BREAKING THE STALEMATE:

ANALYZING STATE PREFERENCES IN THE GLOBAL DEBATES ON MARINE BIODIVERSITY BEYOND NATIONAL JURISDICTION

by

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LIST OF ACRONYMS

ABNJ	Areas Beyond National Jurisdiction
BBNJ	Biodiversity Beyond National Jurisdiction
CBD	Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Marine Living Resources
CITES	Convention on Trade in Endangered Species
CHM	Common Heritage of Mankind
CMS	Convention on the Conservation of Migratory Species
CS	Carbon Sequestration and Storage
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EU	European Union
FAO	United Nations Food and Agricultural Organization
G-77	Group of 77 Developing Nations (currently made of up 131 developing nations)
GOODS	Global Open Ocean and Deep Seabed Biogeographic Classification System
ICSP	Informal Consultations of State Parties to the United Nations Fish Stocks Agreement
IMO	International Maritime Organization
ISA	International Seabed Authority
IUU	Illegal, Unreported and Unregulated Fishing
IUCN	International Union for the Conservation of Nature
JPoI	Johannesburg Plan of Implementation
LME	Large Marine Ecosystem
MAP	Mediterranean Action Plan
MARPOL 73/78	International Convention for the Prevention of Pollution From Ships (1973), as modified by the Protocol of 1978
MCS	Monitoring, Control, and Surveillance
MGR	Marine Genetic Resources
MPA	Marine Protected Area
MSP	Marine Spatial Planning
MSR	Marine Scientific Research
NAFO	Northwest Atlantic Fisheries Organization
NEAFC	North-East Atlantic Fisheries Commission
NGO	Non-Governmental Organization

OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PIN	Processes of International Negotiation Network
RFB	Regional Fisheries Body
RFMO	Regional Fisheries Management Organization
RSP	Regional Seas Programme
SEAFO	South East Atlantic Fisheries Organization (SEAFO
SOLAS	Convention for the Safety of Life at Sea
SPAMI	Specially Protected Areas of Mediterranean Importance
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNGA	United Nations General Assembly
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFSA	United Nations Fish Stocks Agreement
UNICPOLOS	United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea
WCED	World Commission on Environment and Development
WWF	World Wildlife Fund

ABSTRACT

Marine areas beyond national jurisdiction, once perceived to be desolate and relatively barren of life, are now known to be rich in biodiversity and ecosystems that play a critical role in ecological processes and contain socially and economically valuable resources, including food and cancer-curing medicines. As human activities expand further offshore and new activities are proposed in open ocean and deep sea areas, various stakeholders have identified potential gaps and weaknesses in the international legal and regulatory framework for marine areas beyond national jurisdiction, including the lack of provisions for new and emerging activities, potentially inadequate legal frameworks for implementing management tools, and lack of coordination between different instruments and organizations. As a result, this topic has become a prominent area of intergovernmental debate. However, differing perspectives and conflicting legal interpretations among governments have prevented these debates from reaching consensus on means to ensure conservation and sustainable use of marine biodiversity beyond national jurisdiction.

Numerous studies have analyzed various aspects of this topic, yet no study to date has directly analyzed government positions to identify a potential resolution to the debates. In an effort to fill this gap, this analysis characterizes State preferences articulated in major UN fora addressing issues related to marine biodiversity beyond national jurisdiction, identifies and analyzes major areas of contention and commonality between States, and outlines potential elements of a resolution to these debates in the context of State preferences. Using an approach inspired by Robert Friedheim's analysis

of the negotiations for the UN Convention on the Law of the Sea, the study characterizes State preferences in the main issue-areas discussed in the debates on marine biodiversity beyond national jurisdiction; marine genetic resources of the deep seabed, marine protected areas, environmental impact assessments, high seas fishing, cooperation and coordination, and governance and implementation gaps.

The analysis finds that, despite prominent areas of disagreement, there are significant areas of commonality among States on various issue-areas discussed that can serve as building blocks for a potential agreement and facilitate more action-oriented dialogue in future discussions. Furthermore, the thesis illustrates the potential of a comprehensive approach encompassing a package of issues, to provide the enabling policy environment necessary to ensure the conservation and sustainable use of marine biodiversity beyond national jurisdiction and proposes potential elements of such an approach.

Chapter 1

INTRODUCTION AND BACKGROUND

Marine areas beyond national jurisdiction make up more than 60% of the world's oceans and represent one of the last global commons on Earth. They are rich in biodiversity, play a crucial role in the functioning of marine ecosystems, provide critical ecosystem services, including nutrient cycling, carbon storage, and ocean circulation, and possess a unique cultural value for many people around the world. As well, these areas contain resources of significant socio-economic value, including food resources and cancer-curing medicines. In this respect, marine areas beyond national jurisdiction (ABNJ) are important to achieving the social, environmental, and economic goals of sustainable development. This area has also become an important realm of scientific research, as knowledge of biodiversity and ecosystems in the open ocean and deep sea remains limited.

Traditionally, conducting activities in marine areas beyond national jurisdiction (defined as the area of the water column beyond 200 nautical miles of the coast and the seabed beyond the continental shelf of a coastal State as delineated by States pursuant to the UN Convention on the Law of the Sea (UNCLOS) and illustrated in Figure 1), was limited by significant technical and logistical costs. However, advances in technology and scientific innovation have reduced these costs, making activities in ABNJ more feasible. The expansion of human activities further offshore and proposals for new and emerging activities in ABNJ have raised concerns over potential adverse impacts on biodiversity and ecosystems in the open and deep sea, as well as potential gaps and

weaknesses in the current international ocean governance framework. ABNJ issues, therefore, have become a prominent area of discussion and debate in the international landscape. Research and discussions to this end have largely centered on improving implementation of existing provisions and commitments, and considering the need for new governance mechanisms with a view to developing a more robust system that can adequately address potential environmental impacts, and ensure equitable access to, and sustainable utilization of, marine biodiversity in areas beyond national jurisdiction.

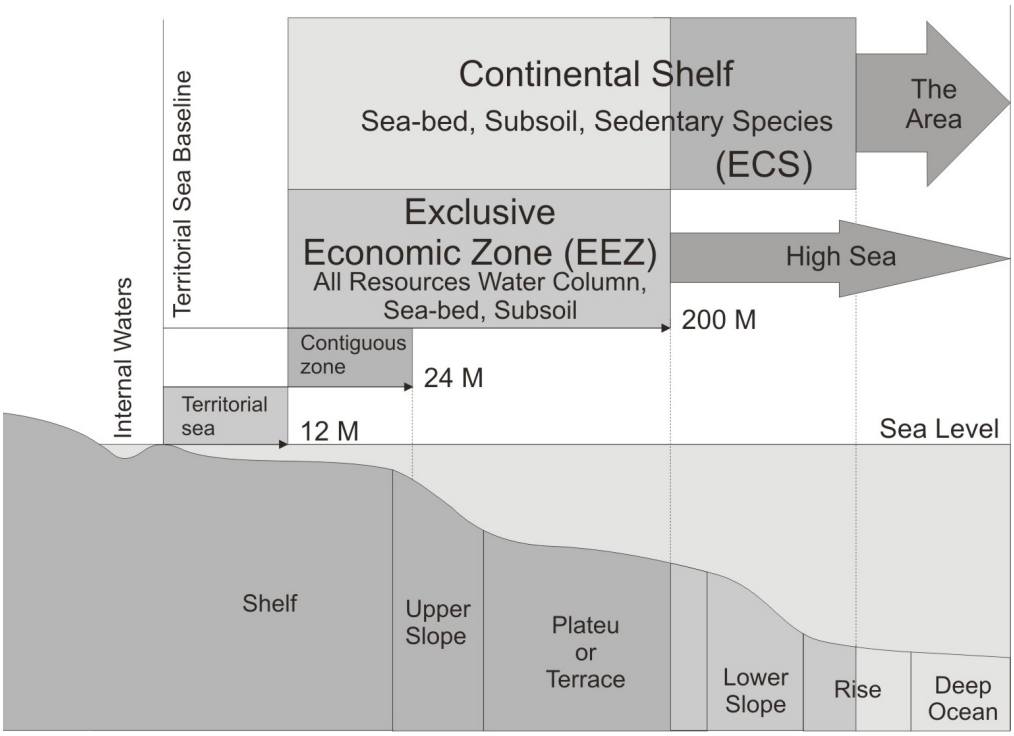

Figure 1. Maritime zone delimitation pursuant to the UN Convention on the Law of the Sea. Source: Schofield 2011.

While this topic has been a major area of focus for many players in the oceans community, it has most notably been addressed at global and regional intergovernmental processes, especially the UN General Assembly and the UN 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, where the political divisiveness of some of the issues surrounding marine biodiversity beyond national jurisdiction has come to light. In these fora, States often articulate notably differing positions on issues related to marine areas beyond national jurisdiction, including the implementation of management tools, the legal regime for marine genetic resources of the deep seabed, and the potential need for new institutional mechanisms. In some cases, there are significantly differing positions between States, while others are characterized by much commonality. It can be argued that a disproportionate amount of focus in these discussions is given to the more divisive issues, which has directed attention away from the opportunities inherent in common interests and principles of agreement and delayed the emergence of tangible action to address common concerns. Although the politically divisive issues continue to predominate many of the intergovernmental discussions, they have also served to stimulate research in areas in need of further analysis, clarify sometimes vague or uncertain legal and regulatory issues, and focus political attention on the importance of addressing major threats to the marine environment and facilitating equitable access to marine biodiversity beyond national jurisdiction.

Unfortunately, little or no research has emerged to characterize areas of both disagreement and commonality among various State preferences as discussed at major intergovernmental fora and to identify potential avenues towards building consensus. This research will aim to fill this void by analyzing the intergovernmental debates on

marine biodiversity beyond national jurisdiction (BBNJ) with the aim of characterizing State positions on the central issues under discussion, identifying areas of commonality, and outlining potential elements of consensus-building and agreement.

While some may argue that high-level intergovernmental discussions can be far removed from on-the-ground impacts and activities, these discussions do, in fact, play a key role in the conservation and sustainable use of living resources, with notable ecological and socioeconomic implications. This relationship is illustrated in Figure 2 by adapting a conceptual framework originally developed for the Millennium Ecosystem Assessment (2005), a global scientific synthesis of the state of the Earth's ecosystems. As the figure illustrates, changes in factors that indirectly affect ecosystems, such as legal frameworks, technology, and lifestyle (upper right corner of figure), can lead to changes in factors directly affecting ecosystems, such as the catch of fisheries or scientific research activities (lower right corner). Intergovernmental discussions and debates are an important indirect driver of change here in that they have significant implications for the development and implementation of legal and regulatory frameworks for nearly all of the activities and processes that may impact marine biodiversity beyond national jurisdiction and, thereby, directly impact the health of habitats and living resources and the provisioning of ecosystem services. Impacts on marine ecosystems (lower left corner) affect the provisioning of ecosystem services, which will also impact human well-being (upper left corner). These interactions can take place at multiple geographic and temporal scales. Actions can be taken either to respond to negative changes or to enhance positive effects at almost all points in this framework.

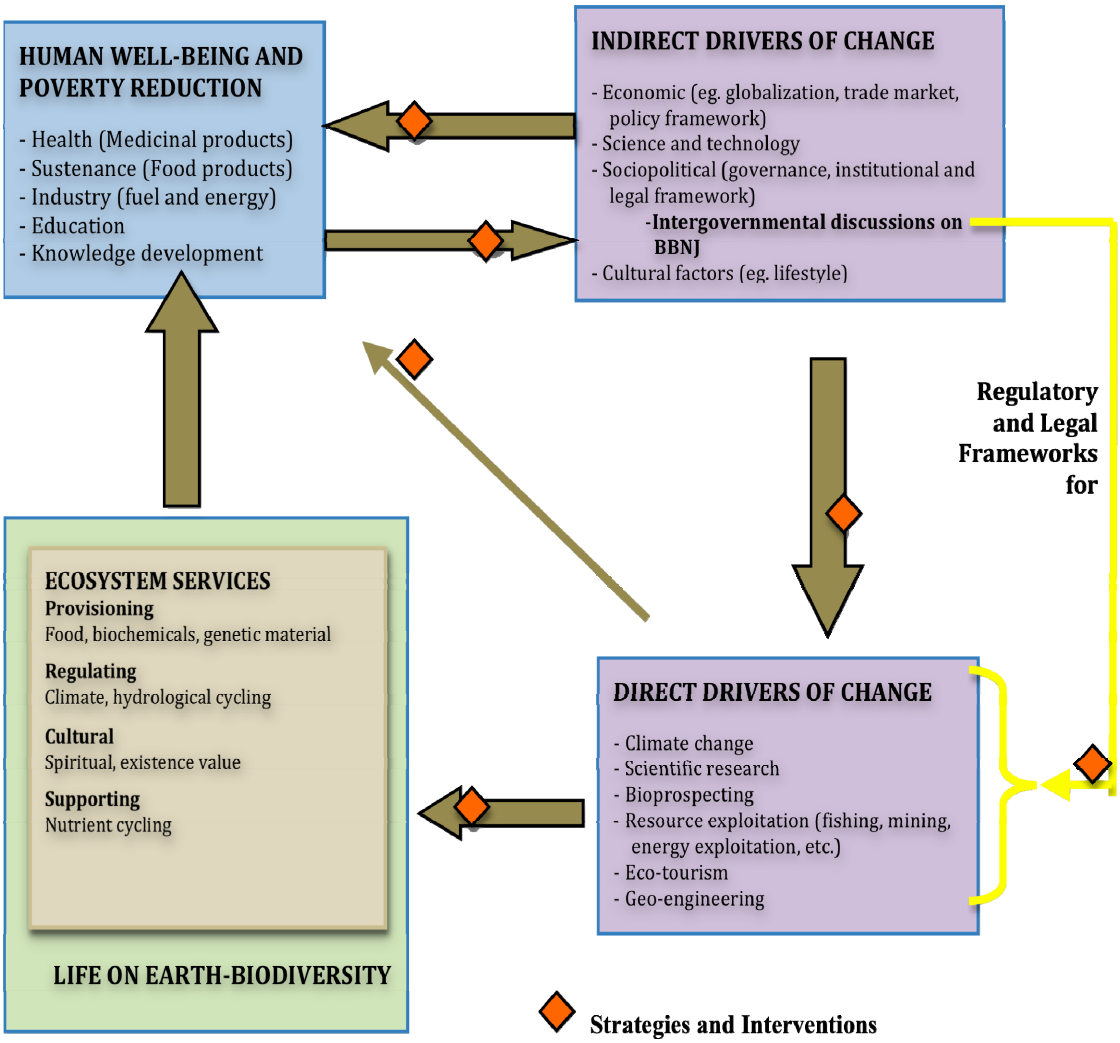

Figure 2. Conceptual framework of interactions between marine biodiversity in areas beyond national jurisdiction, ecosystem services, human well-being, and drivers of change. Source: Adapted from Millennium Ecosystem Assessment 2005.

In light of the key role of the intergovernmental discussions on marine biodiversity beyond national jurisdiction, there is a central need to develop a fuller understanding of the policy preferences of States in these debates on the major issues-

areas discussed, with a view towards identifying areas of commonality and potential elements of agreement in order to address the major concerns associated with areas beyond national jurisdiction.

1.1 The Global Regime for Marine Areas Beyond National Jurisdiction

The international framework is composed of a complex web of global and regional instruments addressing various issues and activities associated with ABNJ (see Table 1). UNCLOS is the main instrument addressing ocean issues and outlines the international legal framework for ABNJ. Therefore, UN fora host the most comprehensive and direct intergovernmental discussions on these issues and have proven instrumental in facilitating robust intergovernmental dialogue and debate on issues related to marine areas beyond national jurisdiction. As well, there are a number of other multilateral agreements that address marine areas beyond national jurisdiction and/or activities impacting biodiversity beyond national jurisdiction, such as the Convention on Biological Diversity (CBD), the Convention on Migratory Species, and various Regional Seas Conventions. Therefore, there are a number of global and regional intergovernmental processes held under the auspices of various mechanisms that also host discussions on issues related to BBNJ.

Discussions on means to improve governance of marine biodiversity beyond national jurisdiction arose primarily in the context of the Convention on Biological Diversity, specifically at the second meeting of the Conference to the Parties (COP-2) in 1995, where Parties discussed issues related to the genetic resources of the deep seabed. In parallel to the discussions within the CBD, the UN Secretary-General drew the attention of the UN General Assembly to these issues at its fiftieth session. In 1996, reporting to the 5th Meeting of the Parties to UNCLOS and referring to the discussions

within the CBD, he urged States Parties to UNCLOS which are also Parties to the Convention on Biological Diversity to coordinate their activities with respect to the relationship between the two conventions, and the identification of additional measures that may need to be taken, including the possible development of new or additional international rules. The Secretary-General again raised the issue of deep seabed biodiversity beyond national jurisdiction at the fifty-first session of the UN General Assembly. Issues related to marine biodiversity beyond national jurisdiction also arose in the third meeting of the United Nations Open-ended Informal Consultative Process, held in 2002, at which it was recommended that various global and regional bodies consider how to address management issues related the protection and preservation of vulnerable ecosystems and that the UN General Assembly should encourage relevant bodies to consider urgently ways to address threats to marine biodiversity of seamounts and certain other underwater features within the framework of the Convention. The UN General Assembly took up this recommendation at its fifty-seventh session and encouraged relevant international organizations consider urgently ways to integrate and improve, on a scientific basis, the management of risks to these ecosystems (CBD 2003)

The fifth meeting of the UN Informal Consultative Process on the Oceans and the Law of the Sea (UNICPOLOS) in 2004 also discussed threats to biodiversity in ABNJ. In light of the growing international attention on the need to address issues related marine biodiversity beyond national jurisdiction, the 59th Session of the UNGA created the UN Ad Hoc Open-ended Informal Working Group of the General Assembly to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction (UN BBNJ Working Group) to host more robust intergovernmental discussions on ABNJ issues and address key questions and areas of uncertainty in support of the UN General Assembly.

The UN BBNJ Working Group has met four times since 2006 and hosts the most comprehensive intergovernmental discussions on ABNJ issues. Valuable dialogue on these issues also continues to be held in the UN General Assembly, the UNICPOLOS, and the meetings of the Conference of the Parties to the CBD, among other fora, although some disagreement has arisen as to appropriateness of the CBD as a forum for discussing issues related to the international legal framework for ABNJ. Therefore, the intergovernmental discussions of the UN BBNJ Working Group, the UNGA, and the UNICPOLOS are currently the main global intergovernmental fora addressing the spectrum of legal, policy, and scientific issues associated with marine biodiversity beyond national jurisdiction.

Table 1. Human activities and the major conventions governing them in areas beyond national jurisdiction. Source: adapted from Kimball 2005.[*]

Activities/Threats	Major Legal Instruments
Fishing Overfishing Bycatch Destructive fishing practices Marine debris Illegal, unreported, and unregulated fishing (IUU)	--UNCLOS --International Convention for the Regulation of Whaling --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 --FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas --Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing --Regional Fisheries Management Conventions (implemented by Regional Fishery Bodies (RFBs) and Regional Fishery Management Organizations (RFMOs))

[*] The CBD also obliges States Parties to individually apply relevant provisions to activities and processes under their jurisdiction or control and to cooperate in the conservation and sustainable use of biodiversity. It does not regulate these activities per se beyond national jurisdiction.

Table 1 (Continued)

Activities/Threats	Major Legal Instruments
Mineral Exploitation Physical destruction Pollution (chemical and noise) Sediment plumes	--UNCLOS and the Agreement relating to the Implementation of Part XI of UNCLOS --International Seabed Authority rules and regulations
Shipping Pollution; marine debris Alien species Noise Physical impacts on megafauna	--UNCLOS --International Maritime Organization (IMO) conventions: -MARPOL 73/78 -International Convention for the Control and Management of Ships Ballast Water & Sediments --IMO measures
Bioprospecting Physical impacts Potential large-scale harvesting	--UNCLOS --Antarctic Treaty System
Submarine cables Potential physical impact	--UNCLOS
Energy exploitation Physical impact Pollution Disaster risk	--UNCLOS and Agreement relating to the Implementation of Part XI of UNCLOS --IMO Conventions --International Seabed Authority rules and regulations
Marine Scientific Research Potential physical destruction	--UNCLOS --Antarctic Treaty System --International Seabed Authority rules and regulations
Open Ocean Aquaculture Pollution Disease Escape of alien species	--UNCLOS --IMO Conventions
Dumping Pollution Physical impact (smothering)	--UNCLOS --Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and 1996 Protocol --Regional Seas Conventions/protocols/annexes

1.1.1 MARITIME ZONE DELIMITATION UNDER UNCLOS

The international framework for marine areas beyond national jurisdiction is largely articulated in the United Nations Convention on the Law of the Sea (UNCLOS). The global community has recognized UNCLOS as providing the "legal framework for all activities in the oceans and seas" and that "any action relating to the conservation and sustainable utilization of marine biodiversity beyond areas of national jurisdiction should be consistent with its legal framework" (UNGA 2009). There are a number of provisions within UNCLOS that apply explicitly to marine areas beyond national jurisdiction and others that are centrally relevant to the major concerns facing the living resources of these areas.

UNCLOS provides a legitimate and internationally recognized system of maritime jurisdiction delimitation, outlining the sovereign rights of States to explore, exploit, conserve, and manage the natural resources within 200 nautical miles of their coastline (also known as the Exclusive Economic Zone or "EEZ") (Part V, Article 56). UNCLOS delineates marine areas beyond the EEZ into two separate legal entities, the water column beyond 200 nautical miles (called the "High Seas") and the seabed and subsoil beyond national jurisdiction (called the "Area"), each having their own respective legal regimes within the Convention.

Part VII of the Convention, which addresses the area known as the High Seas, provides for the freedom of navigation, overflight, laying of submarine cables, construction of artificial islands (subject to the provisions of Part VI), fishing, and scientific research in this area (Article 87). These freedoms are to be enjoyed by States, provided that the High Seas are used for peaceful purposes and that no State lays claim to sovereignty in this area (Article 88, 89). The legal regime for the Area is put forth in Part

XI of the Convention along with the subsequent Part XI Implementation Agreement. Jointly, these provisions hold that the Area and its resources (defined by Article 133 as "all solid, liquid or gaseous mineral resources *in situ* in the Area at or beneath the seabed, including polymetallic nodules") are considered the "common heritage of mankind", which entails that "all rights in the resources of the Area are vested in mankind as a whole" and that any benefits deriving from the utilization of the Area's resources are to be shared among humankind. Part XI establishes the International Seabed Authority (ISA) and gives it jurisdiction over the Area and the responsibility to operationalize the provisions of the "common heritage of mankind" principle for the Area.

1.1.2 THE DEBATED LEGAL REGIME FOR MARINE GENETIC RESOURCES OF THE AREA

The provisions of UNCLOS for the two different legal entities of ABNJ, the High Seas and the Area, are at the base of a heated international debate on the applicable legal regime for the marine genetic resources (MGRs) of the Area. Marine genetic resources, defined by the Convention on Biological Diversity as material of plant, animal, microbial, or other origin containing functional units of heredity that are of actual or potential value, have become a prominent issue in these debates (Convention on Biological Diversity, Article 2). The scientific importance and commercial potential of the unique biochemical traits of organisms from deep sea and open ocean areas is gaining increasing recognition. Private companies, typically in conjunction with scientific research organizations, are actively harvesting deep sea organisms, extracting their unique biochemicals, and developing them into commercial products for use in the pharmaceutical, agricultural, and cosmetic industries, among others (Arico and Salpin 2005). However, the legal status of MGRs and the activities that constitute the search and exploration for them (known as bioprospecting) have become a major source of debate as

there is no clear reference to either genetic resources or bioprospecting in UNCLOS. Given the potentially significant social and economic benefits to be derived from the utilization of marine genetic resources, the relevant legal regime for MGRs has become one of the most heavily debated topics in these discussions.

There is currently disagreement among States as to whether the legal provisions for the Area, as defined in UNCLOS, applies only to the non-living resources of the Area or to the Area's living resources as well, particularly its genetic resources. Many States hold that the "common heritage" principle applies only to the mineral resources of the Area, as defined in Article 133 of Part XI, and that the genetic resources of the seabed beyond national jurisdiction are subject to the High Seas regime, as outlined in Part VII. Other States hold that the drafters of the Convention had not considered the possibility of MGRs when developing the legal regime for the Area and that the "common heritage" principle applies to all resources and activities in the Area, as described in Article 134. These States hold, furthermore, that the benefits derived from the utilization of genetic resources of the seabed are to shared among humankind. Many hold that operationalizing the common heritage of mankind principle for MGRs should entail the development of a regime for regulated access to these resources and the equitable sharing of the benefits arising from their utilization, otherwise known as access and benefit-sharing (ABS). Proposals for an ABS regime for MGRs has become an especially politically contentious area of debate as States on both sides of the debate see either the development of ABS for MGRs, or the absence of an ABS regime as a violation of their rights under UNCLOS.

Exploration, exploitation and commercial development of MGRs require a significant degree of financial resources, technological capacity, and technical expertise possessed only by industrialized developed States. A clear division between developed

and developing States has arisen as a result of the exclusive nature of this industry, with developed States supporting the application of the High Seas provisions of UNCLOS to MGRs and developing States supporting the application of the legal regime of the Area. The potential environmental and ecological impacts of bioprospecting for MGRs through, for example, the removal of parts of the substrate and/or of the associated fauna, in-situ experiments causing alterations in temperature, light, and noise, pollution in the form of debris or biological contamination due to disposal of biological material from other areas (Arico and Salpin 2005), has further driven the concerns of developing States regarding adverse impacts on resources that they hold to be common property.

In addition to governments, MGR-related issues have also become a prominent area of research and analysis, with various legal and policy experts examining applicable legal provisions and associated practical issues.

