists of monetary and non-monetary benefits (Annex 1).

Figure 24. Illustrative process of biodiscovery involving MGR from ABNJ



Source: Harden-Davies, 2017a

for monetary benefit sharing would concern the trigger for benefit sharing, the blurred distinction between commercial and non-commercial research and development, and the difficulty of traceability.[241] Options raised to address some of these concerns include an upfront payment for access, potentially appropriate where there is a clear commercial intent, or payments at various stages along the R&D chain. At the same time, fees could be charged to acquire MGR samples from *ex situ* collections, or for access to *in silico* knowledge for commercial purposes. Some form of trust fund for ABNJ could be established to administer the monetary benefits on behalf of the international community.

During the PrepCom meetings it became clear that some States are strongly opposed to monetary benefit sharing, in line with their opposition to the CHM principle, and fear that additional regulation might disincentivize Marine Scientific Research (MSR) and investment. The sharing of monetary benefits is further complicated by the high cost of obtaining MGRs in ABNJ and the long route to developing a commercial product, thus the most direct benefits from MGRs are likely to be non-monetary (Broggiato *et al.*, 2014). Consensus has begun to emerge between developed and developing nations regarding the desireability of some form of non-monetary benefit sharing. UNCLOS already envisages international cooperation on MSR,[242] publication and dissemination of results,[243] and promotion of data flow and knowledge transfer.[244] These basic provisions could provide the basis for further development of non-monetary benefit-sharing obligations for MGRs.

Elements of the existing multilateral ABS approach under the ITPGRFA, which establishes a common pool of resources, could be adapted to the ABNJ context and provide a starting point for advancing the discussions on this issue.[245] In particular its development of standard material transfer agreements, differentiated and flexible access rights and benefit-sharing obligations, and the regulation of intellectual property rights may be of interest.

241. In practice, sampling cruises in ABNJ tend to be non-commercial, or at least their objectives are not solely or primarily commercial. This makes them difficult to distinguish and therefore difficult to ensure that the appropriate remunerations are sought at the point of access.

242. Articles 242 and 143.3(a).

243. Articles 244.1 and 143.3(c).

244. Articles 244.2 and 144.2.

245. It is nonetheless worth highlighting that the ITPGRFA is applicable to a limited set of 64 key food crops and forages, based on their importance for food security and the level of interdependence among countries. A new instrument for MGR in ABNJ, which will essentially apply to all marine life in ABNJ, will face some unique challenges in terms due to its wide scope and large scale.

7.2. Area-based management tools, including Marine Protected Areas

Area-based management tools (ABMTs) refer to the range of possibilities to manage all human activities occurring in a spatially defined area. During the PrepCom meetings, consensus began to emerge around the guiding principles: the precautionary approach, the ecosystem approach, the science-based approach and transparency. The PrepCom report does not distinguish between marine protected areas (MPAs) and other ABMTs. Though much of the discussion focussed on MPAs, there were also proposals on how the new instrument could encourage the adoption of sector-specific area-based management tools and wider cross-sectoral tools such as marine spatial planning (MSP).

7.2.1. MPAs

Box 12. Key issues for MPAs

Establishing an effective mechanism Negotiations will have to consider how MPAs will be proposed and designated, according to which criteria, and by which bodies, as well as how a potentially wide range of stakeholders might be involved.

MPA types, objectives and duration States have expressed differing views on how ambitious MPAs should be. An agreement could provide for large strictly protected marine reserves that aim to ensure long-term conservation and recovery of ecosystems, as well as time-limited management measures with specific conservation objectives and allowances for sustainable use.

Relationship with existing instruments and bodies Any new MPA process will need to provide sufficient global oversight to ensure that MPAs are effective, yet must also ensure that existing frameworks are not undermined.

Implementation, monitoring and review Negotiations will have to address potentially fraught questions regarding how MPAs will be implemented, such as who will take the necessary management measures and how MPAs will be monitored.

In order to ensure conservation and sustainable use of marine biodiversity, an ILBI must enable the designation and implementation of effective MPAs. The negotiations will have to consider a number of issues in the creation of MPAs in ABNJ, including: (i) criteria used to identify potential areas for protection; (ii) proposal and adoption of MPAs; (iii) implementation of management measures; and (iv) enforcement. There was general convergence that key procedural elements to be discussed will include: the process for coordination and consulation on proposals; mechanims for scientific assesment of proposals; and procedures for decision-making.

In order to identify appropriate areas, a new agreement could use existing scientific criteria (see Annex 5), e.g. those developed for the EBSA process and for the designation of sectoral ABMTs, criteria set out under regional agreements, or other designations developed by NGOs and scientific organisations.[246] States could also choose to develop new criteria under the ILBI.

In this regard, scientists have noted that high priority should be given to certain features in ABNJ, such as seamounts and active hydrothermal vent systems, which are highly vulnerable and require protection (Van Dover *et al.*, 2018; Watling & Auster, 2017). Scientists have also cautioned against limiting criteria to specific oceanographic features, as it is "mobile marine organisms that provide the structure-forming biomass and constitute 'habitat' in the open ocean", thus "for an ABNJ ILBI to offer effective protection to marine biodiversity it must consider habitats a function of their inhabitants and represent all marine life within its scope" (Maxwell *et al.*, 2017).

MPAs could be proposed by States, by a specific-body convened under the agreement, or by NGOs or organisations with State support (IUCN, 2015; Druel & Gjerde, 2014). Provisions may be needed to ensure that a dedicated scientific body considers proposals and that they are officially endorsed by a Conference of the Parties (COP) or competent organisational meeting (IUCN, 2015; Druel & Gjerde, 2014). It also has to be determined how to include input from other relevant global, regional and sectoral stakeholders. In addition, there is disagreement about whether MPAs should be adopted permanently, or whether they should be temporary arrangements.[247]

7.2.2. Other area-based management tools

Though the discussions regarding conservation have often focussed on MPAs, the Package Deal refers to "measures such as area-based management tools, including marine protected areas". States are therefore not limited to MPAs and may wish to consider how the ILBI can incorporate a broad range of possible options for achieving conservation and sustainable use. This could include the development of cross-sectoral measures, such as marine spatial planning (MSP), and the use of sectoral measures, such as: fisheries closures and other fisheries management measures;[248] vulner-

246. Such as Birdlife's Important Bird Areas and IUCN's Important Marine Mammal Areas (IMMAs).

247. This issue has also been a key point of contention in the CCAMLR process to establish MPAs in the Southern Ocean.

248. E.g. spatial and temporal fisheries closures or "refugia"

able marine ecosystem closures; designation of IMO Particularly Sensitive Sea Areas (PSSAs); and designation of ISA Areas of Particular Environmental Interest (APEIs).

Such measures taken in ABNJ could thereby support the implementation of in situ conservation, which is addressed in the CBD with provisions stating that Parties shall:[249]

- "Regulate or manage biological resources important for the conservation of biological diversity, with a view to ensuring their conservation and sustainable use";
- "Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas"; and
- "Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies".

A new agreement could build on existing sectoral measures and the CBD obligations by, for example, encouraging or placing obligations on Parties to: regulate or manage marine activities or resources important for the conservation of marine biological diversity in ABNJ; adopt measures to avoid or minimise adverse impacts of activities; and cooperate through existing bodies to adopt ABMTs for the purpose of conservation and sustainable use of marine biodiversity in ABNJ. The ILBI may also seek to improve the integration of biodiversity concerns into decision-making processes for existing sectoral ABMTs (IUCN Environmental Law Centre, 2013).