An analysis by Glowka in 1996 served to focus growing attention on MGR issues. He examined the issue of marine genetic resources beyond national jurisdiction in "The Deepest of Ironies", in which he made four central points: First, that the deep seabed was not a biological desert and was full of life, as opposed to previously held theories; second, the negotiators of UNCLOS were unaware of the Area's genetic resources and had rather focused on its mineral resources; third, the Area's genetic resources were its most immediately exploitable and potentially lucrative natural resource; and fourth, a process was needed to clarify the legal and institutional issues surrounding the use of the Area's genetic resources. Glowka proposes an intergovernmental review of the "desirability of maintaining the legal status of the Area's genetic resources within the high seas legal regime" in connection with an analysis of means of operationalizing the common heritage principle for the Area's genetic

resources. He also emphasized the need for a thorough review of activities involving the Area's genetic resources.

Glowka (2010) returns to this issue in his work "Evolving Perspectives on the International Seabed Area's Genetic Resources: Fifteen Years after the 'Deepest of Ironies" to address the issue of fair and equitable utilization of the Area's genetic resources in light of the inability of governments to reach consensus on the applicable legal regime for MGRs following years of debate. Glowka notes that the information derived from research activities of the Area's genetic resources is increasingly shifting to the realm of bioinformatics, information which can be made available through online databases. In lieu of a legal or institutional approach to access and benefit-sharing, Glowka notes the opportunity to derive a set of global principles that would support fair and equitable access to the Area's genetic resources as well as the need to ensure that continued access is not undermined by subsequent uses of intellectual property rights. These principles would be based on the interpretation of existing international obligations and would be underpinned by the understanding that access to the Area's biological materials and associated information is the primary benefit to be derived from marine scientific research in the Area. He notes that "the end result could be *de facto* recognition of the Area as a 'biological commons' which would avert the need to legally enclose one of the world's last open-access genetic commons through additional regulation and dramatically new or expanded institutional mandates." These principles could form the basis for an agreed-upon interpretation by the UN General Assembly or the parties to UNCLOS regarding the Area and its genetic resources, whose implementation could be monitored by UNESCO's Intergovernmental Oceanographic Commission.

Scovazzi (2010) outlines some of the major difficulties inherent in the legal regime for bioprospecting and marine genetic resources in areas beyond national

jurisdiction. Noting the evolutionary nature of international law and, in lieu of supporting a specific interpretation of UNCLOS regarding marine genetic resources, he focuses on the importance of State practice in making one interpretation prevail ("evolution by interpretation"). He goes on to state that, "Where the LOS Convention does not provide any clearly defined regime, customary rules can develop elsewhere." This analysis sidesteps some of the contentious legal issues but, in many ways, does not address the exclusive nature of industries and activities in areas beyond national jurisdiction in that a relatively small group of developed States possess the financial and technical capabilities to perform activities in these areas and could, thus, drive the development of international law through customary practice.

In 2007, David Leary addressed the issue of marine genetic resources as an area of significant international debate. He suggests avoiding the complications of the debate surrounding the common heritage of mankind by developing a global commons trust fund linked to international and national legal regimes for the granting of patents for marine genetic resources of the deep seabed. This option would not impinge on the sovereignty of States, as these resources are, by definition, not within the sovereign territory of any State. Leary proposes that the granting of a patent for a marine genetic resource could be made conditional on payment of a royalty to the global commons trust fund (Leary 2007).

In 2010 Leary further discusses this issue, positing whether commercial interest in deep sea genetic resources justifies a new protocol to UNCLOS, as many States have proposed, noting that our knowledge of the long-term commercial potential of these resources is currently limited. He goes on to state that the debates surrounding the "common heritage of mankind" principle are somewhat futile as the implementation of future provisions of the principle as it would apply to genetic resources is very unclear

and there is no mechanism in UNCLOS to regulate access and provide for benefit-sharing. Leary holds that the view that the common heritage principle as the only solution to this issue is an overly fundamentalist approach that ignores many other practical solutions. Leary, therefore, advocates a rigorous and detailed analysis of other potential options for addressing the issues surrounding marine genetic resources of the seabed beyond national jurisdiction (Leary 2010).

In addition to debates on the legal regime for marine genetic resources of the Area, there are a number of other topics under discussion in this issue-area. The existence of potential legal and policy gaps for the MGRs of the Area was one of the initial driving forces for proposals to consider developing a new instrument in the context of UNCLOS to address potential gaps and weaknesses in the existing framework, which becomes one of the central contentious elements in the debates. Some States also highlight the importance of the scientific information of MGRs and focusing on the value of this information, rather than on the economic benefits to be derived from MGRs. Another topic of discussion, particularly among developing States, is potential approaches to benefit-sharing for MGRs, including different types of intellectual property rights instruments that could potentially facilitate benefit-sharing for MGRs.

1.1.3 MARINE SCIENTIFIC RESEARCH IN AREAS BEYOND NATIONAL JURISDICTION

Somewhat related to the issues associated with MGRs are discussions surrounding marine scientific research in ABNJ. Despite ongoing research efforts, knowledge of open ocean and deep sea ecosystems is still largely deficient. Ongoing research expeditions continually provide new insights into these remote areas and the nature of society's interaction with them. Improvements in technological capabilities and

increased funding for research have supported the expansion of scientific research activities, as illustrated by initiatives such as the Census of Marine Life, a globally-coordinated 10-year scientific initiative to assess the diversity, distribution, and abundance of life in the oceans, which focused much effort on deep-sea research. However, scientific research activities can potentially have an adverse impact on marine biodiversity and ecosystems, if conducted inappropriately, through the introduction of light, noise, heat, smothering, physical disturbance from sediment removal or dispersal, the deposit of debris and/or chemical contamination (UNGA 2009). At present, however, the severity of these impacts in areas beyond national jurisdiction is largely unknown.

Various international instruments address the importance of marine scientific research activities as well as the obligation for States to ensure that these activities do not cause undue harm to the marine environment. Part XIII of UNCLOS outlines the need to "promote and facilitate the development and conduct of marine scientific research in accordance with this Convention" (Article 239), provides all States with the right to conduct marine scientific research in the High Seas and the Area (Article 256, Article 257) and declares that States "shall be responsible for ensuring that marine scientific research, whether undertaken by them or on their behalf," is conducted in accordance with the Convention (Article 263), including obligations to "protect and preserve the marine environment" (Article 192). The Convention on Biological Diversity, a framework convention aimed at ensuring the conservation and sustainable utilization of biological diversity, also obliges Parties to prevent harmful impacts on the marine environment from human activities in ABNJ. Contracting Parties are also required to implement the CBD with respect to the marine environment consistently with the rights and obligations of States under UNCLOS (Art. 22). Although the provisions of the CBD do not apply explicitly to the components of marine biodiversity in areas beyond national

jurisdiction, it is the responsibility of State Parties to the CBD to ensure that activities carried out under their jurisdiction or control, within or beyond national jurisdiction, do not adversely impact biodiversity (Art. 4).

This issue has become a central topic of debate in the intergovernmental discussions on BBNJ. Many States support more stringent regulation of scientific research that may impact sensitive habitats and species, while others are concerned that unnecessary regulations may hamper research and hinder the provisioning of benefits to be gained from these activities, and want to ensure that any mechanisms aimed at regulating research are consistent with the provisions of international law. States also discuss various means of operationalizing governance principles, such as the precautionary approach and the ecosystem-based approach, with respect to marine scientific research in ABNJ. Developing States also emphasize the need for capacity building for marine scientific to allow all States to equitably access these resources.

1.1.4 DEEP-SEA MINING IN AREAS BEYOND NATIONAL JURISDICTION

The legal regime for the Area, as outlined in Part XI, is the result of years of complex negotiations and trade-offs originally driven by prospects for deep seabed mining, which was perceived at the time of the UNCLOS negotiations to be a significant near-term possibility. It is interesting, in this respect, that deep seabed mining is still largely prospective, due to high costs and technical difficulties, and discussions on these legal provisions have instead focused on their potential applicability to MGRs. Nonetheless, there has been growing interest in recent years in the mineral resources of the Area as technological developments progressively lower the potential costs of these activities.

As previously noted, the mineral resources of the deep seabed and subsoil beyond national jurisdiction are delineated in UNCLOS as the "common heritage of mankind" (Article 136, Part XI). UNCLOS gives the International Seabed Authority (ISA) regulatory authority over mining in the deep seabed beyond national jurisdiction (or the "Area") and the authority to implement the equitable sharing of benefits deriving from these activities. However, there is increasing concern over the potential environmental impacts of these activities, as proposals have been put forth for future mining the Area. In this respect, there are ongoing discussions within the ISA on means to mitigate adverse environmental and ecological impacts from mining and prospecting for mineral resources in the Area (UNGA 2010).

While governance and regulation of deep-sea mining in ABNJ is not specifically highlighted as a major topic of discussion, States discuss various means by which to achieve cross-sectoral collaboration between management of mining in ABNJ and other sectoral activities that may adversely impact marine biodiversity and ecosystems in ABNJ. Some States hold that cross-sectoral mechanisms at various scales are the ideal means to achieve an integrated approach, while others maintain that the integrity of sectoral bodies should be upheld and that cross-sectoral coordination should be accomplished through various sectoral mechanisms.

1.1.5 THE INTERNATIONAL FRAMEWORK FOR HIGH SEAS FISHING

Commercial fishing is one of the most socially and economically valuable uses of the ocean, but also presents the most direct and pressing threats to the health and well-being of marine ecosystems. Although the majority of commercial fishing takes place within EEZs, the continued growth of high seas fishing, and difficulty in

monitoring and enforcing management in ABNJ, has raised concerns related to high seas fishing among the global community.

The commercial fishing industry in marine areas beyond national jurisdiction has seen consistent growth in recent years. In 2009, the FAO reported that the global catch of deep-water fish species had more than doubled since 1999 (see Figure 3). In response to growing concerns regarding overfishing in the early 1990s, States adopted the 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, also known as the UN Fish Stocks Agreement (UNFSA), in 1995 as an Implementation Agreement to UNCLOS. In light of the need for more consistent and coherent management in both national and international waters, and the lack of clear policy guidance extending from UNCLOS, the UNFSA imposes more stringent obligations on coastal and fishing nations with respect to the management of highly migratory and straddling fish stocks. It incorporates modern precautionary and ecosystem-based principles and is designed to ensure the long-tern sustainability of global fish stocks (UNEP 2006).

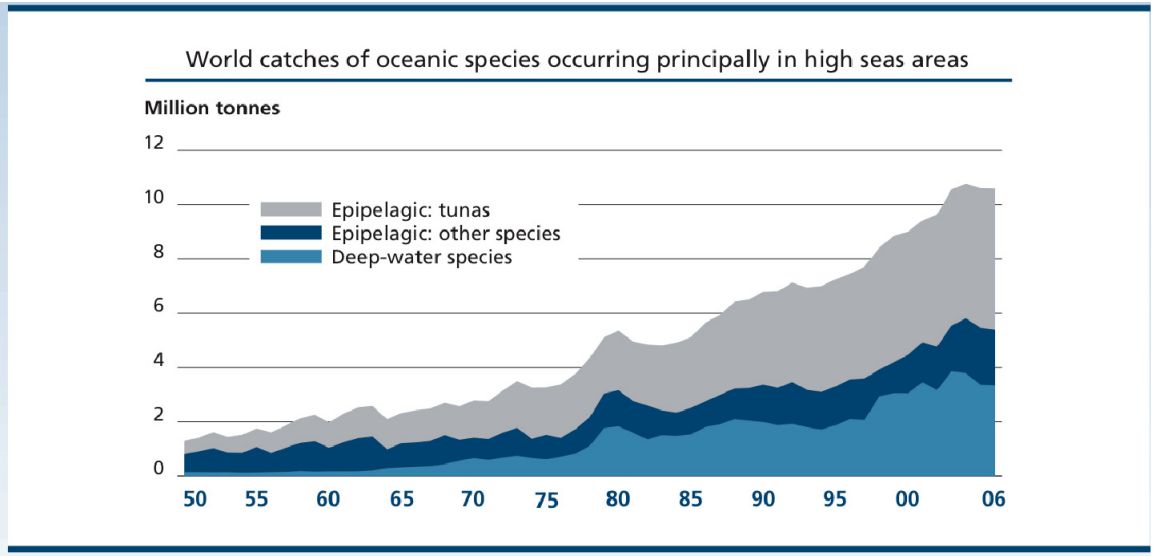

Figure 3. World catch of oceanic species occurring principally in the high seas. Source: FAO 2009 (Courtesy of the Food and Agriculture Organization of the United Nations).

As the main international organization tasked with carrying out much of the technical work on international fisheries management, the Food and Agricultural Organization (FAO) serves as a primary platform for discussing and facilitating the implementation of the global framework for the regulation of fishing activities. A number of significant multilateral agreements have been negotiated under the auspices of the FAO, some of which have been aimed at addressing concerns associated with high seas fishing.

In November 1993, the FAO approved Resolution 15/93, or the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, also known as the FAO Compliance Agreement. The Agreement requires State parties to take measures to ensure that fishing vessels that fly

their flag do not engage in any activity that undermines the effectiveness of international conservation and management measures. Furthermore, it holds that no State party should allow any of its vessels to be used for high-seas fishing unless the vessel has been authorized to do so by an appropriate authority of the party. It also establishes a system of information exchange on high seas fishing activities designed to improve compliance by high seas fishing vessels and to limit the freedom of vessels that have a poor compliance record to reflag* their vessel (Lutgen 2010).

In 1995, the FAO developed the Code of Conduct for Responsible Fisheries, which sets out principles and international standards of behavior for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources. It is the responsibility of governments to implement the Code, but the FAO also promotes the implementation of the code through field project activities and programs, dissemination of technical documentation, and participation in Regional Fisheries Management Organizations (RFMOs). The FAO Compliance Agreement was formally integrated as part of the Code of Conduct for Responsible Fisheries when it was adopted in 1995.

In an effort to combat the growing issue of illegal, unreported, and unregulated (IUU) fishing, the FAO developed the International Plan of Action to Prevent, Deter, and Eliminate IUU Fishing (IPOA-IUU), which provides States with comprehensive, effective and transparent measures by which to act, including through appropriate regional fisheries management organizations to address the major drivers of IUU fishing. The Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated Fishing was approved by FAO Parties in 2009 as

* Reflag- to change the flag of one's vessel to that of a State that is not a party to international high seas fisheries conservation agreements in order to avoid fishing restrictions.

part of ongoing efforts to facilitate government action to address IUU fishing.

In August 2008, FAO Members adopted the International Guidelines for the Management of Deep-sea Fisheries in the High Seas. These guidelines provide countries and regional fisheries management organizations with a voluntary tool through which to better manage high seas fisheries and to protect vulnerable marine ecosystems. The guidelines further define and develop criteria for the conduct of impact assessments for high seas bottom fisheries, and identification of vulnerable marine ecosystems (VMEs).

Regional Fishery Bodies (RFBs) and Regional Fisheries Management Organizations (RFMOs) have made efforts to ensure sustainable fishing practices by member States and identify special areas in need of protection, although these efforts have seen varying success. RFBs undertake activities such as establishing catch limits for specific fisheries and delineate fishery closures for specific vulnerable marine ecosystems. The Northeast Atlantic Fisheries Management Commission (NEAFC), the Northwest Atlantic Fisheries Organization (NAFO), the South East Atlantic Fisheries Organization (SEAFO), and the Western and Central Pacific Fisheries Commission have instituted fishery closures in sensitive marine areas in the high seas.

Despite the existence of a comparatively robust international framework for high seas fishing, high seas fishing still results in adverse environmental and ecological impacts. Destructive fishing practices (such as bottom trawling) continues to cause severe physical damage to many deep sea habitats and species, including in areas beyond national jurisdiction. Incidental capture of non-target species as well as illegal, unreported, and unregulated (IUU) fishing activities in the high seas have also become major areas of concern and threaten the sustainability of global marine fish stocks.

Issues related to high seas fish stocks and commercial fishing in ABNJ have, therefore, continued to be a prominent area of intergovernmental discussion and debate.

There is robust discussion on issues such as various means address illegal, unregulated, and unreported (IUU) fishing, destructive fishing practices such as bottom-trawling, issues related to flag and port State enforcement of management provisions, means to improve the capacity of developing States to adequately implement duties and responsibilities under the international framework, and the potential need to review the mandates and improve the effectiveness of RFBs and RFMOs. States also discuss means to better integrate modern management principles, such as the ecosystem-based approach and the precautionary approach into fisheries management at various scales.

1.1.6 BIODIVERSITY-RELATED AGREEMENTS

In addition to UNCLOS and the various provisions for high seas fisheries, there are also a number of international instruments addressing biodiversity-related issues associated in ABNJ.

The Convention on Biological Diversity is highly relevant, in this respect, as Contracting Parties are to ensure that activities carried out under their jurisdiction or control, within or beyond national jurisdiction, do not adversely impact biodiversity (Art. 4), and are required to implement the CBD with respect to the marine environment consistently with the rights and obligations of States under UNCLOS (Art. 22). Contracting parties are also required to "cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity" (Art. 5). In 2006, Parties agreed that the CBD has a key function to perform in supporting the BBNJ Working Group by providing scientific and technical information and advice relating to marine biodiversity, the application of the ecosystem and precautionary approaches, and the delivery of the 2010

target set by the 2002 World Summit on Sustainable Development for ecosystem-based management of the world's oceans (CBD 2006).

The 1979 Convention on Migratory Species (CMS) is a framework convention requiring "Range States" to protect migratory species as well as their habitats. "Range States" includes any State whose flagged vessels are engaged in the exploitation of a migratory species, including in areas beyond national jurisdiction. The CMS explicitly encourages Range States to conclude regional agreements for the protection of migratory species and, therefore, serves as a viable mechanism for regional cooperation in the protection of marine species beyond national jurisdiction.

The 1973 Convention on Trade in Endangered Species (CITES) was drafted and implemented in response to concerns regarding the potentially adverse impacts of unregulated international trade in wild species of flora and fauna. In recognition of the importance of international trade to the health and well being of global biodiversity, CITES establishes the international legal framework for the prevention of trade in endangered species and for regulation of trade in species that might become endangered in the absence of appropriate regulation. With regards to the high seas, CITES contains a provision, called "introduction from the sea" (Article 1), related to the import of a species that is taken from "the marine environment not under the jurisdiction of any State". There is, however, debate with respect to the implementation of this provision of CITES due to the lack of definition for what constitutes "the marine environment not under the jurisdiction of any State" (UNEP 2006).

One of the main issues related to the international framework for marine biodiversity as it applies to ABNJ is what many governments and stakeholders see as the lack of comprehensive and cohesive guidance in terms applying the various biodiversity-related instruments to areas beyond national jurisdiction and the lack of adequate

integration of biodiversity considerations in many sectoral management frameworks in ABNJ. States differ as the appropriate means to address these issues, with some calling for a new overarching global mechanism that would, among other goals, provide clear guidance for integrating biodiversity-related concerns in the governance framework for ABNJ. While other States argue for more concerted attention on biodiversity-related issues through sectoral mechanisms.

1.1.7 MARITIME TRANSPORT IN AREAS BEYOND NATIONAL JURISDICTION

Maritime transport, or shipping, is also a prominent concern for the conservation and sustainable use of marine biodiversity in ABNJ. Shipping accounts for roughly 90% of global trade by weight and is a critical factor of the global economy. However, the environmental impacts of shipping activities on marine areas beyond national jurisdiction, such as impacts from chemicals used in anti-fouling systems and pollution from oil spills, have long been a notable concern for the global community.

Shipping pollution on the high seas is regulated by the MARPOL 73/78 Convention, which has been ratified by 136 countries, representing 98% of the world shipping tonnage. The International Convention for the Control and Management of Ships Ballast Water and Sediments (Ballast Water Management Convention), which was adopted at a Diplomatic Conference of the International Maritime Organization in 2004 but has yet to be ratified by the sufficient number of States to come into force, aims to reduce and eliminate the transfer of harmful aquatic organisms and pathogens through ballast water. As ballast water transfer practices are frequently undertaken beyond national jurisdiction, this Convention has implications for high seas biodiversity.

Discussions on shipping-related impacts on the marine environment in ABNJ are largely held under the auspices of the IMO and do not factor prominently into the

intergovernmental discussion on ABNJ. Nonetheless, improving the implementation of sectoral management tools, including through the coordination with other global and regional bodies is a major focus of discussion in various intergovernmental fora addressing ABNJ issues.

1.1.8 NEW AND EMERGING ACTIVITIES

Stimulated largely by recent technological developments, some have proposed various new and emerging activities in deep sea and open ocean areas. As there is little or no experience with conducting these activities in ABNJ, there are growing concerns among the global community regarding the applicability of the international ABNJ framework to these activities and the ability of existing provisions to ensure that, if conducted, they do not adversely impact the marine environment.

Concerns over the impacts of climate change are focusing increased attention on various geoengineering techniques, which refers to engineering of the environment in order to combat or counteract the effects of changes in atmospheric chemistry, to address rising concentrations of greenhouse gases (GHG) in the atmosphere. Geoengineering approaches, such as carbon sequestration and storage (CCS) and iron fertilization, have demonstrated preliminary potential to combat rising concentrations of carbon dioxide in seawater, but may also adversely impact marine biodiversity and ecosystems (Royal Society 2009). Other proposed activities, including open ocean aquaculture, energy exploitation, and deep sea tourism, may also negatively impact marine biodiversity and ecosystems, although relatively little of known regarding the severity and nature of these impacts due to limited experience.

Some international processes have begun to address new and emerging activities. In 2007, the Parties to the London Convention and London Protocol for Marine

Dumping (LC/LP) concluded in that, given the present state of knowledge, ocean fertilization activities other than legitimate scientific research should not be allowed. Similarly, the Parties to the CBD recently declared that iron fertilization should not take place "...until there is an adequate scientific basis on which to justify such activities, …with the exception of small scale scientific research studies within coastal waters" (CBD Decision IX/16).

Other new and emerging activities such as ecotourism of deep sea ecosystems and offshore energy exploitation in ABNJ, also present potential policy issues surrounding the potential and unforeseen impacts of these activities. In the intergovernmental discussions on ABNJ, States have articulated the importance of focusing on new and emerging issues to research the potential adverse impacts of these activities, weighed against the potential benefits to be gained, and to ensure that there are adequate and appropriate regulatory mechanisms in place to address these impacts. Many States have highlighted the need for an adequate regulatory framework to address potential adverse impacts of new and emerging activities, including regulatory frameworks for pilot projects scale to allow for an improved understanding of potential impacts.

1.1.9 PRINCIPLES FOR EFFECTIVE GOVERNANCE AND MANAGEMENT

Much of the intergovernmental discussions also focus on applicable principles for effective governance and management in ABNJ; the most prominent of these being the integrated approach, the ecosystem-based approach, and the precautionary approach.

The importance of an integrated approach to ocean governance and management has also been stressed in much of the scholarly literature. The concept of

integrated ocean and coastal management was originally developed to support the management of coastal and nearshore areas. The integrated approach is also applicable in offshore areas and is being increasingly emphasized in the governance and management of marine areas beyond national jurisdiction. Cicin-Sain and Knecht define the concept of integrated coastal and ocean management as "a continuous and dynamic process by which decisions are made for the sustainable use, development, and protection of coastal and marine areas and resources" and one that is "designed to overcome the fragmentation inherent in both the sectoral management approach and the splits in jurisdiction among levels of government at the land-water interface" (Cicin-Sain and Knecht 1998). Achieving integration in areas beyond national jurisdiction will likely entail differing considerations than in coastal and nearshore areas, however, the guiding principles will be the same. Enforcement issues, as well as legal uncertainties and potential gaps in the international regime for areas beyond national jurisdiction may make an integrated approach difficult to achieve in these areas. However, this does not take away from the inherent benefits of the integrated approach and the opportunities for more holistic and effective management presented by cross-sectoral management.

The ecosystem approach is frequently emphasized as an essential aspect for viable ocean governance. The ecosystem approach, as defined in the Convention on Biological Diversity (CBD), is "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (Decision V/6 of the Conference of the Parties to the CBD). It is based on the application of appropriate scientific methodologies focused on various levels of biological organization, which encompass the essential processes, functions and interactions among organisms and their environment (Vierros et al. 2006). The Conference of the Parties to the CBD, at its fifth meeting, endorsed operational guidance for the ecosystem approach

and recommended the development and application of further principles and guidance for its implementation (CBD Decision V/6).

The precautionary approach holds that, when there is a risk of adverse of irreversible environmental impact, even in the absence of scientific proof of such impact, precautionary measures should be taken to ensure that impacts do not occur. The precautionary approach was first endorsed internationally by the World Charter for Nature, which was adopted by the UN General Assembly in 1982, and has been subsequently highlighted and emphasized in a number of international conventions, such as the 1992 Rio Declaration on Environment and Development, regional conventions and strategies, and national frameworks. In ABNJ, the precautionary approach has been centrally emphasized as a basis for management for deep sea fisheries, as emphasized in UNGA Resolutions 61/105 and Resolution 64/72 and is typically operationalized in many sectors through preliminary impact assessment for proposed activities.

Although intergovernmental discussions have focused primarily on the three principles noted above, others have articulated sets of principles to be emphasized in ABNJ. The International Union for the Conservation of Nature (IUCN) has put forth "10 Principles for High Seas Governance", which are as follows (Freestone 2009):

1) Conditional freedom on the high seas
2) Protection and preservation of the marine environment
3) International cooperation
4) Science-based approach to management
5) Public availability of information
6) Transparent and open decision making processes
7) Precautionary approach
8) Ecosystem approach

9) Sustainable and equitable use

10) Responsibility of States as stewards of the global marine environment

There is general consensus among States to concertedly implement principles such as the integrated approach, the ecosystem-based approach, the precautionary principle, and the science-based management approach in ABNJ. However, in light of the limited practical experience in implementing various management measures in ABNJ and the present lack of scientific knowledge of marine biodiversity and ecosystems in the open ocean and deep sea, there are somewhat differing opinions regarding means to operationalize these principles for effective governance and management in ABNJ.

1.1.10 MODERN MANAGEMENT TOOLS IN AREAS BEYOND NATIONAL JURISDICTION

Significant discussion and policy analysis has focused on the need to implement various management tools in ABNJ, especially environmental impact assessments (EIAs) and marine protected areas (MPAs), to address prominent threats to marine biodiversity and ecosystems in ABNJ and ensure the sustainable use of living resources.

While EIAs have long been applied on land and in coastal and nearshore areas, there is currently minimal application of EIAs in marine areas beyond national jurisdiction. EIAs are gaining widespread support for their potential application in ABNJ, but the lack of experience in implementing EIAs in ABNJ, combined with inadequate knowledge of the vulnerability of deep sea and open ocean species and habitats, complicates the development of standardized methodologies to apply EIA in ABNJ. Progress has been made in developing guidelines for the application of EIA beyond national jurisdiction, but there remain important questions related to legal uncertainties, and practical issues related to reporting and enforcement that hinder the application of

this tool. In November 2009, the CBD convened an Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction, which addressed the considerations for implementing Environmental Impact Assessment in areas beyond national jurisdiction (CBD 2009b). Workshop participants reviewed the applicability of the CBD voluntary guidelines on biodiversity-inclusive impact assessment, noting the differences between areas within and beyond national jurisdiction and associated implications for the application of EIA beyond national jurisdiction. Workshop participants noted the significant differences in governance mechanisms and practical difficulties of the use of EIAs beyond national jurisdiction, such as the lack of binding legislation, the difficulty in defining stakeholders beyond national jurisdiction, and the comparatively higher cost of performing EIAs beyond national jurisdiction.

Area-based management tools, especially marine protected areas (MPAs), have become a prominent topic of discussion. There is some experience in implementing sectoral area-based management in ABNJ, through, for example, RFMOs and the IMO. There is, however, increasing interest in expanding the scope of existing capabilities for area-based protection in ABNJ and implementing more cross-sectoral management through MPAs that offer protection from impacts across sectors. As certain regional bodies, such as the OSPAR Commission, are moving forward in implementing marine protected areas in ABNJ, discussions on this topic have gained a greater sense of urgency. While some States support the use of cross-sectoral area-based management tools and want to more forward ambitiously with implementing them in ABNJ, others fear that implementing MPAs in ABNJ without a demonstrated vulnerability of marine ecosystems to environment impacts would not only inhibit their freedoms under international law, but needlessly hinder activities that may lead to significant social and

economic benefits with little environmental impact and hold that such management tools must have a strong scientific basis.

Game et al. (2009) support the development and implementation of marine protected areas in the open ocean, including areas beyond national jurisdiction, arguing that recent advances across conservation, oceanography and fisheries science provide the evidence, tools, and information to confirm pelagic MPAs as "defensible and feasible instruments for pelagic conservation." The authors do, however, address the challenges of establishing "pelagic protected areas" stemming from the high mobility of pelagic species, the relative lack of data on many of the world's open ocean areas, the lack of well-established design principles to inform the selection of pelagic protected areas, logistical enforcement difficulties, and the lack of a legal basis for high seas protected areas.

As ocean areas are becoming increasingly crowded, with more stakeholders vying for dwindling resources and space, marine spatial planning (MSP) is gaining increasing attention as a means to reduce user conflicts and mitigate cumulative impacts on the marine environment. Ardron et al. (2008) examine the potential applicability of MSP in the high seas. The authors highlight the importance of regional support through global programs, high-level global support and coordination, and reforming existing institutional arrangements to better support conservation and sustainable use of high seas biodiversity. Furthermore, the researchers identify key steps to undertake MSP beyond national jurisdiction:

- Begin practicing multi-sector cooperation and decision-making;
- Identify "vulnerable marine ecosystems" in the high seas and manage activities that may have significant adverse impacts to avoid such impacts; and
- Develop incentives and deterrents linked to codes of conduct.

As previously noted, some political obstacles come into play developing and implementing area-based management tools in ABNJ. Hislop (2007) proposes to overcome these political obstacles by proceeding incrementally with implementation on a small scale. Hislop suggests a prototype MPA established by means of a negotiated agreement between a small number of countries that share political will and technological capacity. This type of regional cooperation for area-based management in ABNJ is already being pursued in different areas around the world.

There is also increasing focus on the usefulness and policy relevance of partitioning open ocean and deep sea ecosystems based on biological and physical criteria through what is called "biogeographic classification", serving to identify broad patterns of co-occurrence of species, habitats and ecosystem processes to facilitate the identification of areas in need of protection. Rice et al. (2011) introduce a broad-scale biogeographic classification for the open ocean and deep seabed called the Global Open Ocean and Deep Seabed (GOODS) biogeographic classification system. Although biogeographic classification, in itself, is not management measure, by defining units where conditions and species are more alike than others, a biogeographic classification can be useful facilitating the development and implementation of MPAs in ABNJ.

While the need for integrated management and governance approaches have been emphasized in much of the literature, many also stress the need to improve sectoral authorities and processes as a means to address threats. Ridgeway notes that those engaged in broader oceans debate should look to the value of holistic, coherent sectoral approaches to management and that processes that can contribute to both sectoral outcomes as well as integrated management outcomes should be supported (Ridgeway 2008).

States in these debates have come to a general consensus to move forward in implementing management tools in ABNJ. The primary differences of opinion, in this respect, arise primarily from issues related to the scale and degree of regulation, with some States arguing for the widespread application of MPAs in ABNJ managed by a global mechanism, for example, while other States argue for management on a case-by-case basis and only where there is demonstrated threat to the marine environment, citing notable difficulties in monitoring and enforcement of management tools. There are also notable differences in opinion between States regarding cross-sectoral management approaches. Some States hold that cross-sectoral management tools are critical to effective management in ABNJ, while others hold that coordinated sectoral tools have a stronger foundation and experience in achieving conservation and sustainable use goals.

1.1.11 COOPERATION AND COORDINATION FOR IMPROVED GOVERNANCE AND MANAGEMENT

In light of the need to pursue a more integrated and ecosystem-based approach to ABNJ and to more effectively implement management provisions for multilateral governance, much of these discussions have focused on the need to identify means for States and competent organizations to improve cooperation and coordination with respect to research activities, and to governance and management in ABNJ.

There is a clear basis in international law for multilateral cooperation with respect to ABNJ, including through Part XII of UNCLOS, which obliges State parties to cooperate in the protection and preservation of the marine environment (Article 192), the promotion of marine scientific research, including through publication and dissemination of information and knowledge arising from marine scientific research (Article 244), and enforcement of management provisions (Article 235). State Parties are obliged to "cooperate on a global basis and, as appropriate, on a regional basis directly or through

competent international organizations" in the protection and preservation of the marine environment, taking into account characteristic regional features (Articles 197).

There is a strong basis in UNCLOS, as well as other international conventions, for regional multilateral cooperation. Article 237 of the Convention holds that Part XII is without prejudice to agreements relating to the protection and preservation of the marine environment that may be concluded in furtherance of the general principles of UNCOS. Article 311 states that agreements made between two or more State Parties cannot affect the rights of other State Parties outlined in the Convention. Taken together, these provisions leave States the discretion to conclude regional agreements between themselves, but that these agreements shall not affect the rights and obligations of other States and must be in accordance with the general principles of UNCLOS.

Regional cooperation has proven to be an effective approach in governance and management of the marine environment and resources. As States that share coastal borders and are located in similar areas often have similar concerns regarding the marine environment and capacity to enforce and implement management provisions, the regional approach is looked to by many to be a potentially viable means to address concerns related to biodiversity in areas beyond national jurisdiction, especially where there exists little prospect for global agreement on certain issues.

Some RFMOs have been very successful in facilitating regional cooperation to address concerns related to high seas fishing. There is also growing focus on the role of Regional Seas Conventions, which are often implemented by Regional Seas Programmes (RSP). RSPs address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment by engaging neighboring countries in comprehensive and specific actions to

protect their shared marine and coastal environment and resources. More than 140 countries participate in 18 RSPs, six of which are directly administered by UNEP: Caribbean, East Asian Seas, Eastern Africa, Mediterranean, North-West Pacific, and West and Central Africa (UNEP 2006). Some RSPs have been highly effective in catalyzing regional cooperation for the protection of the marine environment, especially in the utilization of area-based management tools. For example, the OSPAR Commission, an RSP that is tasked with implementing the Convention for the Protection of the Marine Environment in the North-East Atlantic, has established six marine protected areas in the high seas covering a total area of 285,000 km^2, protecting a series of seamounts and sections of the Mid-Atlantic Ridge. In the Mediterranean, the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean provides for the delineation of Specially Protected Areas of Mediterranean Importance, or SPAMIs. One of the existing SPAMIs, the Pelagos Sanctuary for Mediterranean Marine Mammals, provides for the protection of marine mammals and is comprised of 53% marine area beyond national jurisdiction. The protection and management measures applying in the SPAMI are those prescribed by the States proposing them, but all parties are to comply with such measures. In the Southern Ocean, the Commission for the Conservation of Marine Living Resources (CCAMLR) protects marine living resources in the waters surrounding Antarctica. In November 2009, CCAMLR established the world's first MPA in completely in marine areas beyond national jurisdiction near the South Orkney Islands. The South Orkney MPA covers roughly 94,000 km^2 and prohibits all forms of fishing and waste disposal. Progress is also being made in the Pacific Ocean, where 15 governments, including Australia, New Zealand, and Palau, have endorsed a draft framework for the long-term sustainable, and cooperative management of 38.5 million km^2 surrounding their collective islands, including marine areas beyond national

jurisdiction.

Although States strongly support the need for improved coordination and cooperation in ensuring the conservation and sustainable use of BBNJ, as well as in conducting and promoting scientific research, there are differences in opinion with respect to the means by which to achieve improved cooperation as well as the appropriate scale of collaboration with respect to governance and management for various tools. Similarly, States vary in their preferences and perspectives for how to proceed in governance and management of ABNJ at the regional level, with some preferring to avoid reliance on institutional mechanisms and preferring direct State cooperation. Some States also highlight the potential need for new mechanisms at various scales to facilitate more effective cooperation and coordination between States and relevant organizations.

1.1.12 CAPACITY BUILDING AND TECHNOLOGY TRANSFER

Capacity building, including transfer of technology, has been an important topic of discussion within the oceans community, especially as it pertains to areas beyond national jurisdiction. Part XIV of UNCLOS obliges State Parties to support development of the marine scientific and technological capacity of developing States. Article 16 of the Convention on Biological Diversity outlines similar provisions.

Capacity building has arisen as a central issue due partially to the inherent difficulty and high costs associated conducting operations and implementing and enforcing effective governance and management in remote ocean areas. Many developing nations seek the capacity to actively participate in the research and utilization of marine resources in these areas as well as to adequately enforce the provisions of domestic and international ocean policy. Calls for technology- and wealth-transfer, training programs, and information-sharing, especially between developed and developing states, have been

put forth by many in this debate. However, relatively few initiatives have yet to take hold or come to fruition, owing to factors such as the frequently privatized nature of technology and scientific information and the lack of incentives for private companies to enter into information or technology-sharing programs, among others. Subsequently, various options and approaches to capacity building have become a major issue of discussion at oceans-focused intergovernmental fora. In this respect, many States have highlighted the lack of capacity building and technology transfer as one of the most glaring gaps in implementation for ABNJ.

1.1.13 GOVERNANCE AND IMPLEMENTATION GAPS

Despite the many tools and mechanisms available to address the concerns and threats facing marine biodiversity beyond national jurisdiction, there is a widespread view among many States and stakeholders that the provisions of the existing regulatory framework are not fully or adequately applied and that significant implementation gaps remain. These gaps stem from a number of sources, including difficulties in monitoring and enforcement, lack of technical and policy guidance regarding the implementation of management tools, and lack of knowledge regarding the vulnerability of marine ecosystems, among others. While the vast majority of States agree that these implementation gaps must be addressed, they differ as to how this should be accomplished.

There is also increasing debate as to whether the provisions of UNCLOS and the international framework for ocean governance and management, in general, are robust enough or provide enough policy guidance to adequately address some of the major threats to the marine environment in ABNJ and ensure conservation and sustainable use of biodiversity. The evolution of the policy framework governing marine

areas beyond national jurisdiction has, arguably, not kept pace with the rapid technological developments, scientific discoveries, and new and emerging uses of recent decades. In various international fora, States are discussing the potential need for new mechanisms to ensure that modern precautionary and ecosystem-based management approaches are reflected in legal responsibilities and effectively applied and enforced. Consequently, the legal regime for marine areas beyond national jurisdiction and the implementation of the provisions of the existing international framework for the management of certain activities that may occur in this area have become especially contentious areas of intergovernmental debate. In this respect, some States have proposed a package UNCLOS Implementation Agreement that would support the improved implementation of the provisions of UNCLOS in ABNJ, and provide for a comprehensive and coherent policy approach to ensuring conservation and sustainable use. Many developed States, however, hold that a new international agreement for ABNJ is unnecessary and that improved implementation of the existing framework would address major concerns.

Policy experts and non-governmental organizations have weighed in on the potential need for a new agreement to address governance gaps. In "Black Holes in Deep Ocean Space," Greenpeace holds that the international regulatory framework "does not cover biodiversity protection on high seas explicitly and comprehensively" (Greenpeace 2008a). Furthermore, it supports the development and elaboration of a new regime under UNCLOS, which would aim to provide a clear mandate and legal duty to protect biodiversity on the high seas grounded in an ecosystem-based and precautionary approach. Greenpeace has clearly articulated its support for a new global agreement to support the conservation and sustainable utilization of marine biodiversity beyond

national jurisdiction, drafting suggested text for a new UNCLOS Implementation Agreement for biodiversity in areas beyond national jurisdiction (Greenpeace 2008b).

Similarly, Rayfuse and Warner (2008) claim that the current legal regime for the high seas is fragmented, incomplete, and limited in its effectiveness by governance, regulatory, and implementation gaps. They support the need for a global approach to further developing the high seas regime based on the concept of international public trusteeship for the oceans beyond national jurisdiction and the transformation to a legal regime better suited to integrated, cross-sectoral management and preservation of vital ocean ecosystem services in areas beyond national jurisdiction (Rayfuse and Warner 2008). Their calls for an overarching global mechanism to address potential gaps in the existing framework are echoed by many in the ocean community.

Discussions on the potential development of a new international agreement for ABNJ, which may include provisions for other contentious areas such as marine genetic resources, have become one of the main topics of discussion in the intergovernmental debates on ABNJ, and are gaining increasing political attention in other related fora as well.

1.1.14 INTERNATIONAL POLICY DIALOGUE ON ISSUES RELATED TO AREAS BEYOND NATIONAL JURISDICTION

While intergovernmental fora, namely within the UN system, serve as an integral platform for discussion and debate and are a central means for the development of international policy, multistakeholder dialogues involving scientists, academics, and the private sector are also instrumental in stimulating the development of innovative policy options to address complex issues related to areas beyond national jurisdiction.

The Convention on Biological Diversity (CBD) has hosted expert dialogues on various issues related to ABNJ, which have proven to be a valuable forum for

knowledge sharing and innovative discourse. The CBD organized an Expert Workshop on Scientific and Technical Guidance on the Use of Biogeographic Classification Systems and Identification of Marine Areas Beyond National Jurisdiction in Need of Protection in October 2009, which incorporated input from international specialists on biogeographic classification on the development of criteria for the designation of ecologically or biologically significant marine areas (EBSA) in need or protection in areas beyond national jurisdiction (CBD 2009a). As previously noted, the CBD also convened an Expert Workshop on Scientific and Technical Aspects Relevant to Environmental Impact Assessment in Marine Areas Beyond National Jurisdiction in 2009, which addressed the considerations for implementing Environmental Impact Assessment in areas beyond national jurisdiction (CBD 2009b).

The Global Ocean Forum has been a prominent facilitator of open multi-stakeholder dialogue on addressing potential governance and regulatory gaps in areas beyond national jurisdiction. In January 2008, the Global Ocean Forum organized a Strategic Planning Workshop on Global Ocean Issues in Marine Areas Beyond National Jurisdiction in the Context of Climate Change, which focused on, among other areas, the current weaknesses of sectoral management, existing legal and policy gaps with respect to new and emerging uses of ocean resources, and commonalities in moving toward ecosystem-based and integrated management at national and regional levels (Cicin-Sain and Freestone 2008). At the Global Ocean Forum's Workshop on Governance of Marine Areas Beyond National Jurisdiction, which took place in November 2008 in Singapore, participants focused on the need to systematically assess options for the governance management of ABNJ using standard criteria, taking into consideration the respective costs and benefits of each option. Two discrete needs emerged from this workshop: Adequate and strengthened UN oceans-related machinery to help embed coordinated

inter-governmental and inter-agency work; and the experimentation of integrated approaches to the management of areas beyond national jurisdiction at a practical level (Balgos, et al. 2008).

The International Union for the Conservation of Nature (IUCN) has also been an important venue for multistakeholder discussion on ABNJ issues. In January 2003, the IUCN, along with the World Wildlife Fund (WWF) and the World Commission on Protected Areas (WCPA), convened the Expert Workshop on High Seas Marine Protected Areas. Participants to this workshop agreed that urgent action was necessary to address threats to high seas biodiversity and productivity, proposing the establishment of expert networks to build support for high seas biodiversity conservation, the identification and use of opportunities to highlight the need for global concerted action, and the establishment of one or more high seas MPAs as "test cases," to build experience with the practicalities of design, implementation and enforcement should be given urgent attention (Gjerde 2003). In October 2007, the IUCN convened the Workshop on High Seas Governance for the 21st Century, where participants highlighted the need to adequately address environmental impacts beyond national jurisdiction through the use of EIAs, the establish mechanisms of international coordination and cooperation, advance the implementation of area-based management tools beyond national jurisdiction, find alternate approaches to managing marine genetic resources if States are unable to find a common position, and to address identified governance and regulatory gaps utilizing tools at our disposal, such as informal agreements and codes of conduct, and improvements in monitoring, control, and surveillance (IUCN 2008).

1.1.15 ANALYZING GLOBAL ENVIRONMENTAL GOVERNANCE

Over the years, the international framework for environmental governance has grown increasingly complex and has changed shape in many ways, driven by the concerns of the global community. This has stimulated conceptual analysis by political and social scientists that can be instrumental in investigating policy development in new areas.

The concept of the regime has been a notable area of research by political and social scientists. Young (1989) examines the politics of international regime formation, specifically in regards to natural resources and the environment. He aims to determine why actors in international society succeed in forming institutional arrangements or regimes to cope with some transboundary problems but fail to do so in connection with other, seemingly similar, problems. Young employs an alternative model of regime formation, called institutional bargaining, to derive some hypotheses about the determinants of success, which he then uses to illuminate the process of regime formation. Among his key conclusions, Young proposes that: Institutional bargaining can succeed only when the issues at stake lend themselves to contractarian interactions; The existence of salient solutions increases the probability of success in institutional bargaining; The probability of success in institutional bargaining rises when clear-cut and effective compliance mechanisms are available; and Institutional bargaining is likely to succeed when effective leadership emerges. Young's hypotheses indicate some key considerations in the discussions surrounding the existing and prospective regimes for biodiversity beyond national jurisdiction.

Various approaches have been taken to analyzing the establishment, effectiveness, and implications of various types of environmental regimes. In his article "Do regimes matter? Epistemic communities and Mediterranean pollution control", Peter

Haas examines how compliance is achieved in international regimes. He focuses his analysis on the Mediterranean Action Plan (MAP) and shows that this regime served to empower a group of experts (members of an epistemic community), who were then able to redirect their governments toward the pursuit of new objectives. Haas demonstrates how these new actors contributed to the development of convergent State policies in compliance with the regime. This suggests that, in addition to providing a form of order in an anarchic international political system, regimes may also contribute to governmental learning and influence patterns of behavior by empowering new groups. Although States have traditionally been considered the primary actors in international politics, Haas and others have emphasized the increasingly important role of non-State actors. This also holds true for issues related to marine areas beyond national jurisdiction. However, as the discussions addressed in this analysis are driven by the interests and concerns of States, the role of non-State actors will not be addressed in this research.

Much discussion in environmental governance has centered on the implications of fragmentation in regimes. Some argue that fragmentation can actually be more appropriately termed "specialization", and that a regime characterized by specialized parts is more capable of taking concerted action on specific issues. However, since the convening of a number of landmark summits on environment and development, such as the World Commission on Environment and Development (WCED) and the UN Conference on Environment and Development, many of which resulted in landmark environmental agreements, the international community has recognized the inherent weaknesses of fragmented or overly sectoral environmental governance. This has focused increasing attention on the need to address environmental issues as part of the overall earth system and in an integrated, and ecosystem-based manner. In "The Fragmentation of Global Governance Architectures: A Framework for Analysis", Biermann et al. (2009)

differentiate between three degrees of fragmentation, which they termed “synergistic”, “cooperative”, and “conflictive” and found that different types of fragmentation are likely to have different degrees of performance. While cooperative forms of fragmentation may entail both significant costs and benefits, they did not find convincing arguments in favor of a high, or conflictive, degree of fragmentation, which appeared to bring more harm than positive effects, and could generally be seen as a burden on the overall performance of the system. On the other hand, “synergistic fragmentation” appeared to often be a realistic alternative in a world of diversity and difference in which purely universal governance architectures are more a “theoretical postulate than a real-life possibility”.

Although some notable analysis has been undertaken on global environmental governance in general, relatively little conceptual research has emerged specifically on issues related to marine biodiversity beyond national jurisdiction. Nonetheless, there are some studies that can be referred to, in this respect.

Schrijver and Prislan (2009) address the concept of Hugo Grotius’ concept of common goods (*res communis*) as developed in his seminal work *Mare Liberum*. The paper examines the regimes for the deep seabed, the high seas, and marine mammals; outer space, particularly the moon; the polar regions; and the atmosphere, in particular the ozone layer and the climate system. The article demonstrates how some of the original tenets of Grotius’ concept of *res communis*, in particular the idea of inexhaustibility, can no longer be upheld and how the freedom of access to the global commons has become increasingly qualified and supplemented, if not replaced by a new law of international cooperation aimed at conservation and sustainable use of natural resources beyond the limits of national jurisdiction. The authors note that the global commons can serve a valuable function as laboratories for the testing of new principles of

international law and new forms of international cooperation, which can be said to build upon the Grotian heritage.

Although there has been a significant amount of conceptual analysis examining the international regime for environmental governance, as well as increasing attention in the academic community on the viability of the ocean governance regime for ABNJ, there has not been a direct review and analysis of State preferences in the global discussions on marine biodiversity in areas beyond national jurisdiction.

1.2 Problem Statement

The intergovernmental debates on marine areas beyond national jurisdiction have proven valuable in elucidating government preferences, examining key policy issues and legal uncertainties, focusing the attention of policymakers and the general public on the importance of addressing ABNJ issues, and stimulating ongoing dialogues in various sectors and civil society. However, the central areas of contention in these debates are largely unresolved, many of the key uncertainties and questions remain unanswered, and relatively little tangible action has been taken on major areas of commonality. Notable divisions persist, often between developed and developing States, with regards to many of the central issues and little policy guidance has emerged to foster improved cooperation and coordination and more concerted implementation of management tools in ABNJ. This has delayed the achievement of the common goals of the protection of the marine environment, and conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction.

There is a need for a robust and impartial analysis of State preferences on policy issues related to marine areas beyond national jurisdiction in order to gain an improved understanding of the elements of contention and commonality and to outline

potential elements of resolution in the context of State preferences on the various policy issues. As much of the delay in tangible policy development and implementation at various levels can be attributed to political disagreements at these intergovernmental debates, characterizing State preferences and outlining potential avenues for resolution in the context of State preferences is critical to resolving disagreements and stimulating policy development and on-the-ground implementation for governance and management of marine areas beyond national jurisdiction.

1.3 Purpose

In an effort to contribute towards a greater understanding of, and potential resolution to, the debates surrounding marine biodiversity in areas beyond national jurisdiction, this study analyzes the intergovernmental debates on marine biodiversity beyond national jurisdiction with the purpose of answering the following questions:

- What are the main perspectives and policy preferences of States on issues related to marine biodiversity beyond national jurisdiction as articulated at various intergovernmental fora?

  --States have articulated policy preferences in various fora, but there has not been an overarching study that brings together these preferences from various UN fora.

- Where are the most significant areas of contention and commonality?

  --There are well-known differences in opinion on many of the key issues, but within these issues are nuances and potential underlying elements of agreement to be explored.

  --Less focus has been paid to important areas of commonality and less tangible action has emerged to build on common perspectives.

- What are the most promising opportunities to build on commonality and areas of agreement to address the major concerns related to conservation and sustainable utilization?

--Various States has put forth proposals and supported various policy approaches in these debates. These proposals could be developed and/or coupled with other areas of commonality to outline potential paths toward a resolution.

--As these discussions have progressed, there have been developments at the global and regional level that can inform the potential development of a resolution to these debates, in the context of articulated State preferences.

- Based on articulated proposals and identified areas of commonality, what could be the elements of one or more possible resolutions to the intergovernmental debates on BBNJ?

    --Once major elements of commonality and viable policy approaches have been characterized, potential elements of a resolution can be identified for one or all of the issue-areas.

This study answers these questions through an analysis of State preferences within each issue-area that characterizes the central elements of distinction between States and identifies how various policy proposals and proposed approaches put forth by States in these debates align with areas of commonality. In this way, the study identifies the most viable policy approaches based on areas commonality between States and potential elements of agreement and resolution to the debates on marine biodiversity beyond national jurisdiction.