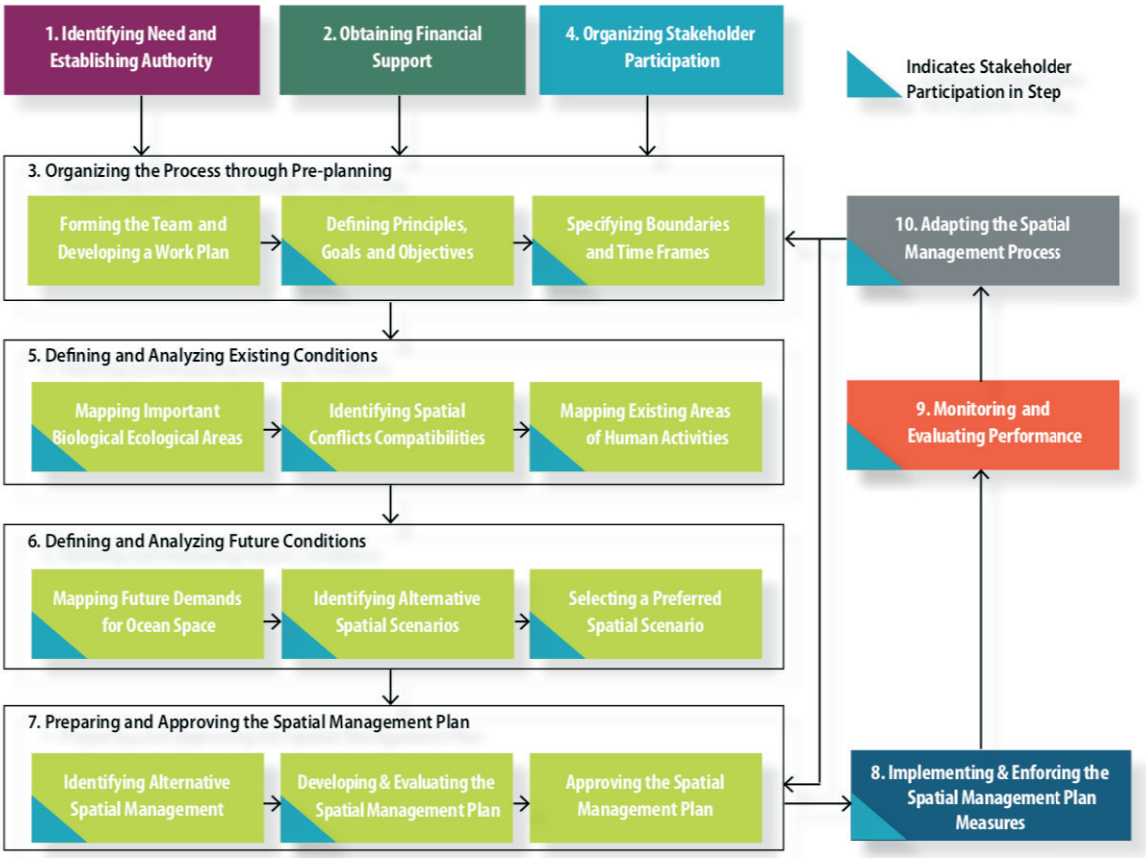
7.2.2.1. Marine spatial planning

Marine spatial planning (MSP) is one example of an ABMT that may be considered in the negotiations. Over the last decade, MSP has emerged as

established to limit biodiversity impacts of fisheries activities, protect vulnerable species, habitats and ecosystems, and to enhance resilience; spatial and temporal fisheries closures outside the boundaries of an MPA with a view to complementing and enhancing the effectiveness or ecological coherence of MPAs and protecting migratory corridors for vulnerable species; limiting deep water fishing effort or gear types in areas in or adjacent to known VMEs or in areas where VMEs are likely to be present in order to reduce the likelihood of further disturbance of VMEs or the ecosystems above the seabed; and use of other fisheries management measures, such as effort or gear restrictions.

249. Article 8 on In-Situ Conservation.

Figure 25. Indicative MSP process



Source: Ehler and Douvere, 2009

the leading concept for integrated marine planning and ecosystem-based management. It is defined as: "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, 2006).

The EU Directive[250] and the CBD guidance on MSP[251] may provide inspiration. IOC-UNESCO and the Directorate-General for Maritime Affairs and Fisheries of the European Commission (DG MARE) have also adopted a joint roadmap to accelerate MSP, highlighting the role of MSP for implementation of the UN Agenda 2030 for Sustainable Development (European Commission & IOC-UNESCO, 2017).

To contribute to the development of effective MSP in ABNJ, a new ILBI could include concrete provisions for: an authority with the mandate to oversee planning and implementation of MSP; a scientific or technical body or mechanism; mechanisms for funding to support collaboration between countries of different capacities; a framework for collecting, sharing, and updating scientific research and data, including principles for acknowledging and dealing with scientific uncertainty (Wright *et al.*, 2018).

7.3. Impact Assessment

7.3.1. EIA

The establishment of a new Environmental Impact Assessment (EIA) process "appears at first to be one of the less controversial issues" (Druel, 2013). Widespread domestic adoption of EIAs and apparent consensus on the need for further development of EIAs in ABNJ suggest that this element of the package could be the "low hanging fruit" of the negotiations. However, there is a wide range of options for establishing such a process for ABNJ (Wright, 2017a) and, while the PrepCom discussions saw convergence on some basic questions,[252] States are yet to near consensus on the more complex issues. For example, much attention was given to finding a common definition of EIAs and of SEAs, possibly building on the many existing standards (e.g. from the CBD, UNEP, the ISA or various regional conventions). However, there is little convergence on the threshold for an activity to require an EIA, whether some activities are to be exempted, how any new provisions on EIAs can account for transboundary and cumulative impacts, who is responsible for funding and conducting the assessment, and what the effect of an EIA should be.

Box 13. Key issues for EIA

The scope of an EIA process In particular, which activities are included in any obligation to conduct an EIA, what the threshold for conducting EIAs should be, and how to account for transboundary and cumulative impacts.

Responsibility for assessments Some national EIA systems assign responsibility to the project proponent, while others require the relevant government agency to manage the process. Existing international instruments vary: the CBD and Espoo Convention both provide for parties to establish their own procedures, whereas the UNGA bottom fishing resolutions place responsibility with RFMOs.

The effect of an EIA A new EIA process could have only an advisory character, with States ultimately deciding whether the proponent can go ahead, or States may agree that the ILBI should provide an international body with the authority to restrict activities where the EIA process shows that an activity is likely to impact the marine environment beyond a certain threshold.

Monitoring and review Post-decision monitoring is "the weakpoint of many EIA regimes [...] Without monitoring there can be no guarantee that conditions imposed by the decision-making body on the project proponent are being implemented" (Goldberg, 1992).

With regards to the process, some States have pointed out that EIAs and SEAs must not be cumbersome for developing states and the importance of capacity building has been stressed (Currie, 2014; Warner, 2012).[253] Some states have called for the inclusion of climate change impacts in assessments. Also raised during the PrepCom meetings was whether there should be special consideration, and concomitant notification requirements for certain States, such as coastal states adjacent to the ABNJ where an activity will take place, other "proximate" States, or States that will be especially affected by the proposed activity.

250. EU Directive 2014/89/EU.

251. Marine Spatial Planning in the Context of the Convention: A study carried out in response to CBD COP 10 decision X/29 (2012) CBD Technical Series No. 68, https://www.cbd.int/doc/publications/cbd-ts-68-en.pdf.

252. E.g. there is a need to establish a clearing-house mechanism to facilitate exchange of information; EIA should contribute to the conservation and sustainable use of marine biological diversity of ABNJ; and the EIA process should be transparent, including by ensuring the involvement of States and relevant stakeholders and by requiring the dissemination and public availability of assessment reports. 'Chair's Overview of the First Session of the Preparatory Committee' (2016); 'Chair's Overview of the Second Session of the Preparatory Committee' (2016).

253. IISD, Summary of the second session of the preparatory committee on marine biodiversity of areas beyond national jurisdiction: 26 August - 9 September 2016 (12 September) http://www.iisd.ca/oceans/bbnj/prepcom2/, p.9.

At the most basic level, an ILBI could reiterate and reinforce the existing obligation of prior assessment under UNCLOS and establish common principles for EIAs in ABNJ (e.g. the precautionary principle, the ecosystem approach, and a no net biodiversity loss principle). An ILBI could further specify a process for the conduct of EIAs, including provisions on thresholds, standards and procedures. If States agree to set an ambitious good practice standard for EIAs in ABNJ, an ILBI could set out a process that is biodiversity inclusive, transparent and subject to international scrutiny, with associated powers to impose conditions on any activities that may negatively impact marine ecosystems in ABNJ (Currie, 2014; Warner, 2012).