Chapter 2

ANALYZING THE DEBATES

2.1 Methodological Approach

This analysis employs a systematic methodology to characterize State preferences on the various issues surrounding marine biodiversity beyond national jurisdiction, identify areas of contention and commonality among these various positions, and identify ways to build upon this commonality to outline elements of a potential agreement for one or all of the issues under discussion. Performing a systematic analysis of intergovernmental negotiations can often be a complex endeavor. These debates frequently involve a large variety of complex issues under discussion by a large number of players, each with their own respective motivations and agendas. As Robert Friedheim (1993) states, "One of the most difficult results to achieve in a global political system as heterogeneous and anarchic as the one under which we have operated late in the twentieth century is agreement among many." This insight is just as relevant in the twenty-first century.

According to Friedheim (1993), international negotiations generally go through (1) a diagnostic phase, (2) a phase of identifying the concept that will be the most influential in molding the outcome, and (3) a phase of refining the concept, polishing the language, and gaining the support of other States. In this context, the debate surrounding areas beyond national jurisdiction would likely be characterized as being either at the end of the first phase or the beginning of the second. Generally, the primary issues have been identified and characterized and some informal proposals for resolution have been put

forth, however, there is still lack of information regarding the impacts of expanding and emerging ocean activities in ABNJ, disagreement regarding certain aspects of the legal regime for areas beyond national jurisdiction, and uncertainty surrounding ideal and appropriate management tools for ensuring protection and sustainable utilization of biodiversity beyond national jurisdiction. These factors, among others, serve to delay attempts towards advancing the discussion on a potential resolution to these controversial issues.

Reaching agreement on many of the issues in the areas beyond national jurisdiction debate will likely prove especially difficult. The various issues of this debate can be highly complex and are complicated by legal uncertainties, political sensitivities, and many related logistical and technical factors. In light of the interlinkages between many of these issues, reaching agreement on a particular set of issues can prove daunting. Employing a clearly defined model is, therefore, an important requirement for analysis.

In light of the inherent difficulties in reaching multilateral agreement on complex and potentially controversial issues, as well as the growing trend in globalization and transboundary environmental issues, analysis of international negotiations, especially related to environmental issues, has become a major area of research for many in the academia. Consulting other relevant academic studies, there exist various options and approaches that can inform the development of a methodological approach for analyzing the intergovernmental debates on BBNJ.

In "An economic theory of mutually advantageous issue linkages in international negotiations", Tollison and Willet (1979) examine the topic of issue-linkages in international negotiations. The researchers focus on the rationale of mutual interest and draw on the economic theory of exchange to demonstrate how issue-linkages can be used to facilitate a greater number of mutually beneficial agreements among

States. They conclude that, while traditional analyses of instances of issue-linkages were explained by attempts of individual countries or groups of countries to extend their dominant bargaining or veto power in one particular issue-area into other areas so as to achieve maximum advantage from their whole array of international interactions, linking issues where mutual interest exists can be particularly useful and advantageous to all those involved.

In recent years, a number of coordinated research initiatives analyzing multilateral negotiation and institutional rule-making in the larger context of global environmental governance have been developed. The International Institute for Applied Systems Analysis (IIASA) has developed the Processes of International Negotiation Network (PIN), a network of more than 3,000 international scholars conducting negotiation analysis. The overall goal of the PIN is to develop knowledge that is useful for finding effective ad–hoc solutions or international regimes for long-term governance as well as to develop new technologies for decision support in the international context. The group also seeks to complement the solutions of substance developed in other research programs with a better understanding of the processes by which they can be enacted. The PIN has recently undertaken a significant amount of research in the international climate change negotiations.

The Global Governance Project is a joint research program of thirteen European research institutions that seeks to advance understanding of the new actors, institutions and mechanisms of global governance, with a particular focus on global environmental change and sustainable development. Analytically, the project defines global governance along three approaches:

-Managers of Global Change, which characterizes increasing participation of various actors in global governance;

-New Mechanisms of Global Governance, which identifies new mechanisms of organization in global governance, such as public-private and private-private partnerships, alongside the traditional system of legal treaties negotiated by States; and -Multiple Options, Solutions and Approaches: Institutional Interplay and Conflicts, which characterizes global governance by different layers and clusters of rule-making and rule-implementation, both vertically between supranational, international, national and subnational layers of authority and horizontally between different parallel rule-making systems.

In 2008, the International Human Dimensions Programme on Global Environmental Change (IHDP) formed the Earth System Governance Project, which is a global network of social and natural scientists engaged in research on the governance of coupled socio-ecological systems, at all levels. One of the Project's main focal areas is that of "Architecture," which includes questions relating to the emergence, design and effectiveness of governance systems as well as the overall integration of global, regional, national and local governance. International negotiations and political processes, therefore, have become a central area of study as a major driver in constructing and adapting the architecture of earth system governance.

In "Making Rules for Governing Global Commons," Thomas Bräuninger and Thomas König analyze the negotiations surrounding the establishment of the global regime for deep sea mining. The researchers take a policy-seeking approach to derive the preferences of 149 states for different decision-making rules from three components: States' preferences for policies, the working properties of different decision-making rules, and the nature of the status quo. The researchers use a multi-dimensional scaling approach to visualize underlying trends in State preferences and to determine why the proposed deep sea mining regime of UNCLOS failed to be supported by the main

industrialized countries. The researchers conclude that traditional approaches to international institutionalization have disregarded the difference between policy positions and preference on rules and that expected outcomes of the rules established as a result of negotiations factor heavily into State preferences.

Despite the contextual relevance of these various research endeavors, there are relatively few completed or ongoing studies that can be used as a viable model to refer to in analyzing the intergovernmental discussions surrounding marine biodiversity beyond national jurisdiction.

One interesting and relevant approach, however, is that taken by Robert Friedheim in *Negotiating the New Ocean Regime.* Friedheim analyzes the negotiation of the UN Convention on the Law of the Sea by employing a model to characterize the negotiation process through an analysis of State positions on the issues under discussion and how these positions developed over time, resulting in eventual agreement. His analysis focuses on the identification of what he calls "formulas," which identify common underlying principles among various positions. Friedheim develops a model recommended by George (1979) to characterize State positions on each issue area along a spectrum (e.g. no regulation ←→ complete regulation), illustrate variations in State positions over time, group (where appropriate) State positions to reflect potential trends (i.e. geography, development status), identify common principles underlying different State positions on a given issue as a foundation for potential agreement, and aggregate preferences and perspectives on various issues to examine the potential for trade-offs on various issues for a package agreement.

While various approaches to negotiation modeling have been developed, Friedheim's model serves as a useful reference point for this analysis for a number of reasons. It demonstrates a novel analysis of intergovernmental discussions involving

many States and a number of separate, but often interrelated, issues. Many approaches to negotiation analysis typically focus on zero-sum scenarios, meaning that there will be clear winners and losers in the outcome. However, as the intergovernmental discussions on BBNJ are still in the diagnostic phase and could result in non-zero-sum outcomes, meaning all parties would be better off if these issues were resolved, Friedheim's model serves as a more useful reference point than negotiation models based on zero-sum scenarios. Friedheim's model is also useful in that many of the issues associated with UNCLOS that he addressed are similar to some of the issues under discussions in this analysis. The following aspects of Friedheim's model served as inspiration for the methodology developed for this analysis:

- Friedheim's model analyzes State preferences along a scale (e.g. no regulation←→ complete regulation; see Figure 4). This is especially applicable to many of the issues under debate in areas beyond national jurisdiction, as much of the impetus to address these issues stemmed from the perceived lack of adequate governance and regulation by certain parties. State positions on these issues run the gamut from support for completely new institutional mechanisms for complete regulation, for example, to the need to avoid the establishment of new regulatory instruments that they perceive as hampering their rights under international law and/or stifling important scientific research activities.

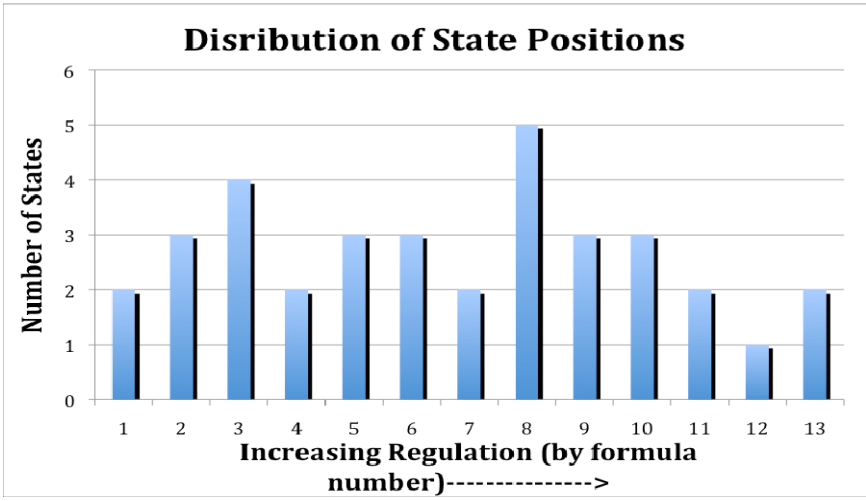

Figure 4. Illustrative example of Friedheim's modeling of State preferences along a scale. States at level 1 support no regulation with respect to a given issue, whereas States at level 13 support complete regulation. While there is no clear pattern in this graph, preferences frequently exhibit a unimodal or bimodal distribution. Source: adapted from Friedheim 1993.

- Friedheim's model provides for the delimitation of acceptable limits along a spectrum of positions of what might be considered common principles, or a "formula," upon which similar yet differing positions could agree. These formulas were derived by identifying principles from the core ideas of a various approaches. For example, while States in the first and fifth groups in the graph shown in Figure 5 support differing levels of regulation, they may support the core principles of a given proposal for a resolution (noted by the number 1 on the x-axis), which could indicate a viable element of agreement. This could prove key to facilitating compromise and working towards agreement or could better illustrate the underlying principles of disagreement for heavily divisive issues.

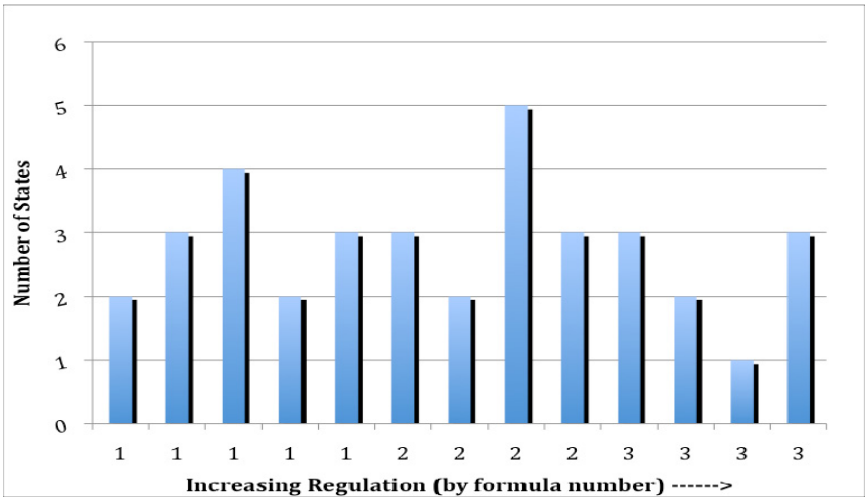

Figure 5. Illustrative example showing Friedheim's approach to the distribution of State positions along a scale that is delineated according to "formulas." States grouped into the x=1 category support the basic principles of formula 1. Source: Adapted from Friedheim 1993.

While Friedheim's model was successful in characterizing these negotiations and analyzing how the various elements of agreement evolved, there are a number of key differences between the context in which Friedheim's model was applied and the debates under examination.

One key difference is that UNCLOS was largely recognized to be a "package deal" at the outset of the negotiations and delegations understood, for the most part, that they would need to compromise on certain issues in order to reach agreement and gain in the respective areas of importance to them. As Friedheim (1993) states, "Parliamentary diplomacy is exercised in a mixed-motive situation: its participants have both conflicting and common goals. These goals can best be reached by finding conclusions where participants are better off with agreement than without" (p. 44). In the debate surrounding areas beyond national jurisdiction, however, it is not certain that resolution to these issues will come under the auspices of one agreement, or if these discussions will result in an

agreement at all. Therefore, there is somewhat less of an incentive to compromise on a given issue in order to achieve gains on another in the context of a potential "package deal" agreement.

Another key difference in this debate is the fact that the UNCLOS negotiations utilized a negotiating text to work towards agreement. In this way, there is a clear record of where compromises must be made and where language is adjusted to reflect these compromises. While language crafting also exists in the debates surrounding areas beyond national jurisdiction in the form of recommendations to the UN General Assembly (UNGA) or revision of meeting agendas, for example, these documents, arguably, do not hold the same weight as formal negotiating text, and clear and transparent records of how language was crafted is largely unavailable, as this is often done in small groups and "closed-door" meetings. Another potentially significant difference is the fact that the UNCLOS negotiations occurred in a largely formal context, while the majority of the intergovernmental discussions and debates on areas beyond national jurisdiction take place in a comparatively less formal or informal context (e.g. in the UN 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). An additional difference is the lack of documentation from these meetings. The UNCLOS negotiations involved a large number of players and took place over a long period of time. This allowed for a relatively robust data set by which to analyze these issues. Unfortunately, there is much less data available for the intergovernmental discussions on BBNJ because there are relatively fewer delegations involved, they have also taken place over a smaller time frame, and there is much less official documentation and reporting on the discussions themselves.

The methodology employed in this analysis characterizes State preferences along a scale for each issue, similar to Friedheim's model, but also facilitates the inclusion of proposals for resolution and the consideration of principles upon which some consensus exists and may be further built upon to work towards agreement on various issues, similar to Friedheim's "formula" approach. This analysis does not predict how future discussions on these issues will proceed or how States will act in the future, but provides reflections and recommendations for areas to explore as promising opportunities for agreement. As these issues are sometimes discussed differently in various fora, it is important to have a clearly outlined method for scaling each position. The following general criteria are adapted to each issue and employed to glean the articulated position of each State on each issue and to place these positions along a scale:

--State preference/aversion for certain legal interpretation

--State preference/aversion for strengthening/weakening of regulatory regime

--Proposals for resolution to the debates in one issue-area or the debates as a whole

--Articulated support for the utilization of certain existing management regimes/ mechanisms/institutions or the need to refer to these in the development/adaptation of other regimes/mechanisms/institutions

--Articulated support for the expansion of mandates for existing bodies or institutions

The primary data for this analysis is statements and interventions delivered by States from intergovernmental fora where issues related to marine biodiversity in areas beyond national jurisdiction have been discussed. Paper copies of these statements and interventions are typically provided to the host secretariat of the given meeting.[*] As some of the discussion in these meetings is not captured by these prepared government

[*] Access to the statements reviewed in this study was kindly provided to the researcher by the UN Division on Ocean Affairs and Law of the Sea (UNDOALOS), UN Office of Legal Affairs (OLA).

statements, these data are supplemented by summaries produced by the Earth Negotiations Bulletin (ENB) of the International Institute for Sustainable Development. While issues surrounding marine biodiversity beyond national jurisdiction have been discussed in a number of intergovernmental meetings, only the discussions in which State preferences are articulated and data on these articulated preferences is available are analyzed. Therefore, the following meetings are analyzed, as they have involved substantive discussions on issues related to marine biodiversity beyond national jurisdiction:

- United Nations General Assembly--58th meeting (2003), 59th meeting (2004), 60th meeting (2005), 61st meeting (2006), 62nd meeting (2007), and 64th meeting (2009)
- United Nations Open-ended Informal Consultative Process on the Oceans and the Law of the Sea--4th meeting (2003), 5th meeting (2004), 8th meeting (2007), 10th meeting (2009), and 11th meeting (2010)
- United Nations 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--2006, 2008, and 2010 meetings
- Informal Consultations of State Parties to the UN Fish Stocks Agreement--2006, 2009, and 2010 meetings
- Review Conference on the 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--2006 and 2010 meetings

The primary source of data for scaling State preferences comes from the deliberations of the UN 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 (UN BBNJ Working Group Meeting), while data from the other meetings serve to fill in gaps and provide additional insight into State preferences.

The UN BBNJ Working Group meeting is focused on in this analysis primarily because 1) It is a UNGA process and, therefore, enjoys explicit near- universal recognition as the legitimate forum to address issues related to biodiversity beyond national jurisdiction, and 2) Meetings of the UN BBNJ Working Group have proven most effective in bringing forth State policy preferences on the full spectrum of various issue-areas related to BBNJ.

Although Friedheim's model analyzes each meeting separately, this was not feasible for the intergovernmental discussions on biodiversity beyond national jurisdiction as there have been relatively fewer meetings with fewer States making interventions, thereby significantly limiting the amount of viable data for each individual meeting. To accommodate this data deficiency, charts for State preferences are constructed at intervals (i.e. 2003-2006, 2007-2008, 2009-2010, and 2011), which incorporate all meetings of the fora addressed in this study that took place in the given time period. In this way, there is a more robust data set for each issue and State preferences are more accurately reflected while also allowing for an illustration of how these debates have evolved over time.

The following issues are examined as part of this analysis:

--Marine genetic resources, including discussions on access and benefit-sharing

--Area-based management tools, especially marine protected areas (MPAs)

--Environmental impact assessments (EIAs)

--Addressing potential governance and regulatory gaps

--High seas fishing

--Cooperation and coordination

2.1.1 CAVEATS AND CONSIDERATIONS

While this analysis is constructed to be an unbiased and inclusive approach to characterizing State preferences and proposals for resolution, there are a number of issues that must be taken into consideration.

- Not All Statements and Interventions Delivered Are Reflected in the Analysis

The methodology developed for this analysis is intended to examine State preferences in a way that accurately represents the intergovernmental discussions and indicates State preferences with respect to viable policy approaches. Finding this balance, however, can sometimes prove difficult. While many of statements delivered during these meetings will give a direct indication of State preference, there are also many statements delivered that are relatively general, highlighting the importance of addressing a given issue but giving little or no indication as to how a State would prefer to do so (ex: "My delegation feels that X issue is important and welcomes further discussion"). As the analysis reflects State preferences in the context of a given scale selected as appropriate for each issue, it only incorporates State preferences that can be placed along that scale. This inherently excludes the data from more general statements and interventions. However, as these general statements do not give indication as to policy approaches or put forth actionable proposals, this does not significantly detract from the analysis as a whole.

- Preferences of Non-governmental Organizations Are Not Included

While non-governmental and intergovernmental organizations are important players in these discussions and have undertaken valuable analytical studies in issues related to BBNJ, preferences of these organizations as articulated at the fora are not included in the analysis. The contribution of these organizations cannot be underestimated or discounted, however, governments are the primary players in these

fora and directly craft the outcomes of these meetings in the form of resolutions, recommendations, etc. For this reason, only State preferences are analyzed.

2.2 Procedure

2.2.1 STAGE 1—SYNTHESIZING POLICY PREFERENCES AND BUILDING STATE PREFERENCE CHARTS

The first stage of the research involved the search for, collection, and organization of data from meetings of the previously-noted intergovernmental fora addressing issues related to marine biodiversity beyond national jurisdiction. This is a time-intensive endeavor, as there is no repository for this information and much of the data must be made usable for analysis (i.e. sorting through long statements, translating statements from other languages into English, transcribing statements that are only available in paper copy). The data were gathered and organized according to fora and time period, then according to the major issue areas, as noted in the previous section.

State preferences were then gleaned by coding the data, identifying language indicating policy preferences (i.e. "my delegation supports X"). Then, tables were used to organize the coded State preferences in each issue-area (see Table 2). States were categorized in these tables according their policy preference with respect to a given aspect selected as appropriate in each issue-area. For example, in the marine genetic resources issue-area, States were organized according to their policy preference on the applicable legal regime for marine genetic resources. These aspects of each issue-area were chosen according to (1) aspects that could be laid out along a scale (e.g. national—regional—global regulation); (2) aspects that the majority of States speaking to the issue addressed; and (3) aspects that could be indicative of policy preferences for implementation. Subcategories within each category (indicated by "+", "++", etc.)

categorize States with differing policy perspectives within major categories, as these can sometimes signify important differences in similar State preferences. As these discussions often examine issues related to marine biodiversity beyond national jurisdiction in various contexts and negotiating text is rarely used due to the largely informal nature of these discussions, these statements do not always use consistent language to articulate preferences, making the coding process somewhat difficult. The data are also reviewed for articulated support for policy approaches, proposals for resolution, and common elements/principles.

Table 2. Example table of coded State preferences indicated. States are organized according their policy preference with respect to a given aspect of each issue.

States	**Policy Preference (A)**		**Policy Preference (B)**	**Policy Preference (C)**		**Policy Preference (D)**
	++	+		+	++	
State A	X					
State B				X		
State C		X	X			
State D			X			X

Construction and Explanation of Policy Preference Charts

Charts are then constructed for each issue area in each time period, where there is sufficient data to do so, to build the foundation for the next stage of research, which seeks to identify potential areas for consensus-building and elements of agreement. States are organized in the chart according to the same aspect used for the tables noted above (which is laid out along the y-axis of each chart). States are indicated by common abbreviations; for a full list of abbreviations for States and delegations included in this

study, please refer to the appendix. Preferences on policy approaches and various principles are incorporated into the charts as well (see Figure 6). However, only the proposals and elements/principles that have been discussed or supported by more than one State in each chart will be included. This is done because (1) due to time and space constraints, it would not be realistic to include every policy approach and element/principle put forth in these discussions; and (2) as this analysis seeks to identify consensus-building elements based on articulated preferences and policy approaches, a policy approach or element/principle that is discussed by only one State is not likely to emerge as a consensus-building element.

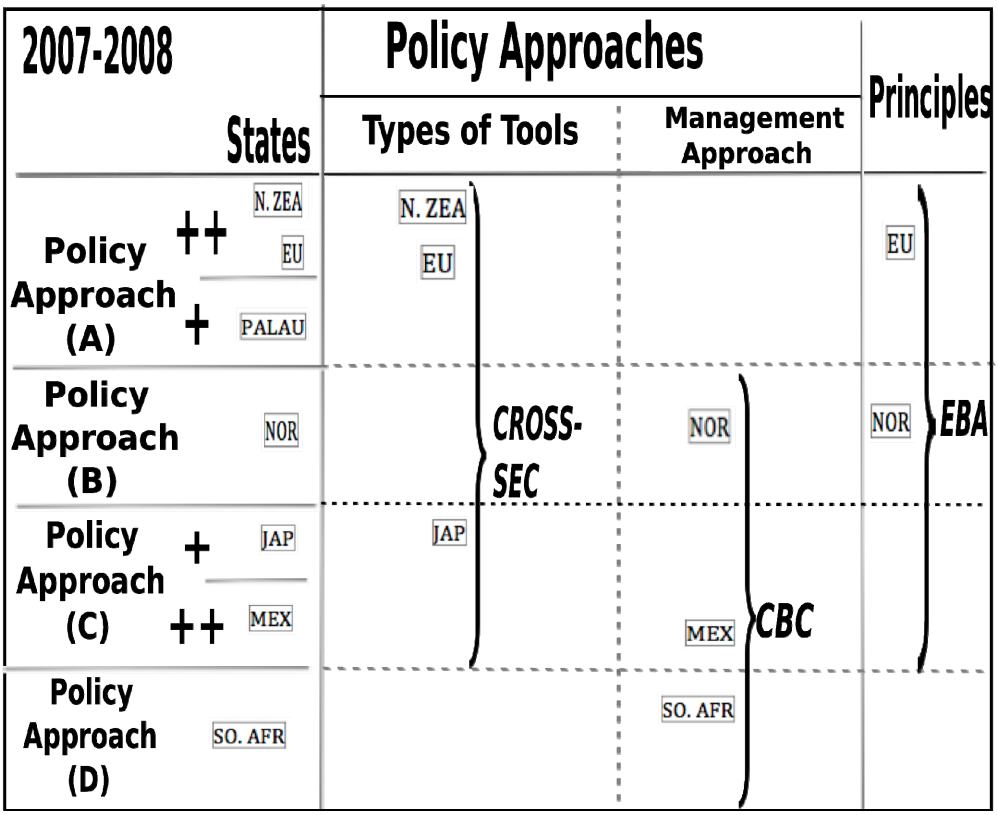

Figure 6. Illustrative example of an issue-area chart. States along the left column indicated policy preferences on the on the aspect of the issue-area used to organize States in the tables (as shown in Table 2). Brackets indicate support for various policy approaches. For example, in this hypothetical issue-area, New Zealand, the EU, and Japan articulated support for the use of cross-sectoral tools (indicated by "CROSS-SEC) at the meetings reviewed during the 2007-2008 time period. "CBC" indicates management approach on a case-by-case basis. "EBA" indicates support for the ecosystem-based approach.

Policy approaches and elements/principles are indicated by a bracket and a short-form code and are aligned in the chart across from States that propose and support these approaches and elements/principles. Brackets for the policy approaches and elements/principles extend over the spectrum where the States that support them are

found in. States that explicitly articulate support for these policy approaches and elements/ principles are listed directly next to the brackets.

Referring to Figure 6, the countries listed next to the bracket for CBC (i.e. Norway, Mexico, and South Africa) have explicitly articulated support for management on a case-by-case basis with respect to this issue-area during the 2007-2008 time period. And, since these States are located along much of the policy spectrum, it is therefore reasonable to presume that other States along this spectrum may also support this approach, indicating a potential element of agreement. In this way, the charts illustrates (1) which States have explicitly supported various approaches/principles; and (2) which approaches/principles span multiple policy preferences, indicating potential areas of agreement. Therefore, approaches and principles that have support from States across the spectrum indicate an opportunity for consensus-building and agreement.

2.2.2 STAGE 2—IDENTIFYING POTENTIAL ELEMENTS OF AGREEMENT

This next portion of the research is focused on analyzing the charts created in Stage 1, namely identifying central elements of commonality and agreement that have been articulated by States in the intergovernmental discussions on BBNJ and analyzing potential areas of synergies and issue-linkages, including the potential elements of a package agreement.

First, central concepts or elements of agreement that could be critical in factoring into a resolution are identified. These will ideally be based on policy approaches and elements/principles that: (1) span State preferences across the given policy spectrum in each issue-area, (2) garner significant support from multiple States, and (3) can be aligned with other potential elements of consensus-building that meet these two criteria. While the underlying basis for these elements of consensus-building is

the data used for the coding of State preferences, there is some degree of liberty that is taken by the researcher in this step, which as Friedheim describes, is "more art than science." (Friedheim 1993).

Next, the analysis identifies potential synergies and issue-linkages across the issue-areas under analysis. This becomes especially relevant in light of the highly interconnected nature of the issues under discussion and the growing support by many States for a comprehensive approach to addressing issues related to marine biodiversity in ABNJ. These central elements will then be analyzed in the context of a potential resolution or outcome to the intergovernmental debates on BBNJ.

Through this approach, this analysis will have accomplished the following:

- Identification and characterization of the State preferences on the major issues surrounding marine biodiversity beyond national jurisdiction at each meeting of prominent intergovernmental fora where these issues are discussed;
- Identification and characterization of proposals for resolution put forth by various delegations;
- Identification and characterization of central underlying principles of the main positions on these issues;
- Characterization of the substantive differences in State preferences on contentious issues with the aim of developing a greater understanding of the central principles underlying this debate; and
- Identification of areas of commonality for each issue area and across issue-areas, with a view to outlining potential elements of an agreement or resolution to the intergovernmental debates on BBNJ.

Chapter 3

STATE PREFERENCES ON MAJOR ISSUE-AREAS

The following section will outline the central foci of discussion and State preferences on the major issue-areas in the intergovernmental debates on marine biodiversity beyond national jurisdiction. State preferences will be addressed in each issue-area in separate time periods, where appropriate, and will be illustrated through the use of the State preference charts, as previously described. Attention will be focused on major areas of contention and commonality, proposed implementation approaches, and proposals to resolution to the debates.

3.1 Marine Genetic Resources

The marine genetic resources issue-area has been one of the central topics of discussion in the intergovernmental debates on marine biodiversity beyond national jurisdiction and has generated much discussion on the potential gaps and weaknesses of the existing framework, and need for further research and discussion on the legal, scientific, and technical issues associated with marine areas beyond national jurisdiction. It has brought many of the underlying differences in policy perspectives to the forefront of the debate, particularly between developed and developing States. As with many of the other issues dealt with in this analysis, the various legal and policy issues within this issue-area is often addressed most directly in the UN BBNJ Working Group and has always featured prominently on the agenda of the Working Group.

Although the issue is generally addressed most directly in the UN BBNJ Working Group, States and other stakeholders had raised concerns regarding marine genetic resources prior to the first meeting of the working group. Issues related to marine genetic resources of the deep seabed were highlighted as early as 1995 at the second meeting of the Conference of the Parties to the CBD. The UNGA also hosted discussions on MGR issues prior to the creation of the BBNJ Working Group. Nonetheless, the fundamental contentious elements of the issue are most directly addressed in the context of the UN BBNJ Working Group, the eighth meeting of the UN Informal Consultative Process on Oceans and the Law of the Sea (UNICPOLOS), and the UN General Assembly.

The policy spectrum chosen for this issue-area is focused on State preferences on the legal regime for marine genetic resources, which is well-suited to the approach used in this analysis. Unlike some of the other issue-areas, policy preferences on the legal regime for MGRs are generally mutually exclusive, meaning that States articulating support for the application of either Part VII or Part XI of UNCLOS to MGRs will only be found in one of these respective categories. The first category ("Part XI Legal Regime") includes States that support the application of the legal provisions of Part XI of UNCLOS to marine genetic resources of the Area, holding that these resources are the common heritage of mankind. There are two subcategories; the first (ABS) includes States that support the need to operationalize processes and mechanisms for access and benefit-sharing (ABS) for marine genetic resources, and the second (CHM) includes States that articulate basic support for the application of the Part XI legal regime. The second category ("Legal Lacuna") includes States that feel that the issue is not addressed in the provisions of UNCLOS and neither the Part VII nor Part XI legal regimes are directly applicable. The third category ("Part VII Legal Regime") includes

States that support the application of the legal provisions of Part VII of UNCLOS to marine genetic resources of the Area, holding that these resources are subject to the principle of the freedom of the seas. This category is composed of two subcategories. The first subcategory (FOS) includes States that articulate basic support for the application of the Part VII legal regime, and the second (++) includes states that claim that the application of other legal or regulatory regimes to marine genetic resources is inappropriate and would unnecessarily impede research activities. Another section included separate from this scale is a category for States who claim that further discussions are needed before a clear position can be taken on the legal regime and/or that discussions should not focus on the legal regime ("Further Discussions Required / Don't Focus on Legal Regime").

3.1.1 2003-2006 TIME PERIOD

As the chart for the 2003-2006 time period demonstrates (see Figure 7), the majority of States articulating preferences in this issue-area are developing States. This is likely due to the exclusive nature of activities related to marine genetic resources and benefits derived from the exploitation of these resources under the current implementation of the international framework for ABNJ.

The category for the application of the Part XI legal regime is made up entirely of developing States and, conversely, the category for the application of the Part VII regime is made up entirely of developed States, namely Iceland, Japan, and the US. The representative of the G-77 and the representative from Argentina argued most strongly for the Part XI regime while the US argued most fervently for the Part VII regime. Argentina noted that "the concept of the Common Heritage of Mankind, applied to sea bed resources, was incorporated in General Assembly Resolution 2749 (XXV),

without making any distinction between living and nonliving resources" and that "the Convention of 1982 (UNLOS) regulated the exploitation of some of those resources, exclusively mineral resources" but "nothing in the Convention affected the applicability of the deep seabed legal regime to other resources that are found there."[*] A number of States, both developed and developing, hold that neither of these legal provisions are appropriate and that there is a clear gap in the existing legal regime for MGRs of the Area.

Three central areas policy approaches emerge from the discussion on MGRs of the Area during this time period; (1) voluntary approaches, (2) scientific research, and (3) global institutional approaches. A number of States across the spectrum, both developed and developing, articulate support for the use of voluntary codes of conduct in mitigating the potentially harmful impacts of the search for, and extraction of, MGRs. These States noted that codes of conduct and guidelines for responsible research, including, for example, the InterRidge Code of Conduct, have been relatively effective in mitigating potential impacts in some areas. The effectiveness of these types of voluntary approaches depends on both how many States/researchers/institutions/etc. would ascribe to and utilize such an approach as well as how well the guidelines are formulated. The effectiveness of codes of conduct is also dependent on up-to-date and, in some cases, locale-specific data on the vulnerability or species and ecosystems to various activities, impacts of the specific types of gear/technology being used, and implications on related biogeochemical processes.

[*] Statement delivered by the delegation of Argentina at the first meeting 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, New York, 13-17 February 2006

The other central aspect of discussion is the role of marine scientific research. Some States note the importance of non-monetary forms of benefit-sharing, stressing the importance of various types of capacity building arrangements involving technology-transfer and information sharing. Some developing States in various parts of the spectrum hold that it is difficult or not possible to distinguish between marine scientific research and bioprospecting for MGRs in the Area, implying the inherent role of the ISA in regulating these activities. A number of States who support the application of the provisions of Part XI of UNCLOS, also highlighted the need to regulate the potentially harmful by-products of the search for, and extraction of, MGRs. States across the spectrum, both developed and developing supported the need to build the capacity of developing States to undertake research on MGRs.

Another focus of discussion, which ties into the discussions on the legal regime, are preferences for global institutional approaches to managing activities related to MGRs in the Area. In the 2003-2006 time period, Argentina, Cuba, and EU supported the negotiation and development of a comprehensive UNCLOS Implementation Agreement for marine biodiversity beyond national jurisdiction that would directly address issues related to MGRs. As we shall see, this proposal gains significant momentum in subsequent discussions. Many developed States, however, held that the existing governance regime for MGRs is sufficient and that a new international agreement is unnecessary. A number of the developing States also highlighted the central role of the International Seabed Authority as a major player in issues related to MGRs. The extent to which MGRs fall within the regulatory purview of the ISA is debated by some developed States, mainly because its mandate is geared towards managing mineral-related activities and promoting scientific research in the Area.

The G-77 and Mexico also highlighted the importance of the precautionary approach in mitigating adverse impacts associated with the exploration and exploitation of MGRs of the Area.

Note: In this time period, Brazil is speaking for the Rio Group, which is composed of the following States: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela

Table 3. Codes and corresponding policy approaches/principles used in Figure 7.

Code	**Policy Approach/Principle Designated by Code**
ABS	Operationalize *access and benefit-sharing* (ABS) for marine genetic resources as part of the Part XI legal regime
BIO	It is difficult or impossible to distinguish between *bioprospecting* and marine scientific research
CB	Undertake *capacity building* for developing States
CHM	Apply the *common heritage of mankind* principle
COC	Support the use voluntary *codes of conduct*
FOS	Apply Part VII legal regime and *freedom of the seas* principle
IMP	Address in the context of an *UNCLOS Implementation Agreement*
ISA	Recognize the role of the *International Seabed Authority*
MSR	Focus on promoting *marine scientific research*
NMBS	Recognize the importance of sharing *non-monetary benefits*
ONLY OPTION	Applying a legal regime other than the Part VII legal regime is unnecessary and harmful
PRE	Apply the *precautionary approach*
RMSR	Must *regulate marine scientific research* activities

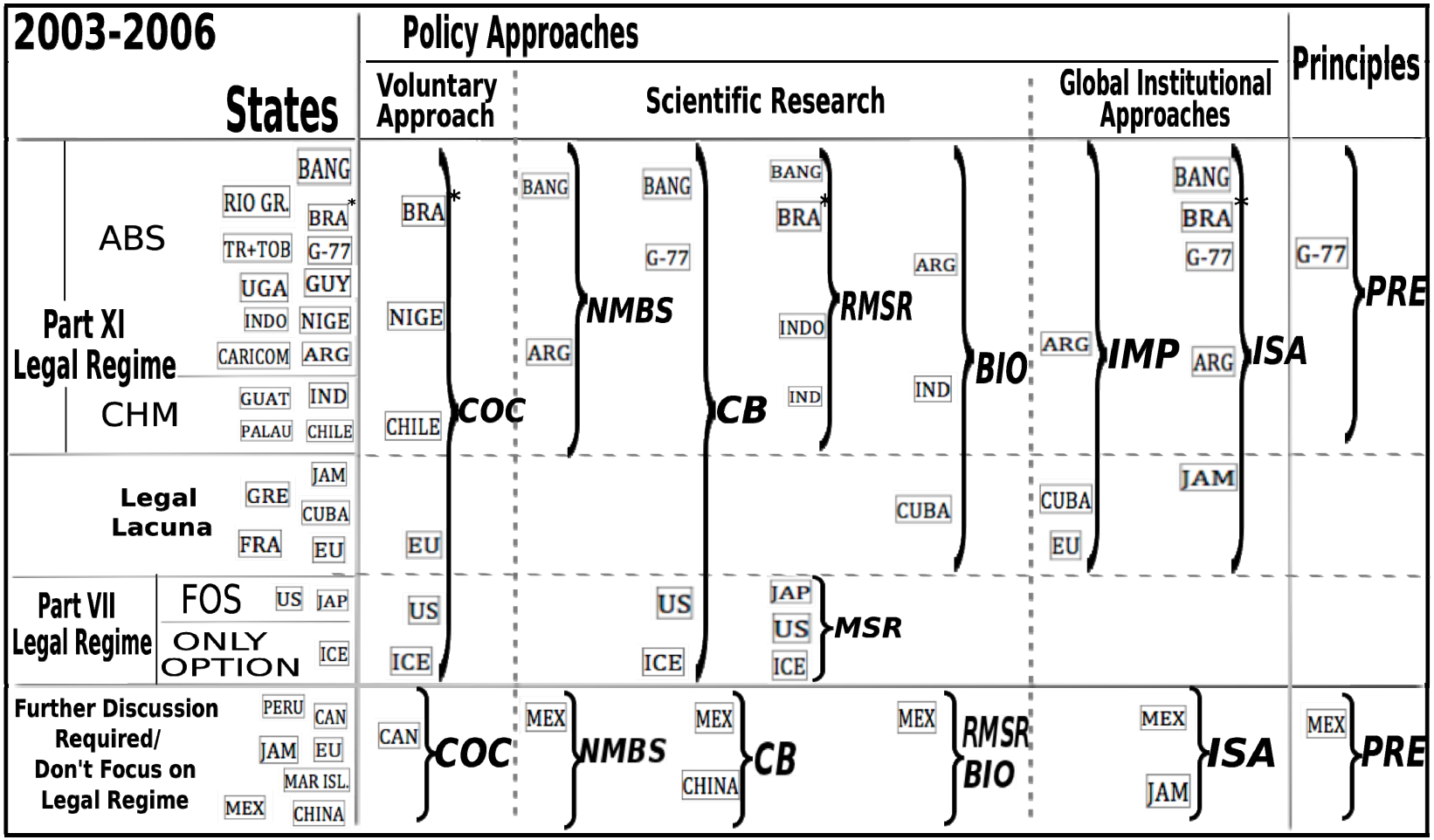

Figure 7. Chart modeling State policy preferences for marine genetic resources articulated at meetings analyzed during the 2003-2006 time period.

3.1.2 2007-2008 TIME PERIOD

Following the contentious and spirited debate of the first meeting of the UN BBNJ Working Group, discussions on MGRs continued to gain momentum as a major area of focus, with a greater number of States articulating policy preferences and putting forth proposals for resolution. However, States also highlighted the need for additional exploration and discussion on the various complex issues related to MGRs to inform the political debates. Therefore, the eighth meeting of UNICPOLOS in 2007 focused solely on issues related to MGRs. Expert panel presentation on topics such as ecological dynamics associated with MGRs, the commercialization process for MGRs, and existing national-level regulatory frameworks for bioprospecting, served to inform subsequent intergovernmental discussions.

The eighth meeting of UNICPOLOS also focused much attention on the related issue of intellectual property rights (IPRs) for MGRs, with States across the policy spectrum (except for those supporting the application of Part VII of UNCLOS) explicitly supporting the need to further explore intellectual property rights issues as they relate to marine genetic resources of the Area. States highlighted that further research on IPRs could inform discussions on the development and evaluation of potential options for equitable benefit-sharing arrangements. Some States, namely Brazil, Canada, the EU, and Korea, emphasized the need to "steer questions away from the unproductive debate on the legal status of marine genetic resource in areas beyond national jurisdiction", and to "focus the discussions on practical options for their management."[*] The use of voluntary codes of conduct again emerged as a topic of discussion, with support from States across the policy spectrum, although these approaches were not focused on as heavily as in the

[*] Statement delivered by the delegation of the European Union at the first meeting 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, New York, 13-17 February 2006

previous time period. A few States, namely the EU and the Bahamas, articulated the regional governance approach as a valuable approach that could facilitate the development of potential avenues for addressing MGR issues between neighboring States of potentially similar interests and concerns.

Marine scientific research again emerged as a central area of focus for MGRs in the Area. Many States across the policy spectrum articulated strong support for capacity building for developing States to participate in research activities related to MGRs of the Area. Discussions also focused on the lack of definition of the term "bioprospecting," with the G-77, Argentina, and Chile holding that there is no distinction between bioprospecting and marine scientific research, while Japan stated that the two are not equivalent. A number of developed States, namely the EU, Australia, Japan, and the US emphasized the importance of marine scientific research related to MGRs in the Area and that the scientific knowledge gained from these activities is an important, if not the most important, beneficial aspect of research on MGRs. Speaking on the scientific importance of MGRs, the US stated that "the greatest benefits will come from expanding knowledge of marine science and increasing the number and nature of products that enhance our lives, health, and livelihoods."[*]

During this time period, States began to focus more centrally on principles of modern ocean governance as they apply to MGRs, namely the integrated approach, the precautionary approach, and the ecosystem approach. These principles were largely invoked by developing States, namely Mexico, Chile, and Kenya, in addition to the EU, to support the need to develop and implement an arrangement that would address issues

[*] Statement delivered by the delegation of the United States at the second meeting 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, New York, 28 April - 2 May 2008

related to the conservation and sustainable use of the resources and ecosystems of the seabed in a more integrated and ecosystem-based manner, and to take special caution when undertaking activities in the Area, as knowledge on potential environmental and ecological impacts of these activities is still relatively limited.

Note: In this time period, Mexico is speaking for the Rio Group, which composed of: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela.

Note: The following countries aligned with the statement of the EU: Albania, Croatia, Georgia, Macedonia, Moldova, and the Ukraine.

Table 4. Codes and corresponding policy approaches/principles used in Figure 8.

Code	Policy Approach/Principle Designated by Code
ABS	Operationalize *access and benefit-sharing* (ABS) for marine genetic resources as part of the Part XI legal regime
BIO	It is difficult or impossible to distinguish between *bioprospecting* and marine scientific research
CB	Undertake *capacity building* for developing States
CHM	Apply the *common heritage of mankind* principle
COC	Support the use voluntary *codes of conduct*
EBA	Apply the *ecosystem-based approach*
FOS	Apply Part VII legal regime and *freedom of the seas* principle
IPR	Further study *intellectual property rights* and patents for MGRs
INT	Support the application of the *integrated approach*
MSR	Focus on promoting *marine scientific research*
NBIO	*Bioprospecting is not equivalent* to marine scientific research
ONLY OPTION	Applying a legal regime other than the Part VII legal regime is unnecessary and harmful
PRE	Apply the *precautionary approach*
REG	Utilize *regional approaches*
RMSR	Must *regulate marine scientific research* activities
SCI	Recognize importance of *scientific information* from MGRs

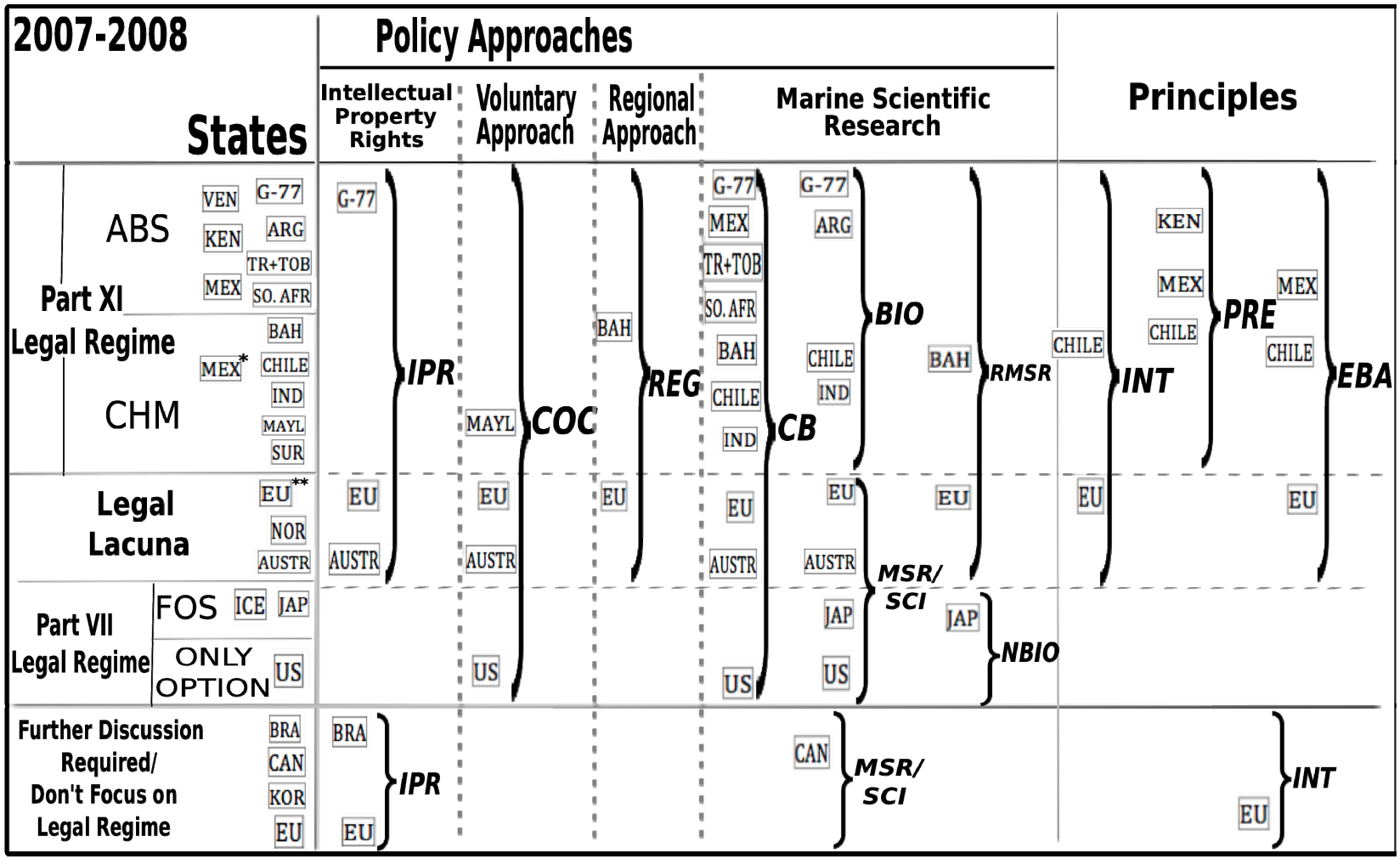

Figure 8. Chart modeling state policy preferences for marine genetic resources articulated at meetings analyzed during the 2007-2008 time period.

3.1.3 2009-2010 TIME PERIOD

Discussions on issues related to marine genetic resources during this time period were relatively less productive and action-oriented. At the third meeting of the UN BBNJ Working Group in 2010, States largely articulated their positions on the legal regime for MGRs, positions that many of these States had articulated at previous meetings, with little indication of willingness to compromise. The North-South political division with respect to perspectives on the legal regime persisted at the meetings held during this time period.

The need to further examine intellectual property rights issues again emerged as a central element of discussion. Some States also focused their statements and interventions on the need to undertake capacity building for developing states to participate in scientific research for MGRs and the sharing of information that emerges from MGR research. As with the 2003-2006 time period, some of the States supporting the application of the Part XI regime of UNCLOS also supported the negotiation of a new UNCLOS Implementation Agreement to address biodiversity beyond national jurisdiction. Some developing States in the Part XI category also highlighted the important role of the International Seabed Authority. There was little discussion on principles of ocean governance in the discussions on marine genetic resources, although a few States did emphasize the potential role of the CBD in informing the discussions on MGRs beyond national jurisdiction.

Table 5. Codes and corresponding policy approaches/principles used in Figure 9.

Code	Policy Approach/Principle Designated by Code
ABS	Operationalize *access and benefit-sharing* (ABS) for marine genetic resources as part of the Part XI legal regime
CB	Undertake *capacity building* for developing States
CBD	Recognize the role of the *Convention on Biological Diversity*
CHM	Apply the *common heritage of mankind* principle
COC	Support the use voluntary *codes of conduct*
FOS	Apply Part VII legal regime and *freedom of the seas* principle
INF	Promote *information-sharing*, including integrated databases
IMP	Address in the context of an *UNCLOS Implementation Agreement*
IPR	Further study *intellectual property rights* as they relate to marine genetic resources and patents deriving from their use
MSR	Focus on promoting *marine scientific research*
ONLY OPTION	Applying a legal regime other than the Part VII legal regime is unnecessary and harmful
INF	Promote *information-sharing*, including integrated databases

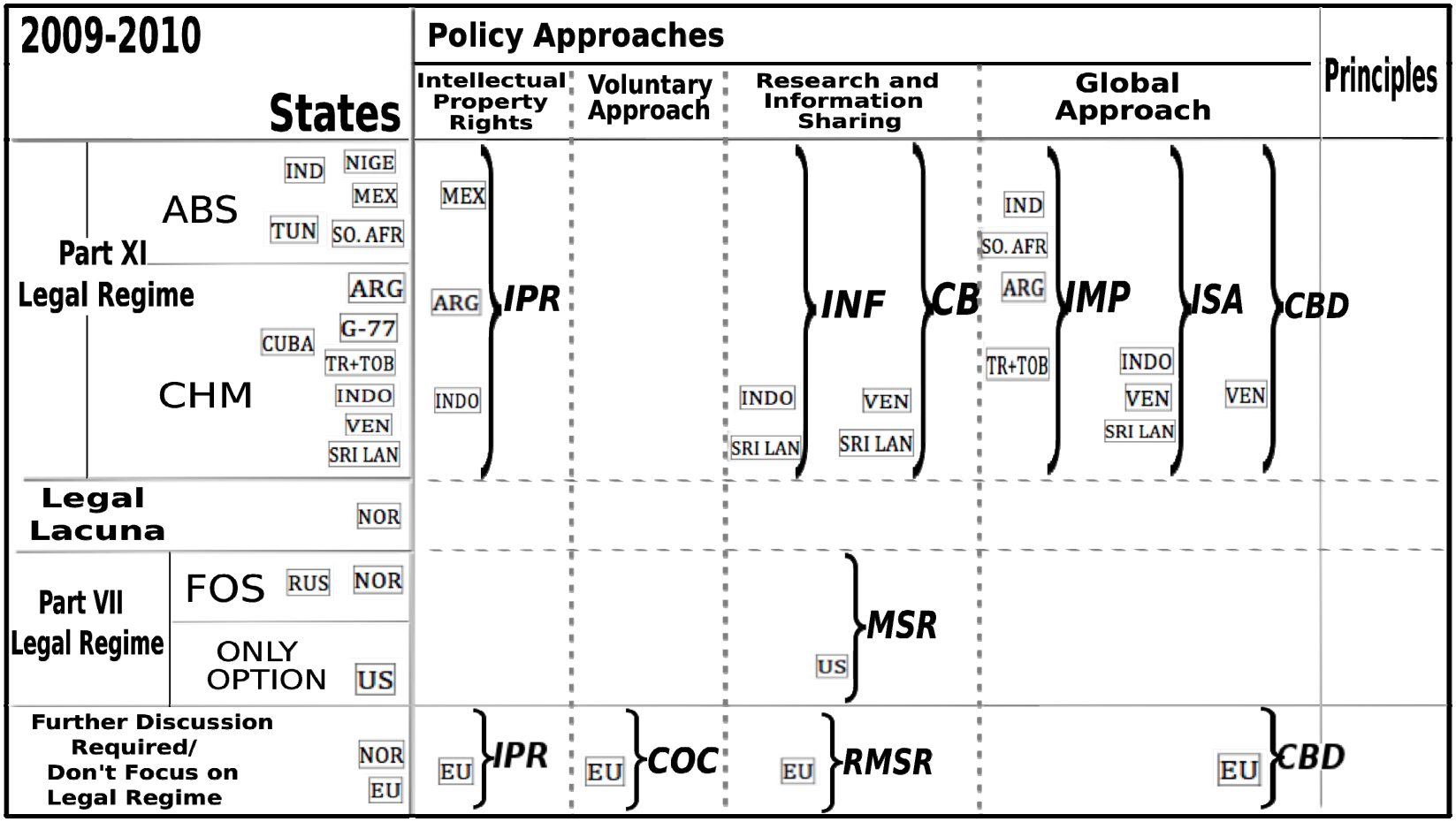

Figure 9. Chart modeling State policy preferences for marine genetic resources articulated at meetings analyzed during the 2009-2010 time period.