Box 14. Good practice Environmental Impact Assessment

Basic principles	Operating principles
EIA should be:	*The EIA process should be applied:*
Rigorous	As early as possible
Credible	To all development proposals that may have potentially significant effects
Interdisciplinary	To both biophysical and points socio-economic impacts
Participative	To provide for the involvement and input of stakeholders, as well as the public
Cost-effective	
Transparent	

Source: International Association for Impact Assessment (Senécal *et al.*, 1999)

7.3.2. SEA

States are yet to converge on an agreement as to whether to include Strategic Environmental Assessments (SEAs) in an ILBI and further clarification of the concept, potential scope and procedural aspects is needed. A SEA process for ABNJ could be employed in relation to proposed sectoral developments or plans for a particular region of ABNJ with the potential for significant impacts on the marine environment.[254] A globally and/or regionally coordinated approach to conducting SEAs could reduce the regulatory burden on individual States or proponents responsible for conducting project-specific EIAs, as long as individual EIAs take account of the SEA for a given area.[255]

Developing provisions for such a process in a new ILBI will entail many of the same questions and challenges as the EIA process, but with less international experience and fewer good practice examples to draw from.[256] At the same time, there will be considerable challenges involved in implementing SEAs in ABNJ due to the vast geographic areas involved, knowledge gaps, the fragmented governance framework and a lack of resources and technical capacities. A new instrument would therefore need to set out efficient and effective procedures for SEAs that provide for transparency and stakeholder participation, while also accounting for the fact that SEA practice in ABNJ is likely to evolve over the longer term (Warner, 2016).

7.4. Capacity building and transfer of marine technology

Marine technology transfer and capacity building are critical cross-cutting elements in the Package. With international guidelines already in place,[257] the key question is how a new agreement can catalyse capacity building and technology transfer efforts beyond those already being undertaken.

Capacity building might be developed and enhanced by: increasing links between regional institutions, e.g. through establishment of mentoring and partnership linkages between North and South regional organisations, such as regional fisheries bodies and the regional seas organisations; increasing the availability of finance for South-South cooperation;[258] establishing a global scholarship programme to foster science, policy and governance research into high seas biodiversity conservation;[259] and ensuring that projects and initiatives are assessed and monitored to ensure continuity and enforcement.

Exiting provisions of UNCLOS, such as bilateral and multilateral agreements, programs, and the establishment of regional marine science and

254. The ILBI could also require SEA for programmes developed within national jurisdiction that could impact ABNJ.

255. I.e. coordinated effort and investment by the international community in SEA processes could pre-empt certain aspects of EIA by ensuring early and comprehensive scoping of strategic areas and identification of potential risks. In a similar manner, SEA could also provide information and an initial foundation for the application of ABMTs and marine spatial planning.

256. At the international level, the Kiev Protocol to the Espoo Convention specifically addresses SEAs, which must be conducted for listed plans and programmes that are likely to have significant environmental (and health) effects.

257. IOC Criteria and Guidelines on the Transfer of Marine Technology (2003).

258. E.g. for GEF-funded projects or other global funding mechanisms.

259. This programme could be established in a similar manner to the UN-Nippon Fellowships, which provide capacity-building through the provision of advanced education and research opportunities in ocean affairs for developing country professionals.

technology centres,[260] could be operationalised by: specifying an institutional mechanism; articulating requirements for cooperation, e.g. indicating standards and procedures for sharing of data and information; and identifying funding mechanisms for the participation of scientists from developing countries (Harden-Davies, 2018).

Regarding technology transfer, an international instrument would need to address: how the sharing of data and the sharing of technology should take place; whether this transfer will be voluntary or compulsory; and in which areas technology should be transferred (i.e. if the agreement will relate only to transfer of technology relating to MGRs or if the scope will be more broadly related to conservation and sustainable use). It has been suggested that a clearing-house mechanism could be developed to share information and coordinate capacity building efforts. The ILBI could strengthen the overall international framework for capacity building and technology transfer through provisions aimed at fostering an integrated approach to the advancement, sharing and application of scientific knowledge (Harden-Davies, 2017b). This includes considering how to involve the private sector.

During the PrepCom meetings, the special needs of a range of country groups have been highlighted, including those of: LDCs, SIDS, LLDCs, African states, middle-income states, geographically disadvantaged states, and States particularly vulnerable to climate change. For example, Least Developed Countries (LDCs) have noted that they will face particular implementation and capacity challenges relating to all aspects of the Package Deal,[261] while Landlocked Developing Countries (LLDCs) have noted that their participation in ocean-related matters has been limited due to a variety of reasons, including lack of knowledge and resources, and that inclusive negotiations should protect their rights.[262]

Box 15. Clearing-house mechanisms

The term "clearing house" originally referred to a financial establishment where financial instruments could be exchanged among member banks so that it was only necessary to settle net balances in cash. Today, the term is used to denote any agency that brings together different parties that seek or provide goods, services, or information.[263] A clearing-house mechanism can be used to match demand with supply, promote cooperation, and facilitate the exchange of information. Parties to the CBD have established such a mechanism to ensure that all governments have access to the information and technologies they need for their work on biodiversity by promoting cooperation in six key areas: tools for decision-making, training and capacity-building, research, funding, technology transfer, and the repatriation of information.[264] The Basel, Rotterdam and Stockholm conventions[265] have also established a joint clearing-house mechanism to facilitate the exchange of information and expertise relevant to implementation.[266]

7.5. Institutional arrangements

The effective implementation of the provisions of a new international instrument for ABNJ will likely necessitate the establishment of some institutional structure through which parties can take decisions, undertake coordination and integrate efforts, and perform reviews and assessments of implementation.

Based on experience with similar multilateral agreements, this framework could include (Greiber, 2015; Mace *et al.*, 2006):

- A Conference of the Parties (COP) to bring together all parties in order to take critical decisions relating to the implementation of the agreement and to review progress;
- A scientific body to provide advice on scientific and technical matters;
- A compliance body to resolve disputes and facilitate compliance with the provisions of the agreement; and
- A Secretariat to provide support to the Parties to the agreement.

260. Articles 243, 270 and 275-277 respectively.

261. UN, Adopting Two Texts on Oceans, Seas, General Assembly Also Tackles Sustainable Management, Conservation of Marine Life beyond National Jurisdiction (5 December 2017) https://www.un.org/press/en/2017/ga11985.doc.htm.

262. UN, As Intergovernmental Conference on Sustainable Use of Marine Biodiversity Begins, Speakers Stress Binding Treaty Critical in Protecting World's Oceans (16 April 2018) https://www.un.org/press/en/2018/sea2069.doc.htm.

263. See https://www.cbd.int/chm/

264. The CBD clearing house currently "still operates at a relatively general and preliminary level" but is nonetheless considered to be a "considerable milestone in the history of biodiversity information sharing" (Laihonen *et al.*, 2004).

265. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989); Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998); Stockholm Convention on Persistent Organic Pollutants (2001).

266. See http://www.brsmeas.org/Implementation/KnowledgeManagementandOutreach/Clearinghousemechanism/tabid/5382/language/en-US/Default.aspx.

An agreement would likely need to specify: which core bodies will be established; a process for the subsequent establishment of additional subsidiary bodies; the relationship between these bodies; how they will be funded and staffed; and rules of procedure.

Beyond identification of this basic architecture, there is little agreement on the governance structure for new treaty, especially with respect to ABMTs. During the PrepCom meetings, the discussions on institutional arrangements led to the crystallization of three models: (i) a global model, creating a new global body with a decision-making mechanism; (ii) a regional and sectoral model, based on the authority of existing bodies for decision making, monitoring and review of ABMTs (with an ILBI providing general policy guidance to promote cooperation); and (iii) a hybrid model, in which regional and sectoral mandates are reinforced with global governance and guidance, possibly including mechanisms for global oversight and review. With many States strongly in favour of either the global or the regional/sectoral model, there was general recognition that the hybrid approach might be a suitable compromise. However, the "hybrid" approach appears to mean different things to different delegations and there will need to be a more precise understanding of what is envisioned under each model before discussions can substantively progress on this matter.