3.1.4 2011 TIME PERIOD

In sharp contrast to the third meeting of the UN BBNJ Working Group in 2010, the fourth meeting of the Working Group in 2011 was characterized by compromise on a number of the key contentious issues as well as proposals on options to build consensus, indicating a hopeful trend for intergovernmental discussions for biodiversity beyond national jurisdiction. In general, State preferences emerged in a relatively similar fashion during this time period, with developing States supporting the Part XI legal regime and developed States supporting the application of Part VII of UNCLOS. However, discussions during this time period exhibit notable differences than in previous time periods, with some developed States somewhat compromising on their original position on marine genetic resources and States joining together to identify operational means to reaching consensus, namely through the creation of an intersessional process to clarify key technical issues.

Regarding policy approaches, a number of developing States, in addition to the EU and Australia supported the further examination of intellectual property rights issues. The US and Canada supported the value of voluntary codes of conduct and, in addition to Japan, emphasized the importance of promoting marine scientific research. Capacity-building, primarily in the context of scientific research was highlighted across the policy spectrum, largely by developing States. States supporting the application of the Part XI legal regime to the MGRs of the Area, in addition to the EU, again lobbied for an UNCLOS Implementation Agreement or some sort of comprehensive agreement to address issues related to marine biodiversity beyond national jurisdiction (indicated by the code, “PD”). Discussions also focused specifically on benefit sharing for MGRs. Notable in this respect, is the fact that Iceland, a developed country that had traditionally

lobbied for the application of Part VII of UNCLOS (a position that typically carried either an explicit or implied objection to benefit-sharing for MGRs of the Area), indicated openness to examining various means of benefit sharing for MGRs. The ecosystem-based approach and the precautionary approach were also highlighted as important for MGRs.

One of the most notable policy approaches that emerged during this meeting was the proposal to create a process of intersessional workshops to support the discussions of the UN BBNJ Working Group and allow for more concerted examination of the various technical issues and key questions. This proposal, in addition to the continued and strengthened calls for a comprehensive agreement, led the suspension of plenary discussions and the transition of the remainder of the meetings discussions into closed-door meetings between States to craft the recommendations to the UN General Assembly. What resulted were recommendations that called for the initiation of a process of intersessional workshops aimed at improving understanding of the scientific, legal, and technical aspects associated with these issues and clarifying key questions.

Although settling on the text for these recommendations took significant deliberation and a few states on both sides of the policy spectrum were unhappy with the text, these recommendations signified an important step forward both for the MGR issue-area and for the debate as a whole. In general, States at the fourth meeting of the UN BBNJ Working Group seemed to focus more heavily on the need to work together the address important issues than on reiterating their long-held political positions. Although the closed-door sessions of this meeting limited the amount of time for plenary discussion, which reduced the number State preferences articulated and the data available for this analysis, this meeting represented a significant step forward in achieving conservation and sustainable use of MGRs beyond national jurisdiction.

Table 6. Codes and corresponding policy approaches/principles used in Figure 10.

Code	Policy Approach/Principle Designated by Code
ABS	Operationalize *access and benefit-sharing* (ABS) for marine genetic resources as part of the Part XI legal regime
BS	Support *benefit sharing* for MGRs
CB	Undertake *capacity building* for developing States
CHM	Apply the *common heritage of mankind* principle
COC	Support the use voluntary *codes of conduct*
EBA	Apply the *ecosystem-based approach*
FOS	Apply Part VII legal regime and *freedom of the seas* principle
IMP	Address in the context of an *UNCLOS Implementation Agreement*
IPR	Study *intellectual property rights* as they relate to MGRs
MSR	Focus on promoting *marine scientific research*
ONLY OPTION	Applying a legal regime other than the Part VII legal regime is unnecessary and harmful
PD	Support the development of *package deal* agreement
PRE	Apply the *precautionary approach*
WORK	Support the creation of a process of *intersessional workshops* to support and better inform discussions

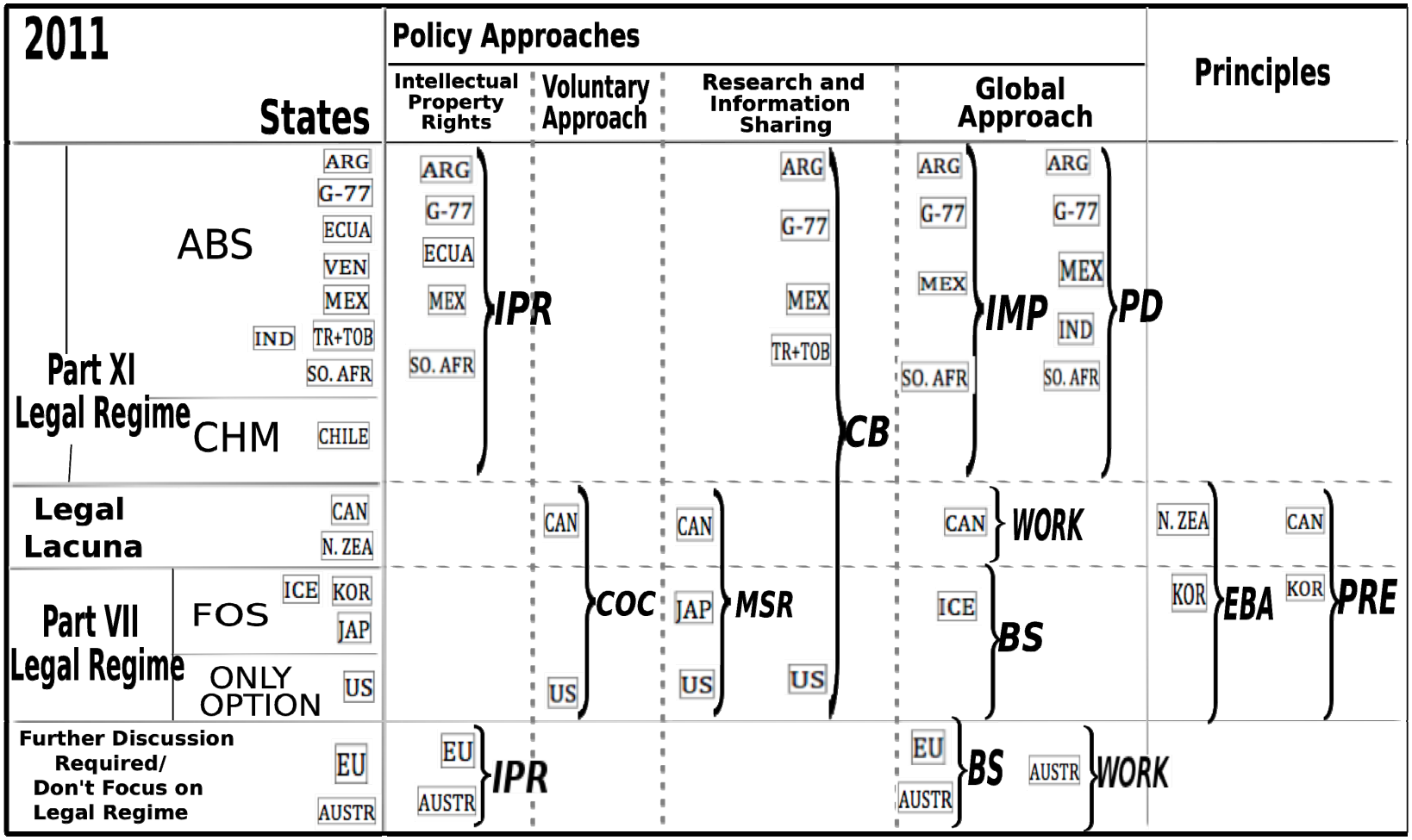

Figure 10. Chart modeling State policy preferences for marine genetic resources articulated at meetings analyzed during 2011.

3.2 Marine Protected Areas

As a widely implemented tool for ensuring the conservation and sustainable use of natural resources, marine protected areas have taken a prominent role in these discussions. MPAs are also highlighted in a number of multilateral conventions and strategies as a key tool for the sustainable development of oceans, including in the Convention on Biological Diversity, Agenda 21, and the Johannesburg Plan of Implementation (JPoI). MPAs hold significant potential for areas beyond national jurisdiction in light of the location-specific nature of many of species and habitats in these areas, especially in the deep sea. Much of the ecosystems and biodiversity that are threatened by anthropogenic activities are often unique to one specific area and are typically interspersed with relatively barren and unproductive areas. Governance and management also becomes somewhat more feasible and effective when applied to sensitive and threatened areas and when there is a clear delineation of where these management measures apply.

As with environmental impact assessments, however, there are a number of complications that arise when transplanting experience in implementing MPAs within national jurisdiction to areas beyond national jurisdiction, including uncertainty as to where the authority to designate and manage high seas MPAs should be vested. Therefore, while this tool has gained widespread support for its potential application in ABNJ, there still remain a number of complicating factors and differences of opinion regarding policy approaches for implementing MPAs in ABNJ.

As with other issues, the policy spectrum for State preferences centered on the scale of application. States in the "Global Approach" category advocate some form of a global approach for implementing high seas MPAs. There are three subcategories within this policy preference zone. The first (BODY) includes States who support the

assigning and/or creation of a new body to designate and management MPAs beyond national jurisdiction. The second subcategory (GUIDANCE) includes States who advocate for the articulation of global guidelines or some form of guidance at the global level, possibly articulated by the UN General Assembly, for example, in establishing high seas MPAs. The third subcategory (CO-OP) includes States that advocate for cooperation between States at the global level.

The next category includes States that have articulated preferences for the regional approach to high seas MPAs. The first subcategory (BODY) includes States who advocate the use of either new or existing regional institutions. This would include, for example, expanding the mandates of Regional Seas Programmes, where appropriate, to provide these bodies with the jurisdiction to designate and manage high seas MPAs. The next subcategory (CO-OP) includes States who advocate for regional cooperation between States in designating and managing high seas MPAs, without specifying preferences for a regional institutional approach.

The next category includes states that support the flag state approach for high seas MPAs and feel that States can, and should, take unilateral action to identify, designate, and protect important and vulnerable marine areas beyond national jurisdiction from adverse impacts of activities conducted by their flagged vessels.

As with some of the other issue-areas, these categories are not mutually exclusive. For example, states that advocate for a flag State approach may also advocate for a regional or global approach. As any efforts designating and managing high seas MPAs will have to be pursued at the flag State level, possibly in conjunction or in coordination with a regional or global approach, therefore, States can logically articulate preferences in support of both of these approaches. Is is, nonetheless, important to keep

these approaches separate, as preferences can, in some cases, be exclusive to each preference zone and have different implications for governance approaches.

3.2.1 2003-2006 TIME PERIOD

As is illustrated in the 2003-2006 chart, a large portion of the States articulating preferences on high seas MPAs supported the global approach. Also notable is that the majority of the States articulating policy preferences on high seas MPAs during this time period are developed states. Developing States did speak to this issue during this time period, however, it was largely developed States who articulated tangible policy preferences.

A number of States across the policy spectrum, especially in the "global approach" zone, articulated support for cross-sectoral MPAs, or MPAs that would address activities and potential impacts from multiple sectors. Significantly less support, however, was articulated for the use of sectoral MPAs and, in some cases, the support for sectoral MPAs is articulated in the context of improving coordination between different sectoral mechanisms, which has inherent cross-sectoral implications. Support was also voiced across the policy spectrum for the use of existing mechanisms, which may include both sectoral and cross-sectoral mechanisms. In this general category, however, there is a notable preference for the use of cross-sectoral MPAs.

States also articulated preferences regarding the general approach taken to designating and managing MPAs. The US and Iceland articulated support for taking a case-by-case approach to high seas MPAs, especially in light of the location-specific nature of these ecosystems and activities. These two States, as well as the EU, also indicated support for the need for a sound scientific basis for the designation and management of MPAs. Not surprisingly, States articulating these preferences also

generally support regional and/or flag state approaches. Generally, these States support the use of high seas MPAs, but feel that a measured and cautious approach is key to establishing and maintaining effective MPAs, rather than establishing MPAs that are little more than "paper parks" and have a limited impact. In 2006, the US highlighted the need for a MPA to have "a clearly delineated and focused impact area and a strong causal link between the harm being addressed and the management measures."*

Mexico and Australia, in the context of support for the global approach, articulated support for taking more concerted efforts to designate VMEs (or Vulnerable Marine Ecosystems), which are defined by the FAO as "...any deep-sea ecosystem that has very high vulnerability to one or more kinds of fishing activity." (FAO 2008) It is important to note, however, that designating an area as containing a VME does not automatically imply a closure to activities, but simply identifies it as a sensitive area that may be in need of protection.

There was somewhat little concrete discussion on the applicability of principles to high seas MPAs during this time period. The EU and the Netherlands emphasized the ecosystem-based approach to high seas MPAs, however, given the strong support for the use of cross-sectoral MPAs, a greater emphasis on the ecosystem-based approach could be inferred from these preferences.

* Statement delivered by the delegation of the United States at the first meeting 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, 13-17 February 2006

Table 7. Codes and corresponding policy approaches/principles used in Figure 11.

Code	Policy Approach/Principle Designated by Code
BODY	Assign and/or create *new body* to manage MPAs
CBC	Use management measures on a *case-by-case* basis
CO-OP	*Cooperation* between States for designating and managing MPAs
CROSS-SECT	Need to take a *cross-sectoral* management approach
EBA	Apply the *ecosystem-based approach*
EXI	Better implement *existing mechanisms*
GUIDANCE	Articulate policy *guidance or guidelines* for designating and managing MPAs
RELY	Support the *reliance of management on scientific data*
SECT	Utilize *sectoral management mechanisms*
VME	Identify *vulnerable marine ecosystems (VMEs)*

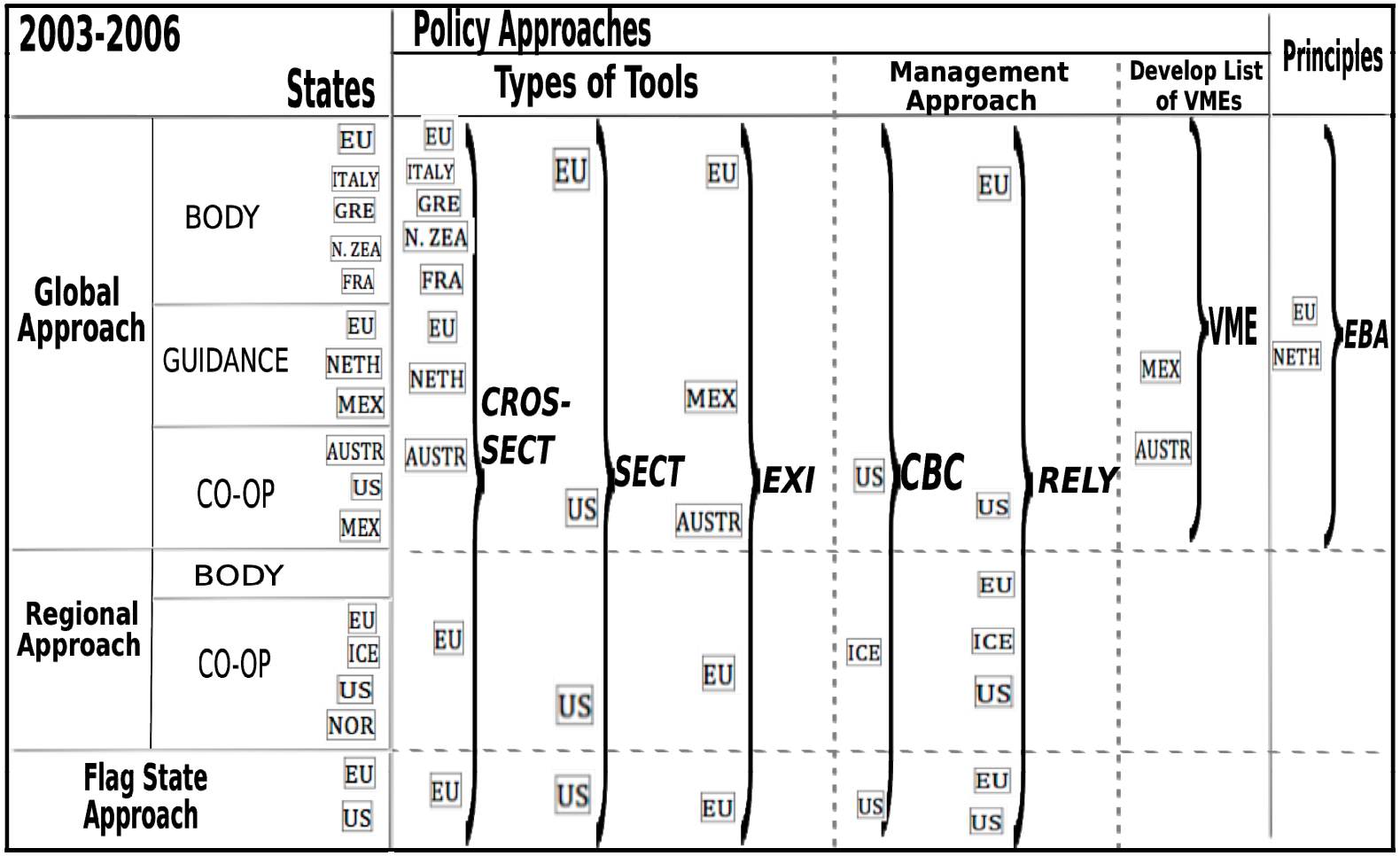

Figure 11. Chart modeling State policy preferences for marine protected areas articulated at meetings analyzed during the 2003-2006 time period.

3.2.2 2007-2008 TIME PERIOD

There was somewhat less discussion on tangible policy preferences by States during this time period, illustrated by the presence of very few States on the chart in Figure 12. This is likely due to the fact that issues related to marine genetic resources somewhat dominated the intergovernmental discussions on marine biodiversity beyond national jurisdiction during this time period. The States that did articulate preferences, however, were those that were also relatively vocal regarding various policy approaches in the previous time period, potentially identifying these States as major players in facilitating the further examination and crafting of potential approaches to implementing MPAs beyond national jurisdiction.

The nature of the discussions on MPAs during this time period was relatively similar to the previous time period. The majority of States voiced support for a global approach to high seas MPAs and largely emphasized many of the same policy approaches that were discussed in the 2003-2006 time period.

Regarding types of MPAs, States once again highlighted cross-sectoral MPAs, particularly in the context of global and regional approaches. The potential use of sectoral and existing mechanisms for MPAs were also emphasized as well.

In terms of management approaches, some States emphasized the need to pursue high sea MPAs on a case-by-case approach, supported by a solid scientific basis. This, however, was highlighted in the context of the global approach, in contrast to the regional approach, as was the case in the 2003-2006 time period. The EU and Australia also explicitly emphasized the potential role of the UNGA in designating MPAs. The EU and Norway also highlighted activities of the OSPAR Commission and North-East Atlantic Fisheries Commission (NEAFC) as promising developments that could be replicated in, or at least inform, other global and regional efforts towards establishing

MPAs in ABNJ. EBSA and VMEs were, once again, highlighted in the global approach, if only to a limited extent. Similarly, the ecosystem-based approach garnered moderate support, but was generally the only principle identified in the context of MPAs beyond national jurisdiction during this time period.

Table 8. Codes and corresponding policy approaches/principles used in Figure 12.

Code	Policy Approach/Principle Designated by Code
BODY	Assign and/or create *new body* to manage MPAs
CBC	Use management measures on a *case-by-case* basis
CO-OP	*Cooperation* between States for designating and managing MPAs
CROSS-SECT	Need to take a *cross-sectoral* management approach
EBA	Apply the *ecosystem-based approach*
EBSA/ VME	Pursue efforts to identify *ecologically and biologically significant areas (EBSAs)* and Identify *vulnerable marine ecosystems (VMEs)*
EXI	Better implement *existing mechanisms*
GUIDANCE	Articulate policy *guidance or guidelines* for designating and managing MPAs
OSPAR/ NEAFC	Look to the progress made under by *OSPAR* and *NEAFC* to inform future action
REL	Support the *reliance of management on scientific data*
SECT	Utilize *sectoral management mechanisms*
UNGA	Support the development of policy guidance from the *UNGA*

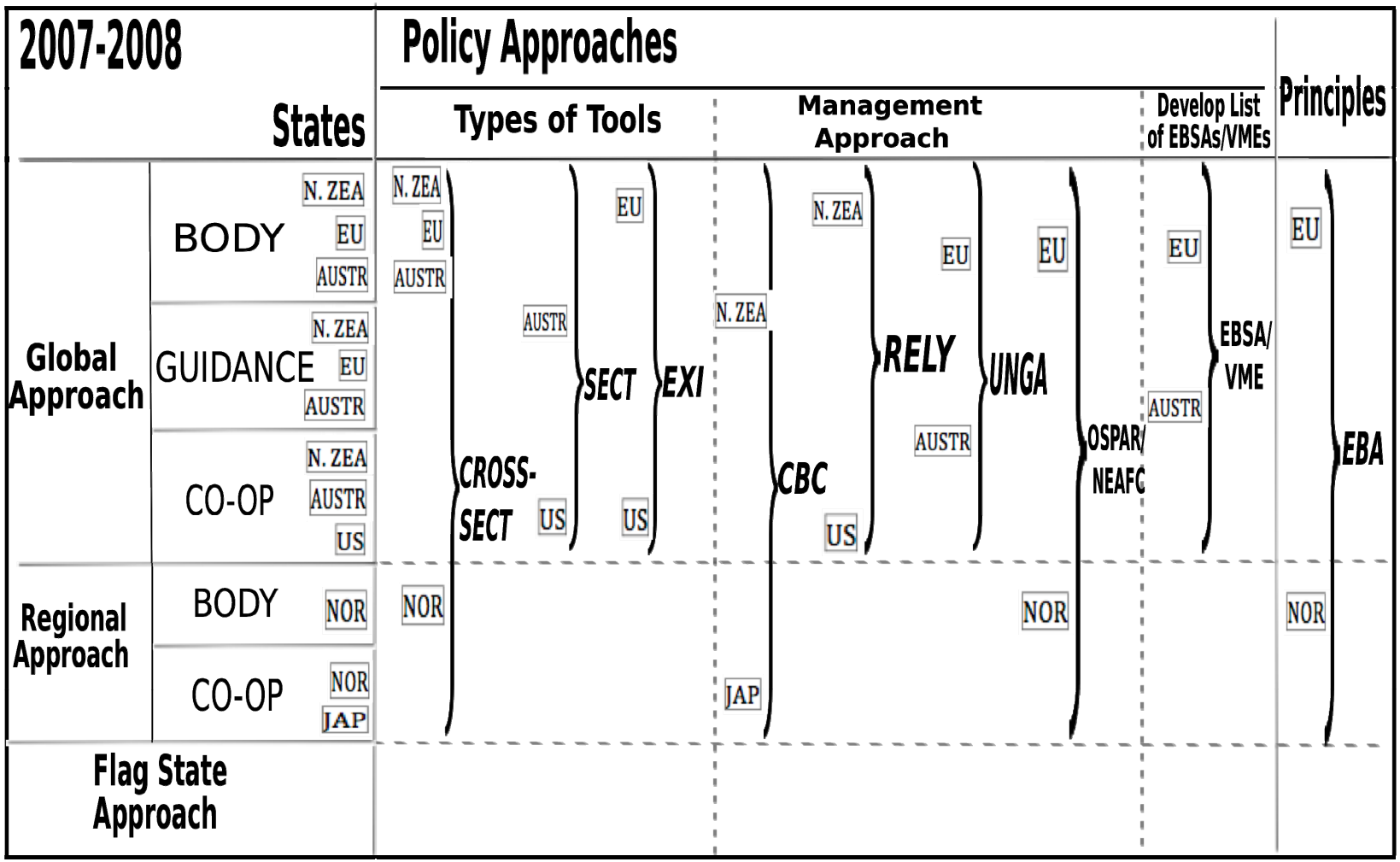

Figure 12. Chart modeling State policy preferences for marine protected areas articulated at meetings analyzed during the 2007-2008 time period.

3.2.3 2009-2010 TIME PERIOD

During this time period, many of the same major players in this issue-area articulated policy preferences, although there seem to be fewer States articulating preferences. This is likely due to the disproportionate amount of focus on governance gaps and marine genetic resources during this time period. In terms of preferences for scale of application, support shifted a bit more towards the regional approach, as States were likely encouraged by progress toward implementing integrated area-based management in the North-East Atlantic by the OSPAR Commission and the North-East Atlantic Fisheries Commission (NEAFC).

Regarding the types area-based approaches, a number of States across the policy spectrum emphasized the importance of cross-sectoral approaches to MPAs, outlining the need for an integrated approach to managing impacts on marine biodiversity and ecosystems beyond national jurisdiction. States also supported the sectoral approach, but did so largely in the context of support for regional and flag State approaches. Australia, the US, and Canada also emphasized the value of using existing mechanisms and tools.

Regarding management approaches, States across the spectrum highlighted the importance of having a science-based approach to designating MPAs and ensuring effective compliance with the management provisions. New Zealand noted the importance of "cooperation among States and a strong focus on compliance…" as being key to effectively implementing high seas MPAs."[*] Taken together these policy preferences, which were articulated by developed States in this time period, indicate support for the need to ground the designation and management of MPAs supported by

[*] Statement delivered by the delegation of New Zealand at the third meeting 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, New York, 1-5 February 2010

both demonstrated rationale and viable governance, rather than establishing MPAs with little effectiveness.

States across the spectrum also supported looking to the notable developments in implementing area-based approaches by the OSPAR Commission and NEAFC as progress that could inform and stimulate progress elsewhere, both at the regional and global levels. The EU, Australia, and the US also supported seeking guidance from the CBD, including from progress in developing criteria to for identifying ecologically and biologically sensitive areas (EBSAs) as potential sites in need of protection.

Notably absent, however, was discussion on the principles to guide the development and implementation of MPAs in areas beyond national jurisdiction.

Table 9. Codes and corresponding policy approaches/principles used in Figure 13.

Code	**Policy Approach/Principle Designated by Code**
BODY	Assign and/or create *new body* to manage MPAs
CBD	Recognize the role of the *Convention on Biological Diversity*
COMP	Develop means to ensure better *compliance*
CO-OP	*Cooperation* between States for designating and managing MPAs
CROSS-SECT	Need to take a *cross-sectoral* management approach
EBSA/ VME	Pursue efforts to identify *ecologically and biologically significant areas (EBSAs)* and Identify *vulnerable marine ecosystems (VMEs)*
EXI	Better implement *existing mechanisms*
GUIDANCE	Articulate policy *guidance or guidelines* for designating and managing MPAs
OSPAR/ NEAFC	Look to the progress made under by *OSPAR* and *NEAFC* to inform future action
RELY	Support the *reliance of management on scientific data*
SECT	Utilize *sectoral management mechanisms*

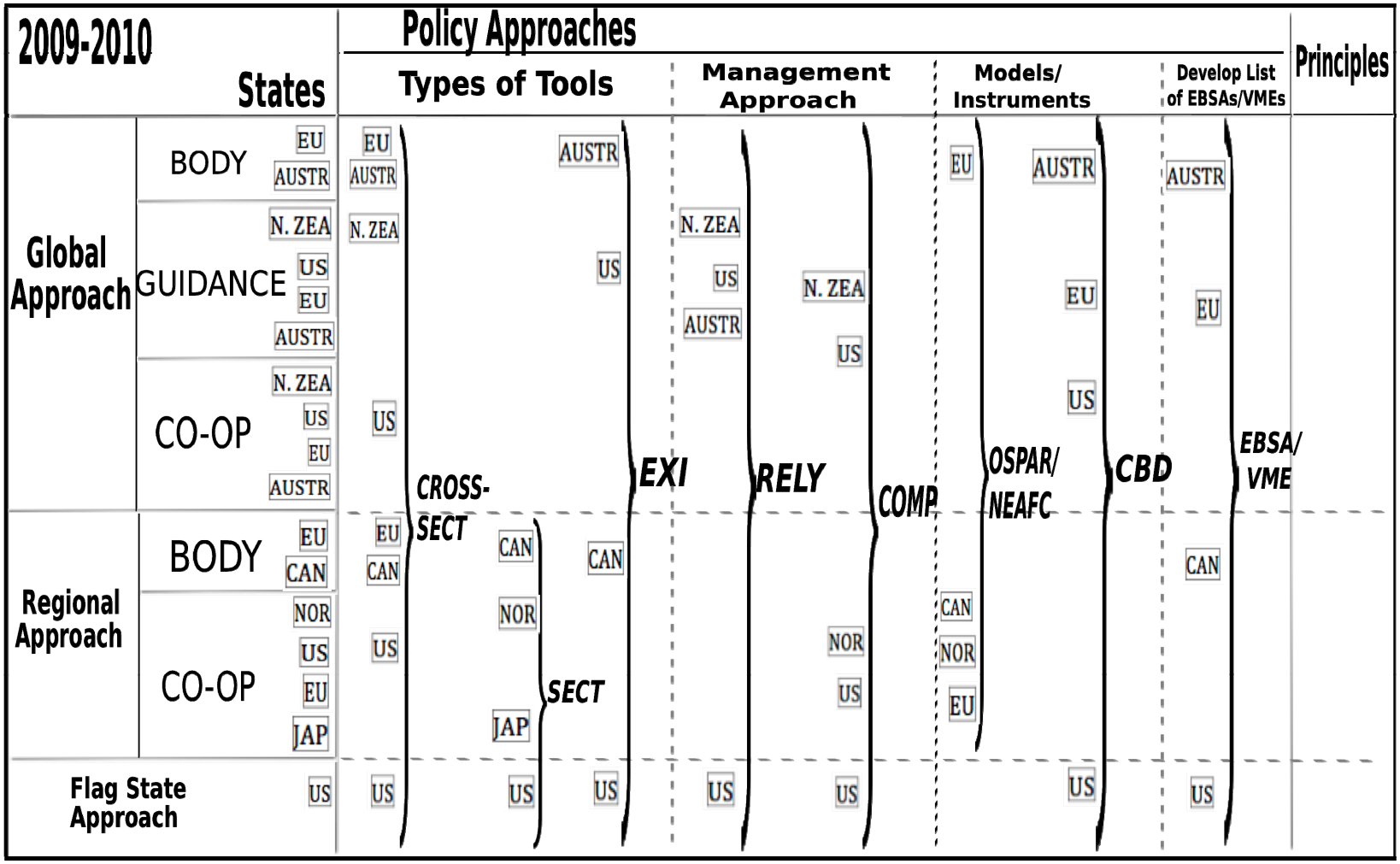

Figure 13. Chart modeling State policy preferences for marine protected areas articulated at meetings analyzed during the 2009-2010 time period

3.2.4 2011 TIME PERIOD

As with the other issue-areas, discussions on MPAs during the 2011 BBNJ Working Group Meeting proceeded somewhat differently than previous discussions. Early on in the meeting, some States delivered prepared statements articulating preferences and preferred policy approaches for high seas MPAs.

The EU, South Africa, and Norway voiced support for the both the global and regional approach, while the US articulated support for the global approach. Canada, Japan, and Korea, however, opted for the regional approach in their statements. There was some discussion and support voiced across the policy spectrum for the value of sectoral MPA approaches, as well as using a case-by-case and scientific approach to designating and managing MPAs. The EU, South Africa, and Norway took special note of the progress made in the North-East Atlantic by the OSPAR Commission, including through regional cooperation with the NEAFC RFMO, to advance area-based protection of sensitive marine ecosystems in areas beyond national jurisdiction.

However, in response to continued disagreements over contentious issues such as the legal regime for marine genetic resources and potential governance gaps, and lack of progress in advancing discussions on potential avenues to implement management tools, such as MPAs and EIAs, Australia proposed the creation of a intersessional process of workshops to further study the technical issues associated with implementing MPAs beyond national jurisdiction, among other issues, to support the discussions of the UN BBNJ Working Group. This proposal, along with steadfast calls for the consideration of an UNCLOS Implementing Agreement, focused discussion on the consideration of such a process, some of which was conducted in closed-door meetings, and less on State preferences on policy approaches. Therefore, there was relatively less data available on State preferences from this meeting.

Table 10. Codes and corresponding policy approaches/principles used in Figure 14.

Code	Policy Approach/Principle Designated by Code
BODY	Assign and/or create *new body* to manage MPAs
CBD	Designate management measures on a *case-by-case* basis
CO-OP	*Cooperation* between States for designating and managing MPAs
GUIDANCE	Articulate policy *guidance or guidelines* for designating and managing MPAs
OSPAR/ NEAFC	Look to the progress made under by *OSPAR* and *NEAFC* to inform future action
RELY	Support the *reliance of management on scientific data*
SECT	Utilize *sectoral management mechanisms*

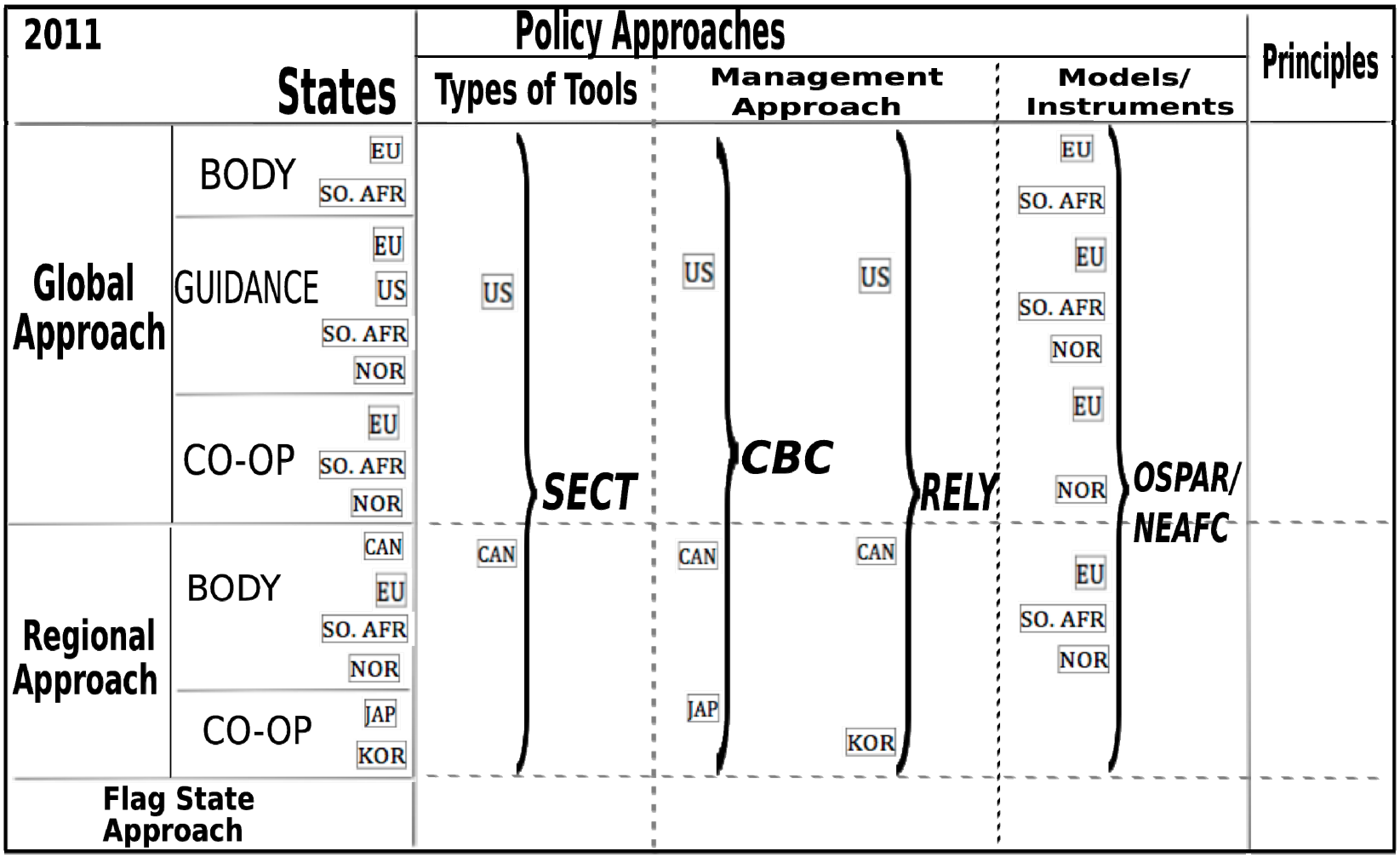

Figure 14. Chart modeling State policy preferences for marine protected areas articulated at meetings analyzed during the 2011 time period.

3.3 Environmental Impact Assessments

Environmental impact assessments for activities that may affect marine biodiversity are discussed in nearly all of the fora addressing issues related to marine areas beyond national jurisdiction. However, the majority of the statements addressing EIAs are relatively general and provide little information on State preferences for EIAs in ABNJ. While general statements outlining the importance of examining and pursuing EIAs in ABNJ are a valuable means of focusing political attention on EIAs as a potentially important tool, they are much less useful in advancing discussions at a substantive level and building consensus on potential policy options.

Due to the fact that a relatively small portion of the States that spoke on EIAs actually articulated policy preferences for EIAs, there was comparatively less data available for analysis in this topic area. Therefore, State preferences throughout the entire time period examined in this study (2003-2011) were modeled in one chart, rather than in three or four separate time periods, as with the other issue-areas. This did not present significant complication, however, as most States did not appear to significantly alter their policy preferences on EIAs over time. In the instance of States articulating different policy preferences in different time periods, the various preferences were all modeled on the chart. This did not present any major issues as States did not articulate conflicting policy preferences in the various fora throughout time period under analysis.

The large number of relatively general statements was likely due to various technical and logistical complexities inherent in implementing EIAs for marine areas beyond national jurisdiction. While there is much experience in implementing EIAs within national jurisdiction, there are a number of issues that arise when attempting to transplant this experience to ABNJ, including; uncertainty over the mandate and authority to oversee and approve the EIA for certain activities; the acceptable degree of impact on

biodiversity and ecosystems; relevant stakeholders to be taken into consideration; and the appropriate scale at which to conduct an EIA in light of data gaps on ecological connectivity. In the general absence of a robust analysis, issues such as these have likely made States wary of developing and articulating clear policy preferences for EIAs in ABNJ. However, practical sectoral experience in implementing EIAs in ABNJ, including through the use of EIAs for bottom-fishing (as called for in UNGA Resolution 61/105), and the emergence of technical studies and expert workshops for EIAs in ABNJ indicate factors that are beginning to reverse this trend. States continue to recognize, however, the need for more concerted expert policy analyses to fully examine these technical and logistical complications before this tool can be adequately implemented in ABNJ.

The policy spectrum for EIAs is based on the preferred scale of implementation, namely regarding State preferences for implementing EIAs at the global, regional, or national-level. This factor was chosen primarily because it lends itself well to this type of scaling approach used in this analysis, as well as the fact the majority of States articulating policy preferences on EIAs speak to the preferred scale at which they should be implemented.

At the top of the chart is a category for States that support the global approach for EIAs. The first sub-category (MECHANISM) indicates States that articulate the need for a global coordinating mechanism for EIAs, and the second (GUIDANCE) includes States that identify the need to develop standardized guidance for EIAs at the global level, such as a set of guidelines or best practices.

The next category includes States that support the regional approach for EIAs. The first subcategory (MECHANISM) includes States that articulate the need to incorporate EIAs into regional mechanisms/arrangements, including RFMOs and

Regional Seas Programs. The second (CO-OP) includes States that prefer regional cooperation directly between States.

The next category includes States that support the flag State approach for implementing EIAs in ABNJ. The final category includes States that support the voluntary approach for EIAs, which is characterized as articulating support for EIAs and/or developing guidance for stakeholders who may wish to voluntarily implement EIAs for activities that may impact marine biodiversity as a measure of good practice.

As with some of the other issue-areas, these categories are not necessary mutually exclusive, as illustrated by the presence of States in multiple categories. Although this provides less of an opportunity for contentious elements of this topic to be identified, it also illustrates the fact that there are less contentious elements in this issue-area and, therefore, a potentially wider breadth of opportunities for consensus building.

Unlike some of the other issue-areas, there are no clear divisions between developed and developing States, although there are also comparatively fewer developing States articulating policy preferences on this issue as compared to the other issue-areas. Also evident is that that there is a relatively small number of States that are especially vocal on this issue, including the US, the EU, and Australia. While it is beneficial to have widespread participation from all states in these discussions, in this case where clear divisions are not evident and the issue is not as politically charged, it can also be beneficial to have a small group of States that may take charge on a given issue to advance the debate. With regards to EIAs, where further technical studies outside of the auspices of these intergovernmental discussions may be required, these States could serve as valuable players in facilitating these technical analyses, including through hosting technical workshops and commissioning policy analyses.

Regarding policy approaches for EIAs, States articulated preferences on the types of assessments that could be undertaken. Some of the States preferring the global and regional approach called for the use of EIAs that address the cumulative impacts of multiple activities on marine biodiversity and habitats, as well as the need to implement EIAs to address the potential impacts of new and emerging activities, such as geoengineering and bioprospecting, with Norway, in particular, noting that "new activities and extending existing activities into new areas should be subject to proper environmental impact assessment."*

A number of States across the policy spectrum clearly articulated the need for the existence of a demonstrated threat in order to warrant the use of EIAs in order to avoid regulatory measures that may unnecessarily hamper valuable research and sustainable use activities. Japan stated its objection to blanket EIA provisions for all activities, stating that "we do not accept that an environmental impact assessment must be completed before any activity in a marine environment can take place."*

Australia noted the potential usefulness of looking to the recent UN General Assembly Resolution 61/105, which calls for assessments of proposed bottom fishing activities to ensure that no significant adverse impacts (SAI), as a potential model when developing and implementing further EIAs for other activities in ABNJ.

Some States across the policy spectrum outlined the core principles to be focused on when implementing EIAs in ABNJ. The precautionary approach, which is a central underlying aspect of EIAs, was highlighted by the EU and Norway. Notable,

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* Statement delivered by the delegation of Norway at the second meeting 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, New York, 28 April - 2 May 2008

* Statement delivered by the delegation of Japan at the second meeting 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, New York, 28 April - 2 May 2008

however, is the focus on the ecosystem-based approach. In highlighting the ecosystem-based approach with respect to EIAs, a number of States across the policy spectrum have indicated the need to take a more holistic approach to EIAs, which is traditionally used on a sectoral basis. This is especially encouraging in marine areas beyond national jurisdiction, where there are significant data gaps on the impacts of specific activities, ecological connectivity, sensitivity of marine species and ecosystems, and the location and intensity of activities taking place beyond national jurisdiction.

Table 11. Codes and corresponding policy approaches/principles used in Figure 15.

Code	**Policy Approach/Principle Designated by Code**
CO-OP	*Cooperation* between States for managing EIAs in ABNJ
CUM	Assess the *cumulative impacts* of multiple human activities on marine biodiversity
DEM	Must be a *demonstrated threat* to warrant the use of EIAs
EBA	Apply the *ecosystem-based approach*
GUIDANCE	Articulate policy *guidance or guidelines* for designating and managing MPAs
MECHANISM	Develop a coordinating mechanism for EIAs in ABNJ
NEW	Address *new and emerging activities*
PRE	Apply the *precautionary approach*

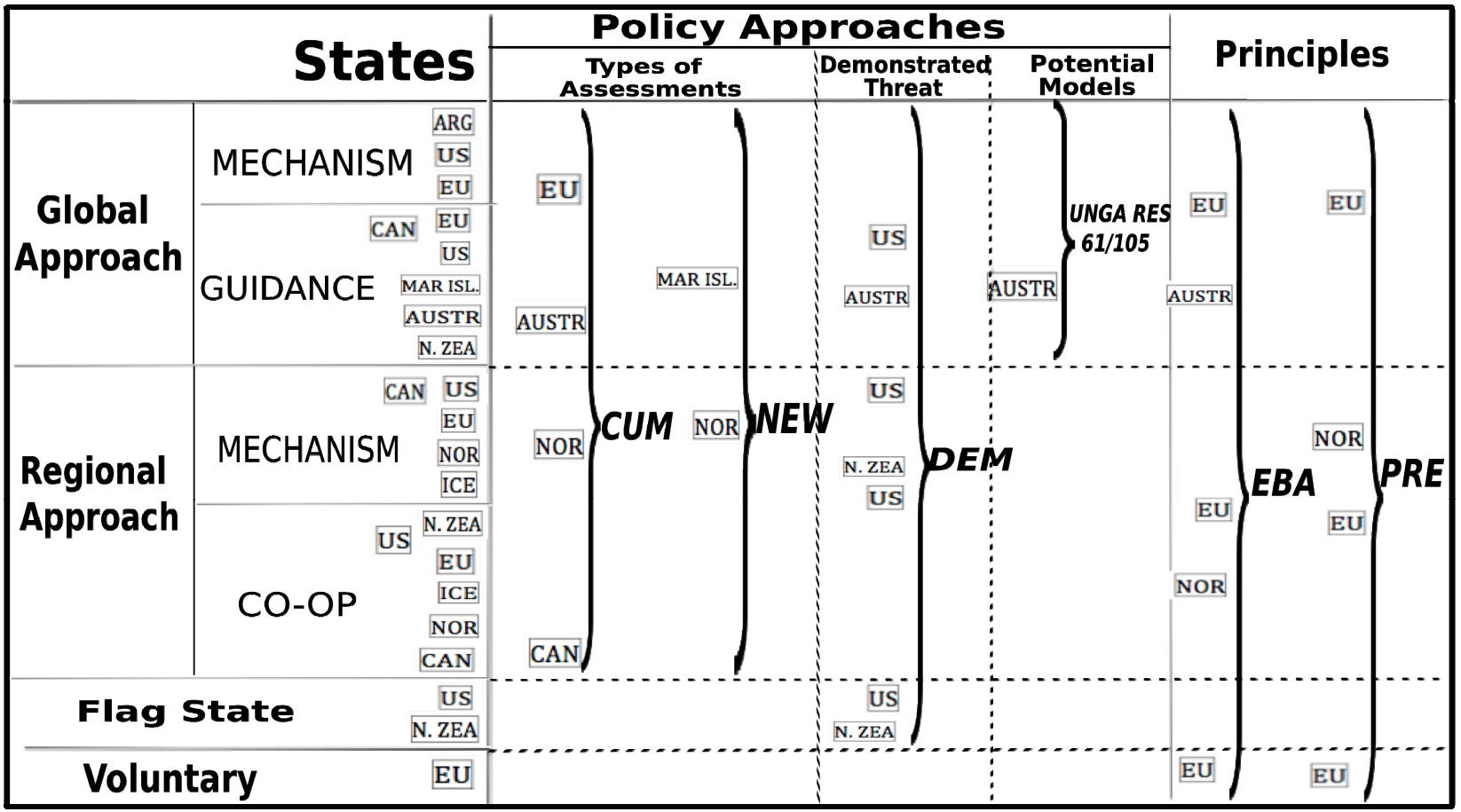

Figure 15. Chart modeling State policy preferences for environmental impact assessments articulated at meetings analyzed between the entire time period reviewed (2003-2011).

3.4 High Seas Fishing

High seas fishing occupies a unique, but sometimes unclear, role in these discussions. Impacts from overfishing and destructive fishing practices remains the most direct threat to the conservation and sustainable use of marine biodiversity beyond national jurisdiction. However, most of the main intergovernmental fora addressing issues related to marine biodiversity beyond national jurisdiction do not directly address governance and management of high seas fishing. Although the UN BBNJ Working Group and UNICPOLOS discuss issues such as modes of cooperation between RFMOs and other global and regional bodies, high seas fishing is most directly addressed relevant fisheries-related global discussions, including the Review Conference for the UN Fish Stocks Agreement and the Informal Consultations of State Parties to the UN Fish Stocks Agreement (ICSP), as well as the UNGA. Available data from these discussions allows for sufficient analysis up to 2010.

This study is not intended to be an exhaustive analysis of State preferences on high seas fishing as there are a number of complications that would arise in trying to do this. First, as high seas fishing is often addressed as a transboundary issue, frequently in the context of RFMOs with jurisdictional boundaries than incorporate areas both within and beyond EEZs, it can be difficult to disaggregate preferences on general transboundary fishing management from preferences on high seas fisheries management. Another significant complicating factor arises from the fact that there are a wide range of global and regional fora in which States may articulate preferences on high seas fisheries management. Due to time and resource constraints, it is not feasible for the researcher to analyze all of these meetings. Furthermore, as the objective of this analysis is to identify areas of commonality and potential elements of agreement in the intergovernmental discussions on marine biodiversity beyond national jurisdiction, the analysis of

discussions on high seas fishing will be in the context of discussions on BBNJ and either the development of, or implications for, a potential resolution to these issues that would arise from these discussions, rather from discussions on transboundary fisheries management.

There are three major categories in the policy spectrum in this issue area; (1) States that support the global approach to high seas fisheries; (2) States that support the regional approach; and (3) States that support for the state-level approach. There are two subcategories in the global approach category; the first (BODY/MECHANISM) includes States that articulate support for new global mechanisms/bodies/instruments, and the second (STRATEGY) includes States that support the need to develop global strategies and/or global criteria for reviewing the effectiveness of fisheries management regimes. There are three subcategories in the regional approach category. The first subcategory (NEW) includes States who support the need to establish new RFMOs or regional management bodies, the second (EXPAND) includes States that support the need to expand the scope and/or strength of existing regional bodies, and the third (CURRENT) includes States that support addressing high seas fisheries management under the current mandates of existing regional management bodies.

There are tangible overlaps in various ways between these categories. For example, the FAO Port State Agreement would represent a global approach to management implemented at the port State-level, and State supporting the Port State Agreement could be listed in both the global approach and the State-level approach categories.