7.6. Overarching issues

The challenges inherent in negotiating a new agreement should not be underestimated. The negotiations will have to navigate a range of complex issues, such as facilitating consensus, ensuring the full participation of developing States[267] and forging an agreement that will allow the widest possible participation of all States. Furthermore, the negotiations will have to find solutions to a range of complex overarching issues that may affect all aspects of an agreement, including addressing fisheries, monitoring, control and surveillance (MCS), adjacency and compatibility, and funding.

7.6.1. Not undermining the mandates of existing organisations

A number of bodies at the global and regional levels already have a mandate to manage specific sectoral activities and/or regions within ABNJ. Resolution 72/249 states that the negotiation process and its result "should not undermine existing relevant legal instruments and frameworks and relevant global, regional and sectoral bodies." Determining what this will mean in practice has proven to be a serious point of contention. A range of interpretations have been offered, reflecting differing underlying views regarding the intended role and purpose of a new agreement.

Taken literally, "undermine" can mean to "lessen the effectiveness, power, or ability of, especially gradually or insidiously" or "to weaken or ruin by degrees".[268] Many delegations have interpreted this as allowing for the development of an ambitious agreement and a range of proposals have been put forward that aim to advance conservation and sustainable use by building on existing frameworks, including proposals that an ILBI could:

- Set out common principles and objectives to help ensure that all organisations with a role in ABNJ are working toward the same overall goals;
- Provide a default mechanism for cases where competent bodies are lacking or where they fail to act according to their mandates or the principles of the ILBI;
- Include provisions and/or mechanisms that enable non-members of relevant existing organisations to be involved in management activities relevant to conservation and sustainable use;
- Support existing institutions by enhancing cooperation and coordination, providing advice, collating and communicating information, and formulating recommendations;
- Call upon parties to strengthen existing institutions in accordance with the priorities and principles of the ILBI; and
- Oblige Parties to implement the agreement both directly and via their participation in competent international organisations.

However, a few States have taken a narrower view, arguing that including provisions on issues or activities already covered in other agreements or empowering a new agreement with a broad mandate for managing biodiversity would inevitably encroach on the mandates of existing organisations. From this perspective, existing instruments would effectively set an upper limit on the potential regulatory scope of the ILBI: activities could only be regulated to the extent that

267. At the time of the organizational meeting, the balance of the Voluntary Trust Fund intended to enable developing country participation was US$40,000, sufficient to facilitate the participation of just six delegates to the first session of the IGC.

268. Oxford and Merriam-Webster dictionaries respectively.

they are "not adequately addressed by existing international conventions" or, "where such activities are already managed or governed by an existing agreement, the instrument would apply relevant provisions of the existing agreement mutatis mutandis".[269]

7.6.2. Addressing fisheries

Closely linked to the "not undermining" issue is the question of how a new ILBI will address fisheries. Fishing is widely acknowledged to be one of the most significant threats to marine biodiversity in ABNJ and many delegations have therefore argued that a new instrument should include provisions aimed at advancing conservation and sustainable use in fisheries management. By contrast, a few States have stated that fisheries management in ABNJ should be excluded from the purview of the negotiations entirely, arguing that any provisions on fisheries would undermine existing fisheries management organisations. There are nonetheless strong links between fisheries management and all elements of the Package Deal and, given that the negotiations concern conservation and sustainable use of marine biodiversity as a whole, many delegations and commentators assume that an ILBI will address fisheries, at least with respect to biodiversity issues (Marciniak, 2017; Barnes, 2016; Wright *et al.*, 2016).

Though there "appears to be no appetite for wholesale reform of RFMOs" (Barnes, 2016), there are many possibilities for expanding and strengthening existing fisheries management mechanisms through the ILBI (Barnes, 2016; Wright *et al.*, 2016; Tladi, 2015). This could include: additional reporting and accountability procedures; reiterating and reinforcing the need for an ecosystems approach to fisheries; elaborating mechanisms for integrating biodiversity protection into decision-making processes; establishing criteria and priorities for biodiversity-focused measures, including ABMTs; expanding the coverage of RFMOs; refining the integration of fisheries in management tools, such as MPAs; and focusing attention on monitoring and surveillance efforts to include biodiversity protection measures. The ILBI could also establish a mechanism to allow non-fishing States to contribute to advancing conservation and sustainable use in fisheries management frameworks and organisations.

269. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_files/Chair_non_paper.pdf

7.6.3 Monitoring, control and surveillance

Effective monitoring, control and surveillance (MCS) is critical for the success of marine conservation and management. Efforts have been made by the international fishing community to regulate and monitor fishing since the end of the 20th century, driven by a surge of illegal, unreported and unregulated (IUU) fishing. But MCS remains challenging, especially in the high seas.

Box 16. Examples of MCS actions taken within RFMOs

- Port State measures
- IUU vessel lists
- Vessel monitoring systems (VMS)
- Catch documentation schemes, vessel catch reporting and transshipment notification
- Vessel authorization, licensing and marking requirements
- Consolidated List of Authorized Vessels (CLAV)
- Evaluation and monitoring of compliance

Technological developments are opening up possibilities for more effective and cost-efficient MCS. These can complement, or potentially even substitute, the costly observer programs currently in force in many regions. The possibility of using publicly available AIS data, originally devised to avoid collisions between ships, for fisheries management has been discussed (Dunn *et al.*, 2018; Stop Illegal Fishing, 2018). Vessel monitoring systems (VMS), designed for fisheries management, can also provide valuable data to management authorities (Pew, 2017). A range of other technologies are currently being developed or adapted, such as remote sensing, video and sensor monitoring (see, e.g. Bartholomew *et al.*, 2018; Chirayath and Earle, 2016; Colefax *et al.*, 2018).

Generally speaking, different approaches to data collection are best combined to yield the maximum amount of actionable information. However, data only has an impact if it is effectively gathered, delivered, and used by decision-makers to support strong compliance provisions. The effectiveness of MCS is tightly linked to the future governance structure put in place by the new agreement, and the resulting policy options for using the new tools. Moreover, government–industry–civil society partnerships are critically important in making these technologies accessible by aiding further development and ensuring technology transfer and capacity building (Dunn *et al.*, 2018).

7.6.4. Adjacency and compatibility

A number of issues relating to adjacency and

compatibility have been raised in the discussions to date. Firstly, negotiations will need to ensure that any provisions of a new agreement or measures taken thereunder will not impinge on the rights of coastal States over their continental shelves (Mossop, 2017). Secondly, in relation to EIAs, it has been suggested that: (i) any process established by the ILBI should respect coastal States' jurisdiction regarding EIAs for activities that are within their national jurisdiction;[270] and (ii) compatibility of proposed activities with measures established by adjacent coastal State should be considered as part of an EIA process.[271] Thirdly, a number of calls have also been made throughout the discussions for the inclusion of provisions in the ILBI that would provide for special consideration of coastal States adjacent to ABNJ (Dunn *et al.*, 2017). In relation to ABMTs, this might include provisions that:

- Measures taken in relation to ABNJ should be compatible with those taken by adjacent States in respect of their EEZ.
- Coastal States should be consulted regarding any measures proposed for ABNJ adjacent to waters under their national jurisdiction.
- In relation to the "high sea pockets"[272] in the Pacific, the adjacent coastal States "have greater opportunity, and should be allowed greater role, in conserving, managing, and regulating access to the resources of those high sea pocket areas."[273]
- Standards applied in ABNJ should not be lower than those applied by adjacent coastal States in their EEZs.[274]
- Measures taken under an ILBI should be compatible with those established within national jurisdiction of adjacent coastal States and should not undermine their effectiveness. The UNFSA provides a precedent for such a provision (see Box 17).
- Measures should not place a disproportionate burden upon adjacent coastal States.

Box 17. UNFSA, Article 7

Conservation and management measures established for the high seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the straddling fish stocks and highly migratory fish stocks in their entirety. In determining compatible conservation and management measures, States shall take into account:

– National conservation and management measures adopted by adjacent coastal States in relation to the same stocks and ensure that measures do not undermine the effectiveness of such measures;

– Measures established in accordance with the Convention in respect of the same stocks by relevant coastal States, fishing States, and regional fisheries management organizations or arrangements;

– The biological characteristics of the stocks, including the extent to which the stocks occur and are fished in areas under national jurisdiction; and

– The respective dependence of the coastal States and the States fishing on the high seas on the stocks concerned.

7.6.5. Funding

The issue of how funding for the implementation of a new agreement could be raised and equitably allocated will be crucial to the success of any new agreement. A global fund could be established to support capacity-building projects as well as to fund the development of a possible clearing house for technology transfer (Druel & Gjerde, 2014). Existing funds could also be better leveraged: for example, only 2% of full-scale Global Environment Facility (GEF) projects to date have focussed on ABNJ. The GEF currently serves as "financial mechanism" to five conventions[275] and its Scientific and Technical Panel has encouraged the GEF to "support actions that account for the diversity of ecosystem services that ABNJ provides", noting that "integrated spatial planning and other tools, or approaches, can help support future actions on ABNJ while strengthening governance arrangements that can address future risks and environmental challenges not aptly covered by current laws and institutional policies" (Ringbom & Henriksen, 2017).

Innovative financing models may allow private sources of finance to be leveraged in support of conservation and sustainable use of marine

270. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_ files/Chair_non_paper.pdf, p.75.

271. Ibid.

272. I.e. ABNJ bounded by the EEZs of adjacent coastal States.

273. Chair's non-paper on elements of a draft text of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 28 February 2017, http://www.un.org/depts/los/biodiversity/prepcom_ files/Chair_non_paper.pdf, p.24.

274. PSIDS August 2016 submission, http://www.un.org/depts/los/biodiversity/prepcom_files/Supplement.pdf

275. The CBD, the United Nations Framework Convention on Climate Change (UNFCCC), the Stockholm Convention on Persistent Organic Pollutants, the UN Convention to Combat Desertification (UNCCD), and the Minamata Convention on Mercury.

biodiversity in ABNJ. Global financial markets are increasingly accessible and open to supporting sustainability initiatives. For projects to be attractive to funders there need to be clear structures, predictable cash flows and transparent ways to assess risks and returns. Natural capital economics can be drawn upon as a way to ascribe economic value to the high seas and thereby help identify marine investment opportunities. This requires comprehensive ocean data infrastructure, the cost of which could be decreased by making it available to other ocean users and delivering it through public-private partnerships. Experience can be drawn from the recent efforts to increase climate finance through innovative models (Thiele & Gerber, 2017).

7.6.6. Navigating complex negotiations: lessons from UNCLOS

The negotiations for a new treaty may be challenging, but there are many examples where States have overcome considerable differences in order to address common concerns. The negotiation of UNCLOS is itself considered a triumph of international diplomacy and multilateralism, being "probably the first truly global effort of mankind to work collaboratively in the development of international law" (Koh, 1982). As such, Kofi Annan has called the Convention "one of the United Nations' greatest achievements". The President of the UNCLOS negotiations, Ambassador Tommy Koh, has enunciated nine key factors that he believes led to the success of the negotiations:

1. UNCLOS "does not fully satisfy the interests and objectives of any State", but it is a "monumental achievement [that] has accommodated the competing interests of all nations."

2. Allowing for some flexibility in organising discussions on the 25 Package Deal elements was essential, so long as the results were ultimately "brought together to form an integral whole".

3. The group system, whereby negotiations took place informally in small groups dedicated to particular issues, helped delegations to identify their positions and allowed them to negotiate with States with competing interests. Nonetheless, flexibility must be maintained so as not to "paralyze the negotiating process with rigidity"

4. Negotiations needed to be "progressively miniaturized", as a forum consisting of 160 delegations is not conducive to meaningful discussion.

5. "In general, the more informal a negotiating group, the more likely we are to make progress."

6. The Drafting Committee and its language groups played an important role in ensuring that "we have one treaty in six languages and not six treaties in six languages."

7. A united Collegium provided the conference with leadership and prevented it from "floundering during its many crises ".

8. The Secretariat provided the conference with excellent services and assisted the President and Chairman in the various negotiating committees and groups.

9. NGOs offered three valuable services: (i) independent experts providing an independent source of information on technical issues; (ii) assistance to developing country representatives in order to "narrow the technical gap"; (iii) opportunities to meet outside the Conference setting to informally discuss some of the most difficult issues.

ANNEXES

Annex 1. Exploration contracts with the ISA[276]

	Contract duration	Resource targeted	Location	Sponsoring State(s)
1	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Bulgaria, Cuba, Czech Republic, Poland, Russian Federation and Slovakia
2	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Russian Federation
3	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Republic of Korea
4	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	China
5	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Japan
6	2001-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	France
7	2002-2022	Polymetallic Nodules	Indian Ocean	India
8	2006-2021	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Germany
9	2011-2016	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Nauru
10	2011-2026	Polymetallic Sulphides	Southwest Indian Ridge	China
11	2012-2027	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Tonga
12	2012-2027	Polymetallic Sulphides	Mid-Atlantic Ridge	Russian Federation
13	2013-2028	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Belgium
14	2013-2028	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	UK
15	2014-2029	Cobalt-Rich Ferromanganese	Western Pacific Ocean	Japan
16	2014-2029	Cobalt-Rich Ferromanganese	Western Pacific Ocean	China
17	2014-2029	Polymetallic Sulphides	Central Indian Ridge	Republic of Korea
18	2014-2029	Polymetallic Sulphides	Mid-Atlantic Ridge	France
19	2015-2030	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Kiribati
20	2015-2030	Polymetallic Nodules	Clarion-Clipperton Fracture Zone	Singapore
21	2015-2030	Cobalt-Rich Ferromanganese	Magellan Mountains, Pacific Ocean	Russian Federation
22	2015-2030	Polymetallic Sulphides	Central Indian Ocean	Germany
23	2015-2030	Cobalt-Rich Ferromanganese	Rio Grande Rise, South Atlantic Ocean	Brazil
24	2016-2031	Polymetallic Nodules	Clarion Clipperton Fracture Zone	UK
25	2016-2031	Polymetallic Nodules	Clarion Clipperton Fracture Zone	Cook Islands
26	2016-2031	Polymetallic sulphides	Central Indian Ocean	Indian
27	2017-2032	Polymetallic Nodules	Clarion Clipperton Fracture Zone	China
28	2018-2033	Polymetallic Sulphides	Mid Atlantic Ridge	Poland
29	2018-2033	Cobalt-Rich Ferromanganese	Western Pacific Ocean	Republic of Korea

276. Information from ISA website (https://www.isa.org.jm/deep-seabed-minerals-contractors).

Annex 2. Existing ABMTs applicable to ABNJ

Agreement/body	Area-based tools in ABNJ	Usage
Agreement relating to the implementation of Part XI of the UNCLOS, 1994 (establishing the International Seabed Authority)	Areas of Particular Environmental Interest (APEI); preservation reference zones[1]	9 APEIs in the Clarion-Clipperton Zone (North Central Pacific)[2]
International Convention for the Prevention of Pollution From Ships, 1973 (as modified by the Protocol of 1978)	Special Areas (SAs)	2 SAs in ABNJ (Mediterranean and Antarctic)
International Maritime Organization	Particularly Sensitive Sea Areas (PSSAs)[3]	None designated in ABNJ
International Convention for the Safety of Life at Sea, 1974	Areas To Be Avoided (ATBAs)	None designated in ABNJ
International Convention for the Regulation of Whaling, 1946	Sanctuaries	Two established: Indian Ocean (1979) and Southern Ocean (1994)
Convention for the Protection of the World Cultural and Natural Heritage, 1972	World heritage sites	None designated in ABNJ
Regional Fisheries Management Organisations/ Arrangements (non-tuna)	Fisheries closures (pursuant to UNGA resolutions)	Fisheries closures established in many (see Annex 4)

1. ISA. Decision of the Council of the International Seabed Authority relating to amendments to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area and related matters. 2013; ISBA/19/C/17; Section V.31.6.

2. ISA. Decision of the Council relating to an environmental management plan for the Clarion-Clipperton Zone. 2012. ISBA/18C/22. http://www.isa.org.jm/files/documents/EN/18Sess/Council/ISBA-18C-22.pdf.

3. IMO. Revised guidelines for the identification and designation of Particularly Sensitive Sea Areas (PSSAs), 2005; A.982(24)

Annex 3. Existing regional initiatives for the conservation and sustainable use of marine biodiversity in ABNJ

Area	Organisations/Conventions	MPA-related actions/measures
North-East Atlantic	OSPAR	First network of MPAs in ABNJ (OSPAR)
	NEAFC	NEAFC fisheries closures
		Collective Arrangement between competent organisations on cooperation
Mediterranean	Mediterranean Action Plan (MAP), Barcelona Convention	First MPA partly covering high seas (Pelagos Sanctuary)
		MoU between MAP and GCFM
	General Fisheries Commission for the Mediterranean and Black Sea (GFCM)	Project on developing a network of SPAMIs in the Open seas, including the deep seas
		Proposal to designate parts of the Sanctuary as a Particularly Sensitive Sea Areas (PSSA)
The Southern Ocean	CCAMLR	South Orkney Islands and Ross Sea MPAs
		Process to establish a network of MPAs is ongoing
South Pacific	SPREP	SPREP Convention applies to four "high seas pockets" (no measure through SPREP taken to date)
South East Pacific	CPPS	Member States of CPPS committed themselves in 2012 "Galapagos Declaration" to promote action to protect living resources in ABNJ
Western Africa	Abidjan Convention	Establishment of a working group to study all aspects of the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction within the framework of the Abidjan Convention (COP 11 in 2014: Decision CP. 11/10)
Western Indian Ocean	Nairobi Convention	Feasibility of the extension of the geographical coverage of the Nairobi Convention to ABNJ in progress, in the context of a project funded by the French GEF
		2015 Contracting Parties decision to "cooperate in improving the governance of areas beyond national jurisdiction, building on existing regional institutions including the Nairobi Convention and developing area based management tools such as marine spatial planning"
Sargasso Sea	Sargasso Sea Commission	Encourages and facilitates voluntary collaboration toward the conservation of the Sargasso Sea; aims to encourage the adoption of measures through competent management authorities.
	2014 Hamilton Declaration (signed by Azores, Bermuda, Monaco, UK and US)	

Annex 4. Summary of bottom fisheries closures in ABNJ

Adapted from: Gianni *et al.*, 2016, Wright *et al.*, 2015, and the FAO VME closure database.[277]

Region	Body	Closures	% "Fishable" area	% "Fishable" seamounts
North-East Atlantic	NEAFC	11 closures	16.7%	33.1%
North-West Atlantic	NAFO	20 closures	12.9%	57.6%
South-East Atlantic	SEAFO	11 closures	16.1%	21.5%
			21.2% (closed to bottom trawling)	23.3% (closed to bottom trawling)
North Pacific	NPFC	Preliminary closures declared; footprint approach effectively limits fishing activity.	0.5%	0.3%
South Pacific	SPRFMO	Formal closures not declared; footprint approach effectively limits fishing activity; unilateral closures implemented by New Zealand.	0.0%	0.0%
			7.5% (closed to bottom trawling by NZ)	3.1% (closed to bottom trawling by NZ)
Southern Ocean	CCAMLR	2 MPA, 1 blanket closures in relation to toothfish fisheries, 4 additional closures. Commercial bottom trawling prohibited throughout the CCAMLR region. Regulations apply to mainly longline fisheries.	0.7%	0.7%
			100% (closed to bottom trawling)	100% (closed to bottom trawling)
Indian Ocean	SIOFA	Formal closures not declared.	0.0%	0.0%
Mediterranean	GFCM	Closure of areas to bottom trawling.	0.0%	0.0%
			18.1% (closed to bottom trawling)	39.7% (closed to bottom trawling)

277. http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/vme.html

Annex 5. Existing scientific criteria for identifying areas of interest

Framework	Organisations/ Conventions	Criteria
Ecologically or Biologically Significant marine Area (EBSA)	Convention on Biological Diversity (CBD)	Uniqueness or rarity Special importance for life history stages of species Importance for threatened, endangered or declining species and/or habitats Vulnerability, fragility, sensitivity, or slow recovery Biological productivity Biological diversity Naturalness
Vulnerable Marine Ecosystem (VME)	UN Food and Agriculture Organization (FAO)	Uniqueness or rarity Functional significance of the habitat Fragility Life-history traits of component species that make recovery difficult Structural complexity
Particularly Sensitive Sea Area (PSSA)	International Maritime Organization (IMO)	Ecological criteria (such as unique or rare ecosystem, diversity of the ecosystem or vulnerability to degradation by natural events or human activities) Social, cultural and economic criteria (such as significance of the area for recreation or tourism) Scientific and educational criteria (such as biological research or historical value)
Specially Protected Areas of Mediterranean Importance (SPAMI)	Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) to the Barcelona Convention	Uniqueness Natural representativeness Diversity Naturalness Presence of habitats that are critical to endangered, threatened or endemic species Cultural representativeness
Antarctic Specially Protected Area (ASPA) and Antarctic Specially Managed Area (ASMA)	Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)	*ASPAs may include:* – areas kept inviolate from human interference so that future comparisons may be possible with localities that have been affected by human activities – representative examples of major terrestrial, including glacial and aquatic, ecosystems and marine ecosystems – areas with important or unusual assemblages of species, including major colonies of breeding native birds or mammals – the type locality or only known habitat of any species – areas of particular interest to ongoing or planned scientific research – examples of outstanding geological, glaciological or geomorphological features – areas of outstanding aesthetic and wilderness value – sites or monuments of recognised historic value – other areas as may be appropriate to protect outstanding environmental, scientific, historic, aesthetic or wilderness values *ASMAs may include:* – areas where activities pose risks of mutual interference or cumulative environmental impacts – sites or monuments of recognised historic value

Annex 6. Overview of participation in selected agreements and membership of country groupings

		International agreements				Biodiversity & conservation agreements			Groups						UN-OHRLLS			Tuna RFMOs					Non-tuna RFMOs							Regional organisations with ABNJ mandate			
	UN	UNCLOS	CBD	Part XI	UNFSA	CITES	CMS	IWC	AU	AOSIS	CARICOM	EU	G77	PSIDS	LDCs	LLDCs	SIDS	CCSBT	IATTC	ICCAT	IOTC	WCPFC	GFCM	NAFO	NEAFC	NPFC	SEAFO	SIOFA	SPRFMO	Barcelona	CCAMLR	OSPAR	SPREP
Afghanistan	•		•			•	•						•		•	•																	
Albania	•	•	•	•		•	•													•			•							•			
Algeria	•	•	•	•		•	•		•				•							•			•							•			
Andorra	•		•																														
Angola	•	•	•	•		•	•		•				•		•					•							•						
Antigua & Barbuda	•	•	•	•		•	•	•		•	•		•				•																
Argentina	•	•	•	•		•	•	•					•																		•		
Armenia	•	•	•	•		•	•									•																	
Australia	•	•	•	•	•	•	•	•										•			•	•						•	•		•		•
Austria	•	•	•	•	•	•	•	•				•																			•	•	
Azerbaijan	•	•	•	•		•										•																	
Bahamas	•	•	•	•	•	•				•	•		•				•																
Bahrain	•	•	•			•							•				•																
Bangladesh	•	•	•	•	•	•	•						•		•																		
Barbados	•	•	•	•	•	•				•	•		•				•			•													
Belarus	•	•	•	•		•	•																										
Belgium	•	•	•	•	•	•	•	•				•																			•	•	
Belize	•	•	•	•	•	•		•		•	•		•				•		•	•													
Benin	•	•	•	•	•	•	•	•	•				•		•																		
Bhutan	•		•			•							•		•	•																	
Bolivia (Plurinational State of)	•	•	•	•		•	•						•			•																	
Bosnia & Herzegovina	•	•	•			•	•						•																	•			
Botswana	•	•	•	•		•			•				•			•																	
Brazil	•	•	•	•	•	•	•	•					•							•											•		
Brunei Darussalam	•	•	•	•		•							•																				
Bulgaria	•	•	•	•	•	•	•	•				•											•										
Burkina Faso	•	•	•	•		•	•		•				•		•	•																	
Burundi	•		•			•	•		•				•		•	•																	
Cambodia	•		•			•		•					•		•																		
Cameroon	•	•	•	•		•	•	•	•				•																				
Canada	•	•	•	•	•	•													•	•		•		•		•							
Cabo Verde	•	•	•	•		•	•		•	•			•				•			•													
Central African Republic	•		•			•			•				•		•	•																	
Chad	•	•	•	•		•	•		•				•		•	•																	
Chile	•	•	•	•	•	•	•	•					•																•		•		
China	•	•	•	•		•		•					•						•	•	•	•				•			•		•		
Colombia	•		•			•		•					•						•														
Comoros	•	•	•			•			•	•			•		•		•				•												
Congo (Democratic Republic of the)	•	•	•			•	•		•				•		•																		
Congo (Republic of the)	•	•	•			•	•	•	•				•																				
Cook Islands [1]		•	•	•	•		•			•												•						•	•				•
Costa Rica	•	•	•	•	•	•	•	•					•						•														
Côte D'Ivoire	•	•	•	•		•	•	•	•				•																				
Croatia	•	•	•	•	•	•	•	•				•								•			•							•			
Cuba	•	•	•	•		•	•			•			•				•							•						•			
Cyprus	•	•	•	•	•	•	•	•				•											•							•			

		International agreements				Biodiversity & conservation agreements			Groups						UN-OHRLLS			Tuna RFMOs					Non-tuna RFMOs							Regional organisations with ABNJ mandate			
	UN	UNCLOS	CBD	Part XI	UNFSA	CITES	CMS	IWC	AU	AOSIS	CARICOM	EU	G77	PSIDS	LDCs	LLDCs	SIDS	CCSBT	IATTC	ICCAT	IOTC	WCPFC	GFCM	NAFO	NEAFC	NPFC	SEAFO	SIOFA	SPRFMO	Barcelona	CCAMLR	OSPAR	SPREP
Czech Republic	•	•	•	•	•	•	•	•				•																					
Denmark	•	•	•	•	•	•	•	•				•												•	•				•			•	
Djibouti	•	•	•			•	•		•				•		•																		
Dominica	•	•	•	•		•		•		•	•		•				•																
Dominican Republic	•	•	•	•		•	•	•		•			•				•																
Ecuador	•	•	•	•	•	•	•	•					•						•										•				
Egypt	•	•	•			•	•		•				•							•			•							•			
El Salvador	•		•			•							•						•	•													
Equatorial Guinea	•	•	•	•		•	•		•				•							•													
Eritrea	•		•			•	•	•	•				•		•						•												
Estonia	•	•	•	•	•	•	•	•				•																					
Ethiopia	•		•			•	•		•				•		•	•																	
EU		•	•	•	•	•	•											•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	
Fiji	•	•	•	•	•	•	•			•			•	•			•					•											•
Finland	•	•	•	•	•	•	•	•				•																				•	
France	•	•	•	•	•	•	•	•				•							•	•	•	•	•	•				•		•	•	•	•
Gabon	•	•	•	•		•	•	•	•				•							•													
Gambia (Republic of The)	•	•	•			•	•	•	•				•		•																		
Georgia	•	•	•	•		•	•																										
Germany	•	•	•	•	•	•	•	•				•																			•	•	
Ghana	•	•	•	•	•	•	•	•	•				•							•													
Greece	•	•	•	•	•	•	•					•											•							•			
Grenada	•	•	•	•		•		•		•	•		•				•			•													
Guatemala	•	•	•	•		•							•						•	•													
Guinea	•	•	•	•	•	•	•	•	•				•		•					•		•											
Guinea Bissau	•	•	•			•	•	•	•	•			•		•		•			•													
Guyana	•	•	•	•		•				•	•		•				•																
Haiti	•	•	•	•						•	•		•		•		•																
Holy See																																	
Honduras	•	•	•	•		•	•						•							•													
Hungary	•	•	•	•	•	•	•	•				•																					
Iceland	•	•	•	•	•	•		•												•				•	•						•	
India	•	•	•	•	•	•	•	•					•								•										•		
Indonesia	•	•	•	•	•	•							•					•			•												
Iran (Islamic Republic of)	•		•		•	•	•						•								•												
Iraq	•	•	•			•	•						•																				
Ireland	•	•	•	•	•	•	•	•				•																				•	
Israel	•		•			•	•	•															•							•			
Italy	•	•	•	•	•	•	•	•				•											•							•	•		
Jamaica	•	•	•	•		•				•	•		•				•																
Japan	•	•	•	•	•	•		•										•	•	•	•	•	•	•		•	•	•			•		
Jordan	•	•	•	•		•	•						•																				
Kazakhstan	•		•			•	•									•																	
Kenya	•	•	•	•	•	•	•	•	•				•								•												
Kiribati	•	•	•	•	•			•		•			•	•	•		•		•			•											
Kuwait	•	•	•	•		•							•																				

		International agreements				Biodiversity & conservation agreements			Groups						UN-OHRLLS			Tuna RFMOs					Non-tuna RFMOs							Regional organisations with ABNJ mandate			
	UN	UNCLOS	CBD	Part XI	UNFSA	CITES	CMS	IWC	AU	AOSIS	CARICOM	EU	G77	PSIDS	LDCs	LLDCs	SIDS	CCSBT	IATTC	ICCAT	IOTC	WCPFC	GFCM	NAFO	NEAFC	NPFC	SEAFO	SIOFA	SPRFMO	Barcelona	CCAMLR	OSPAR	SPREP
Kyrgyzstan	•		•			•	•									•																	
Lao People's Democratic Republic	•	•	•	•		•		•					•		•	•																	
Latvia	•	•	•	•	•	•	•					•																					
Lebanon	•	•	•	•		•							•										•							•			
Lesotho	•	•	•	•		•			•				•		•	•																	
Liberia	•	•	•	•	•	•	•		•				•		•					•													
Libya	•		•			•	•		•				•							•			•							•			
Liechtenstein	•		•			•	•																										
Lithuania	•	•	•	•	•	•	•	•				•																					
Luxembourg	•	•	•	•	•	•	•	•				•																				•	
Macedonia (Former Yugoslav Rep. of)	•	•	•	•		•	•									•																	
Madagascar	•	•	•	•		•	•		•				•		•						•												
Malawi	•	•	•	•		•			•				•		•	•																	
Malaysia	•	•	•	•		•							•								•												
Maldives	•	•	•	•	•	•				•			•				•				•												
Mali	•	•	•			•	•	•	•				•		•	•					•												
Malta	•	•	•	•	•	•	•					•											•							•			
Marshall Islands	•	•	•		•			•		•			•	•			•					•											•
Mauritania	•	•	•	•		•	•	•	•				•		•					•													
Mauritius	•	•	•	•	•	•	•		•	•			•				•				•								•				
Mexico	•	•	•	•		•		•											•	•													
Micronesia (Federated States of)	•	•	•	•	•					•			•	•			•					•											•
Moldova (Republic of)	•	•	•	•		•	•									•																	
Monaco	•	•	•	•	•	•	•	•															•							•			
Mongolia	•	•	•	•		•	•	•					•			•																	
Montenegro	•	•	•	•		•	•																•							•			
Morocco	•	•	•	•	•	•	•	•	•				•							•			•							•			
Mozambique	•	•	•	•	•	•	•		•				•		•						•												
Myanmar	•	•	•	•		•							•		•																		
Namibia	•	•	•	•	•	•			•				•							•							•				•		
Nauru	•	•	•	•	•			•		•			•	•			•					•											•
Nepal	•	•	•	•		•							•		•	•																	
Netherlands	•	•	•	•	•	•	•	•				•																				•	
New Zealand	•	•	•	•	•	•	•	•										•				•							•		•		•
Nicaragua	•	•	•	•		•		•					•						•	•													
Niger	•	•	•	•		•	•		•				•		•	•				•													
Nigeria	•	•	•	•	•	•	•		•				•							•													
Niue[2]		•	•	•	•					•												•											
[North] Korea (Dem. People's Rep. of)	•		•										•																				
Norway	•	•	•	•	•	•	•	•												•				•	•		•				•	•	
Oman	•	•	•	•	•	•		•					•								•												
Pakistan	•	•	•	•		•	•						•								•												
Palau	•	•	•	•	•	•	•	•		•				•			•					•											
Palestine (State of)[3]		•	•	•									•																				
Panama	•	•	•	•	•	•	•	•					•						•	•													
Papua New Guinea	•	•	•	•	•	•				•			•	•			•					•											•

		International agreements				Biodiversity & conservation agreements			Groups						UN-OHRLLS			Tuna RFMOs					Non-tuna RFMOs							Regional organisations with ABNJ mandate			
	UN	UNCLOS	CBD	Part XI	UNFSA	CITES	CMS	IWC	AU	AOSIS	CARICOM	EU	G77	PSIDS	LDCs	LLDCs	SIDS	CCSBT	IATTC	ICCAT	IOTC	WCPFC	GFCM	NAFO	NEAFC	NPFC	SEAFO	SIOFA	SPRFMO	Barcelona	CCAMLR	OSPAR	SPREP
Paraguay	•	•	•	•		•	•						•			•																
Peru	•		•			•	•	•					•						•										•			
Philippines	•	•	•	•	•	•	•						•							•	•	•										
Poland	•	•	•	•	•	•	•	•				•																		•		
Portugal	•	•	•	•	•	•	•	•				•																			•	
Qatar	•	•	•	•		•							•																				
Romania	•	•	•	•	•	•	•	•				•											•									
Russian Federation	•	•	•	•	•	•		•												•				•	•	•			•		•		
Rwanda	•		•			•	•		•				•		•	•																	
St Kitts & Nevis	•	•	•		•	•		•		•	•		•				•																
St Lucia	•	•	•		•	•		•		•	•		•				•																
St Vincent & the Grenadines	•	•	•		•	•		•		•	•		•				•			•													
Samoa	•	•	•	•	•	•	•			•			•	•			•					•											•
San Marino	•		•			•		•																									
Sao Tome & Principe	•	•	•			•	•	•	•	•			•		•		•			•													
Saudi Arabia	•	•	•	•		•	•						•																				
Senegal	•	•	•	•	•	•	•	•	•				•		•					•													
Serbia	•	•	•	•		•	•																										
Seychelles	•	•	•	•	•	•	•		•	•			•				•				•							•					
Sierra Leone	•	•	•	•		•			•				•		•					•	•												
Singapore	•	•	•	•		•				•			•				•																
Slovakia	•	•	•	•	•	•	•	•				•																					
Slovenia	•	•	•	•	•	•	•	•				•											•							•			
Solomon Islands	•	•	•	•	•	•		•		•			•	•	•		•					•											•
Somalia	•	•	•			•	•		•				•		•						•												
South Africa	•	•	•	•	•	•	•	•	•				•					•		•	•							•			•		
[South] Korea (Republic of)	•	•	•	•	•	•		•										•	•	•	•	•		•		•	•	•	•		•		
South Sudan	•		•						•				•		•	•																	
Spain	•	•	•	•	•	•	•	•				•											•							•	•	•	
Sri Lanka	•	•	•	•	•	•	•						•								•												
Sudan	•	•	•			•			•				•		•						•												
Suriname	•	•	•	•		•		•		•	•		•				•																
Eswatini (Swaziland)	•	•	•	•		•	•		•				•			•																	
Sweden	•	•	•	•	•	•	•	•				•																			•	•	
Switzerland	•	•	•	•		•	•	•																								•	
Syrian Arab Republic	•		•			•	•						•							•			•							•			
Taiwan (Chinese Taipei) [4]																		•	•			•				•			•				
Tajikistan	•		•			•	•						•			•																	
Tanzania (United Republic of)	•	•	•	•		•	•	•	•				•		•						•												
Thailand	•	•	•	•	•	•							•								•							•					
Timor-Leste	•	•		•						•			•	•	•		•																
Togo	•	•	•	•		•	•	•	•				•		•																		
Tonga	•	•	•	•	•	•				•			•	•			•					•											
Trinidad and Tobago	•	•	•	•	•	•				•	•		•				•			•													
Tunisia	•	•	•	•		•	•		•				•							•			•							•			
Turkey	•		•			•														•			•							•			

		International agreements				Biodiversity & conservation agreements			Groups						UN-OHRLLS			Tuna RFMOs					Non-tuna RFMOs							Regional organisations with ABNJ mandate			
	UN	UNCLOS	CBD	Part XI	UNFSA	CITES	CMS	IWC	AU	AOSIS	CARICOM	EU	G77	PSIDS	LDCs	LLDCs	SIDS	CCSBT	IATTC	ICCAT	IOTC	WCPFC	GFCM	NAFO	NEAFC	NPFC	SEAFO	SIOFA	SPRFMO	Barcelona	CCAMLR	OSPAR	SPREP
Turkmenistan	•		•										•			•																	
Tuvalu	•	•	•	•	•			•		•				•	•		•					•											
Uganda	•	•	•	•		•	•		•				•		•	•																	
Ukraine	•	•	•	•	•	•	•																•							•			
United Arab Emirates	•		•			•	•						•																				
UK	•	•	•	•	•	•	•	•				•								•	•									•	•		
USA	•				•	•		•											•	•		•		•		•			•		•		•
Uruguay	•	•	•	•	•	•	•	•					•							•											•		
Uzbekistan	•		•			•	•									•																	
Vanuatu	•	•	•	•	•	•				•			•	•	•		•		•	•		•				•			•				
Venezuela (Bolivarian Republic of)	•		•			•							•						•	•													
Viet Nam	•	•	•	•		•							•																				
Yemen	•	•	•	•		•	•						•		•						•												
Zambia	•	•	•	•		•			•				•		•	•																	
Zimbabwe	•	•	•	•		•	•		•				•			•																	

1. The Cook Islands and Niue are self-governing territories in free association with New Zealand. The territories are responsible for the conduct of their own international relations, including for concluding treaties. In a declaration in 1988, New Zealand stated, by express provision and with the consent of all parties concerned, that its future participation in international agreements would no longer extend to the Cook Islands or Niue. Given their admission to the membership of specialized agencies without any specifications or limitations, the Secretariat of the UN recognized the full treaty-making capacity of the Cook Islands in 1992 and that of Niue in 1994. See Repertory of Practice of United Nations Organs, Supplement No. 8, Volume VI, http://legal.un.org/repertory/art102/english/rep_supp8_vol6_art102.pdf.

2. Denmark participates in NAFO and NEAFC in respect of the Faroe Islands & Greenland and in SPRFMO in respect of the Faroe Islands. The Faroe Islands and Greenland are part of the Kingdom of Denmark and their foreign and security interests are therefore the responsibility of the Danish government. See http://um.dk/en/foreign-policy/greenland-and-the-faroe-islands/.

3. The State of Palestine is a Permanent Observer to the UN and is currently recognised by 137 States (see http://palestineun.org/about-palestine/diplomatic-relations/).

4. The UNFSA paved the way for Taiwan's participation in RFMOs (Djalal, 2006; Ho, 2006; Hu, 2006). Article 1(3) provides that the Agreement applies mutatis mutandis to "fishing entities whose vessels fish on the high seas". UNFSA states that RFMOs cannot preclude membership of a State with a real interest in the fishery (Article 8(3)) and that fishing entities "shall enjoy the benefits from participation in the fishery commensurate with their commitment to comply with conservation and management measures in respect of the stocks" (Article 17(3)). Taiwan generally participates in RFMOs under the title "Chinese Taipei". Taiwan participates in ICCAT as a "Cooperator" and in CCSBT as a Member of the "Extended Commission" as the "Fishing Entity of Taiwan".

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The long and winding Road: negotiating a treaty for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction

Glen Wright, Julien Rochette (IDDRI), Kristina Gjerde (IUCN), Isabel Seeger (IDDRI)

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