3.4.1 2003-2006 TIME PERIOD

The regional approach enjoyed the most support from States in this time period. Although, port and flag State approaches were also notably emphasized as well. Global approaches garnered relatively less support, likely due to the fact of the presence of the UN Fish Stocks Agreement as well as other instruments such as the FAO Compliance Agreement and the Port State Agreement already provide a relatively robust framework at the global level. A relatively large number of States focused on the need to either expand the scope and/or strength of existing regional bodies, or address high seas fisheries management under the current mandates of existing regional management bodies.

As a complex topic involving a wide range of activities and stakeholders, there were a number of items under discussion. Capacity building for developing States was emphasized by States in the regional and state-level categories, largely by developing States. There was also much discussion on the major threats associated with high seas fishing activities. Many States across the policy spectrum highlighted the need for concerted action to address IUU fishing, as a major threat to the sustainability of global fisheries. States across the spectrum also noted the need to address destructive fishing practices as well adverse impacts from bottom-trawling. Bottom-trawling was especially addressed by States in the South Pacific region, namely Australia, New Zealand, as well as the Pacific Island Forum (PIF), as high seas fisheries in this region are subjected to intensive bottom-trawling, often from distant water fishing nations (DWFN). Mexico and the US, in the context of statements supporting the regional and state-level approach, focused on the need to address adverse impacts of high seas fishing on seamounts. Discussions also focused on the need to further designate vulnerable marine

ecosystems (VMEs) potentially in need of protection, which was emphasized by States supporting global approach, regional approach, and port State approaches.

The UN Fish Stocks Agreement was also a prominent item of discussion. A large number of States across the policy spectrum focused on the need to encourage greater participation in the Fish Stocks Agreement, which States emphasized as key to developing and maintaining a robust global regime for sustainable fisheries. A number of developing States, however, noted that ratifying the UN Fish Stocks Agreement would have little impact for states that lack the capacity to adequately implement the provisions of the Agreement. In addition to the need to build capacity for States to implement robust fisheries management, developing States in the regional and State-level approach policy zones also stressed that States that are not parties to the Fish Stocks Agreement should not be excluded from global discussions on fisheries management. As well, China noted that "the concerns of developing countries should be fully taken into account in discussions of oceans management, especially in the process of formulating relevant standards or criteria."[*] Some States also highlighted the need to curb the persistent issue of "flags of convenience," in which vessels are purposely registered to developing States that lack the capacity to effectively enforce management provisions by establishing a 'genuine link' between registered vessels and flag States that they are registered to. Korea, in particular, highlighted the need for further international action on "effective monitoring, control, and surveillance (MCS) of fisheries, by means of ensuring genuine links between fishing vessels and flag States and creating a comprehensive global record of fishing vessels."[*]

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[*] Statement delivered by the delegation of China at the first meeting 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, New York, 13-17 February 2006

[*] Statement delivered by the delegation of the Republic of Korea at the 5th Round of Informal Consultations of States Parties to the UN Fish Stocks Agreement, New York, 20-24 March 2006

Some States also emphasized the precautionary and ecosystem-based approach as central principles for achieving sustainable high seas fisheries.

Table 12. Codes and corresponding policy approaches/principles used in Figure 16.

Code	Policy Approach/Principle Designated by Code
BODY/ MECHANISM	Create new *new global mechanisms/bodies/instruments*
CB	Undertake *capacity building* for developing States
CURRENT	Addressing through the *current mandates* of existing regional management bodies
DEST	Need to address *destructive fishing practices*
EBA	Apply the *ecosystem-based approach*
EXPAND	*Expand the scope and/or strength* of existing regional bodies
IUU	Address *illegal, unregulated, and unreported (IUU) fishing*
NEW	Establish *new RFMOs or regional management bodies*
NON	Facilitate the participation on *non-Party States* in discussions on governance and management
PRE	Apply the *precautionary approach*
SEAM	Address adverse impact of fishing in seamounts
STRATEGY	Develop *global strategies and/or global criteria* for reviewing the effectiveness of fisheries management regimes
TRAWL	Address the impacts of *bottom-trawling*
UNFSA	Encourage greater participation in the *UN Fish Stocks Agreement*
VME	Identify *vulnerable marine ecosystems (VMEs)*

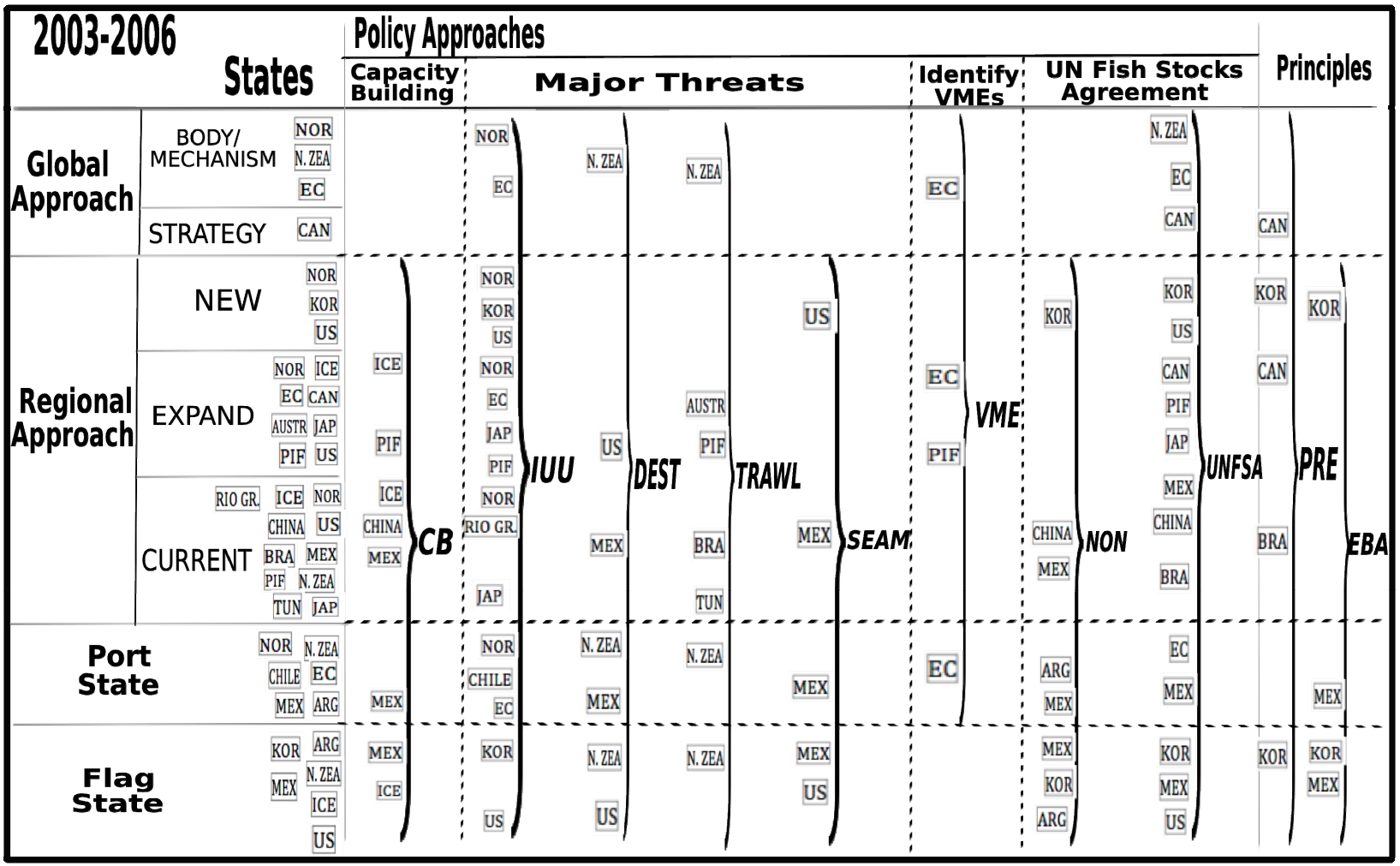

Figure 16. Chart modeling State policy preferences for high seas fishing articulated at meetings analyzed during the 2003-2006 time period.

3.4.2 2007-2008 TIME PERIOD

Relatively similar trends in State distribution are evident in this time period as the previous time period, with States strongly supporting regional approaches to high seas fisheries management, largely through RFMOs and regional fishery bodies (RFBs). The majority of the States in this category supported utilizing existing regional bodies, either in their existing or expanded capacity.

Capacity building for developing States was highlighted across the policy spectrum as central to addressing issues related to high seas fisheries. Notable in this respect, is the fact that many developed States highlighted to need for capacity-building for developing States to facilitate the development of a robust fisheries management regime where all States are capable of implementing management provisions. States also discussed the major threats and concerns associated with high seas fisheries, and specifically outlined the need to address IUU fishing and destructive fishing practices. The US and Canada also highlighted the need to reduce or eliminate excess fishing capacity, which is a noteworthy position for developed States with comparatively large fishing fleets. The need to advance efforts to identify and protect VMEs was also an item of discussion during this time period. Discussions on the UN Fish Stocks Agreement proceeded similarly to those in the previous time period, although significantly fewer States highlighted the need to encourage greater participation in the Agreement. This is likely due to the fact that a number of additional States had ratified the Agreement prior to these meetings.

One new item of discussion in this time period was the need to examine potential options for review of RFMO effectiveness. In light of negative trends in global fish stocks, States discussed the need to improve the effectiveness of RFMOs in managing high seas fishing, with some States calling for a specific mechanism to review

RFMO effectiveness, either through standardized internal review processes or an external third-party mechanism.

In terms of principles, the ecosystem-based approach was emphasized as important by the US and European Commission.

Table 13. Codes and corresponding policy approaches/principles used in Figure 17.

Code	Policy Approach/Principle Designated by Code
BODY/ MECHANISM	Create new *new global mechanisms/bodies/instruments*
CAP	Reduce or eliminate excess *capacity* for high seas fishing
CB	Undertake *capacity building* for developing States
CURRENT	Addressing through the *current mandates* of existing regional management bodies
DEST	Need to address *destructive fishing practices*
EBA	Apply the *ecosystem-based approach*
EXPAND	*Expand the scope and/or strength* of existing regional bodies
IUU	Address *illegal, unregulated, and unreported (IUU) fishing*
NEW	Establish *new RFMOs or regional management bodies*
NON	Facilitate the participation on *non-Party States* in discussions on governance and management
REV	Undertake *RFMO performance review*
STRATEGY	Develop *global strategies and/or global criteria* for reviewing the effectiveness of fisheries management regimes
UNFSA	Encourage greater participation in the *UN Fish Stocks Agreement*
VME	Identify *vulnerable marine ecosystems (VMEs)*

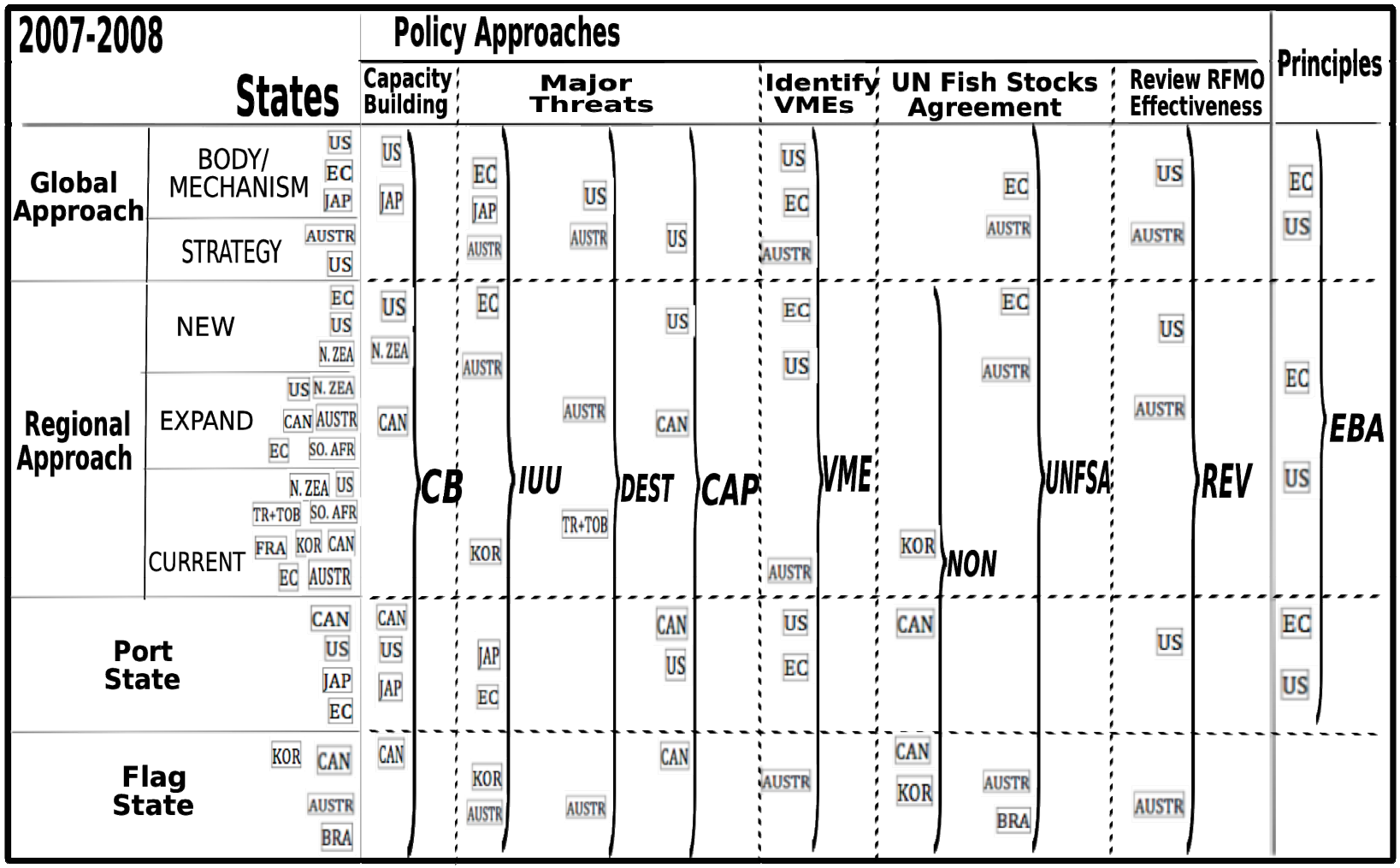

Figure 17. Chart modeling State policy preferences for high seas fishing articulated at meetings analyzed during the 2007-2008 time period.

3.4.3 2009-2010 TIME PERIOD

The regional approach was again the preferred policy approach by most States in this time period, namely the need to address issues through current mandates of existing regional bodies. Notable in this time period, was a significant increase in support for State-level approaches. Capacity-building was discussed again, with some small island developing States (SIDS) also calling for greater support for developing States to improve their capacity to assess fish stocks and implement effective fisheries management. The need to address IUU fishing was strongly emphasized across the policy spectrum by a large number of States. Canada, New Zealand, and Norway, in the context of support for regional and State-level approaches, called for the need to address destructive fishing practices. Harmful fishing subsidies, subsidies and economic policies that stimulate and encourage the expansion of fishing capacity and the use of unsustainable practices are a relatively new item to the discussions on high seas fisheries and were highlighted as an important issue by the US and Japan. The US, in addition to Mozambique, also spoke on the need to reduce and/or eliminate excess fishing capacity. The need to identify VMEs was again highlighted, especially by Pacific States, as well as the importance of encouraging greater participation in the UN Fish Stocks Agreement.

In the 2009-2010 time period, many began to look to the promising developments in regional cross-sectoral cooperation being undertaken by the North-East Atlantic Fisheries Commission (NEAFC) and the OSPAR Commission, who were treading new ground in governance and management of marine living resources on the high seas, including through area-based management approaches. Some States, namely by the EU, the US, Australia, Korea, and Norway, continued to emphasize the need for mechanisms to review the effectiveness of RFMOs and regional fisheries bodies.

Regarding principles, States across most of the policy spectrum highlighted both the precautionary and ecosystem-based approaches.

Table 14. Codes and corresponding policy approaches/principles used in Figure 18.

Code	Policy Approach/Principle Designated by Code
BODY/ MECHANISM	Create new *new global mechanisms/bodies/instruments*
CAP	Reduce or eliminate excess *capacity* for high seas fishing
CB	Undertake *capacity building* for developing States
CURRENT	Addressing through the *current mandates* of existing regional management bodies
DEST	Need to address *destructive fishing practices*
EBA	Apply the *ecosystem-based approach*
EXPAND	*Expand the scope and/or strength* of existing regional bodies
IUU	Address *illegal, unregulated, and unreported (IUU) fishing*
NEAFC/ OSPAR	Look to the progress made under by *NEAFC* and *OSPAR* to inform future action
NEW	Establish *new RFMOs or regional management bodies*
PRE	Apply the *precautionary approach*
REV	Undertake *RFMO performance review*
STRATEGY	Develop *global strategies and/or global criteria* for reviewing the effectiveness of fisheries management regimes
SUBS	Address *perverse fishing subsidies*
UNFSA	Encourage greater participation in the *UN Fish Stocks Agreement*
VME	Identify *vulnerable marine ecosystems (VMEs)*

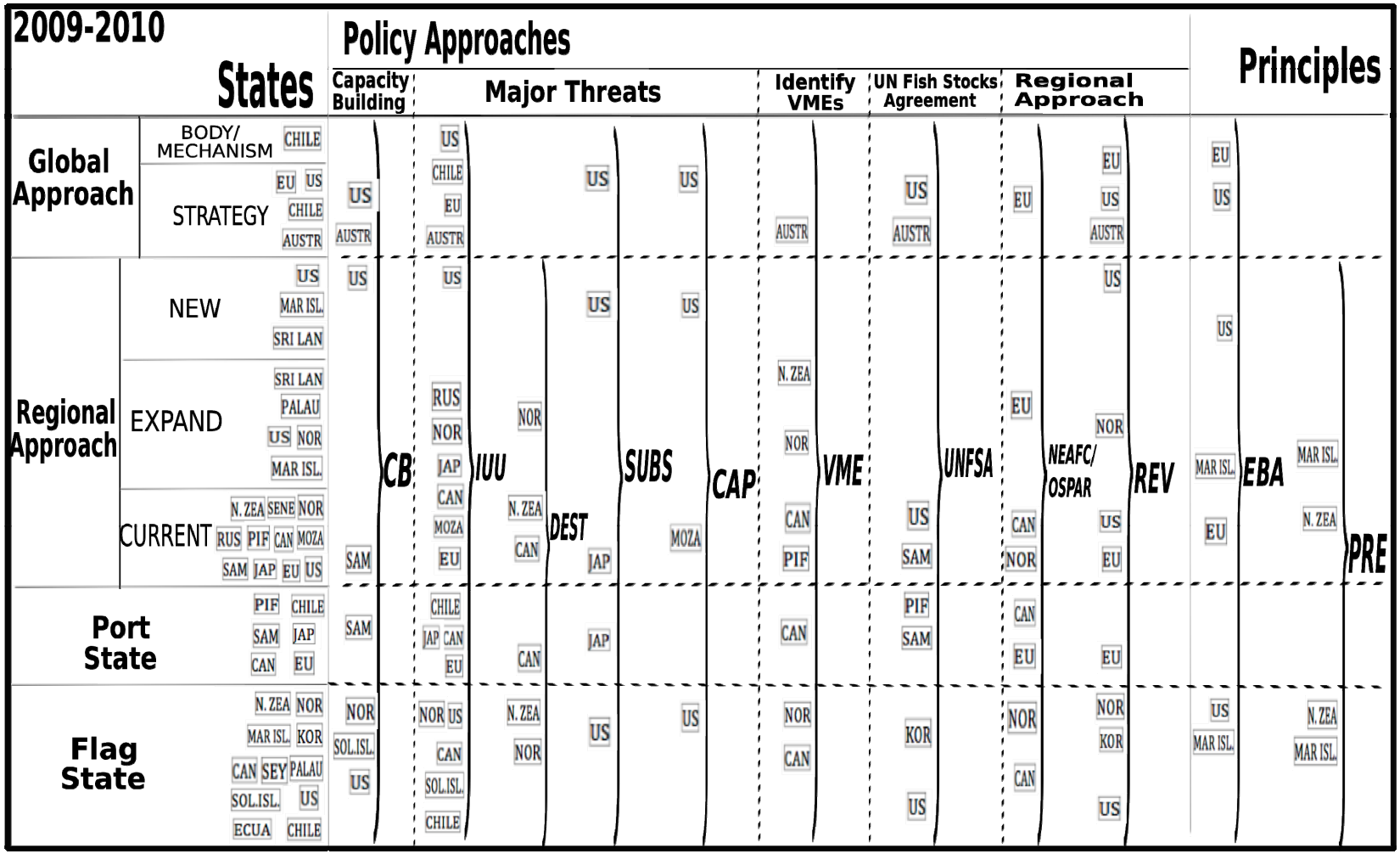

Figure 18. Chart modeling State policy preferences for high seas fishing articulated at meetings analyzed during the 2009-2010 time period.

3.5 Cooperation and Coordination

The cooperation and coordination issue-area has occupied a unique role in these discussions. It initially previously featured prominently on the agenda of these meetings as a major item of discussion. As these discussions progressed, however, this agenda item became much less important as more tangible discussions on specific areas in which cooperation and coordination were needed began to take place. The agenda item all but disappeared from the agenda of the UN BBNJ Working Group by its 4th meeting in 2011. While specific areas for potential cooperation and coordination were included under this agenda item in earlier meetings, the cooperation and coordination agenda item seemed to be crafted in a way to allow for the States to explore the agenda item as they saw fit rather than forcing discussions on specific areas. For example, at the earlier stages of the debate, it was not explicitly clear to what extent there was agreement on the need to pursue, or at least discuss pursuing, EIAs in ABNJ. Therefore, including EIAs as a separate agenda item might have touched on some political difficulties for States who may oppose a certain policy approach, or have the unwanted effect of focusing discussion in an area that might not be considered a priority by many of the States. In light of the significant amount of time that it takes States to deliver prepared statements on a wide range of topics, the latter can become an important logistical issue and can significantly delay progress in these discussions.

Despite the declining importance of this issue-area, it is addressed in this analysis for a number of reasons. First, much substantive discussion was held under the "cooperation and coordination" agenda item in the earlier stages of the discussions. Although this item became less suited to the complex nature of the developing discourse, it did, nonetheless, serve a valuable purpose early on in the debates. Secondly, the fact that this agenda item was highlighted from the outset as a general area of importance

reflects the general consensus on the need to better coordinate and cooperate governance and management activities and, therefore pursue a more integrated and holistic approach to addressing activities in marine areas beyond national jurisdiction.

The policy spectrum for cooperation and coordination is made up of three general policy preferences: (1) States who articulate support for strengthening or creating global mechanisms to achieve improved cooperation and coordination; (2) States who articulate support for strengthening or creating new regional mechanisms; and (3) and States who feel that existing mechanisms, within their current mandates, provide valuable opportunities for improving cooperation and coordination. As with other issue areas, these options are not mutually exclusive, as some States, for example, hold that there exists significant opportunity to better utilize existing mechanisms for cooperation and coordination, but that strengthening or creating mechanisms will also contribute to the achievement of these goals.

3.5.1 2003-2006 TIME PERIOD

As this issue area was most relevant and prominent in the earlier stages of these discussions, States articulated more tangible policy preferences on cooperation and coordination during this time period as compared to the others.

Of the three categories along the policy spectrum, the need to strengthen global mechanisms garnered the largest amount of support, from a roughly equal amount of developed and developing States. New Zealand and the US, in statements in support of improved global mechanisms as well as the use of existing mechanisms, voiced support for capacity building for developing nations, both as a major output of cooperation and coordination as well as means to enable developing nations to more effectively cooperate and coordinate with other States and regional and global entities

This agenda item also hosted some discussion on the possible negotiation of a new UNCLOS Implementation Agreement for marine biodiversity beyond national jurisdiction. In this time period, Argentina and the EU highlighted the potential need for such an agreement, highlighting that this type of agreement could also serve as an important tool to improve coordination between existing mechanisms. Australia, Iceland, and the US, however, voiced opposition to the need for a new agreement to improve cooperation and coordination. Australia, however, voiced support for strengthened, and possibly new, regional mechanisms, where appropriate.

Some States across the policy spectrum emphasized the need for more attention on flag and port State responsibility, and that efforts toward improving cooperation and coordination are most effective when pursued through State-level efforts.

Canada, the EU, and New Zealand highlighted the importance of improving cooperation and coordination in the conservation and sustainable use of marine biodiversity beyond national jurisdiction through sectoral mechanisms. These States noted that sectoral approaches can be effective, especially in light of significant experience in the use of sectoral mechanisms, but that sectoral approaches must be linked together in a more holistic and integrated approach.

Also emphasized as central to achieving conservation and sustainable use was improved coordination at the UN level. There are a large number of bodies, agencies, and conventions within the UN system that directly or indirectly address issues related to marine biodiversity beyond national jurisdiction and largely address ocean issues in a sectoral manner. There is inadequate coordination between these various entities regarding their ABNJ-related activities and, in some cases, conflicting and overlapping mandates. Some States held that improving coordination would not only serve to reduce any potential conflicts and clarify mandates, but could also facilitate synergies and

leveraging of the resources and competencies of these bodies to achieve more effective governance and management of activities affecting marine biodiversity beyond national jurisdiction.

Table 15. Codes and corresponding policy approaches/principles used in Figure 19.

Code	Policy Approach/Principle Designated by Code
CB	Undertake *capacity building* for developing States
FLAG/ PORT	Focus on *Flag and Port State responsibilities*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
SECT	Utilize *sectoral management mechanisms*
UN	Improve cooperation and coordination at the *UN-level*
XIMP	Not convinced of the need for an *UNCLOS Implementation Agreement*

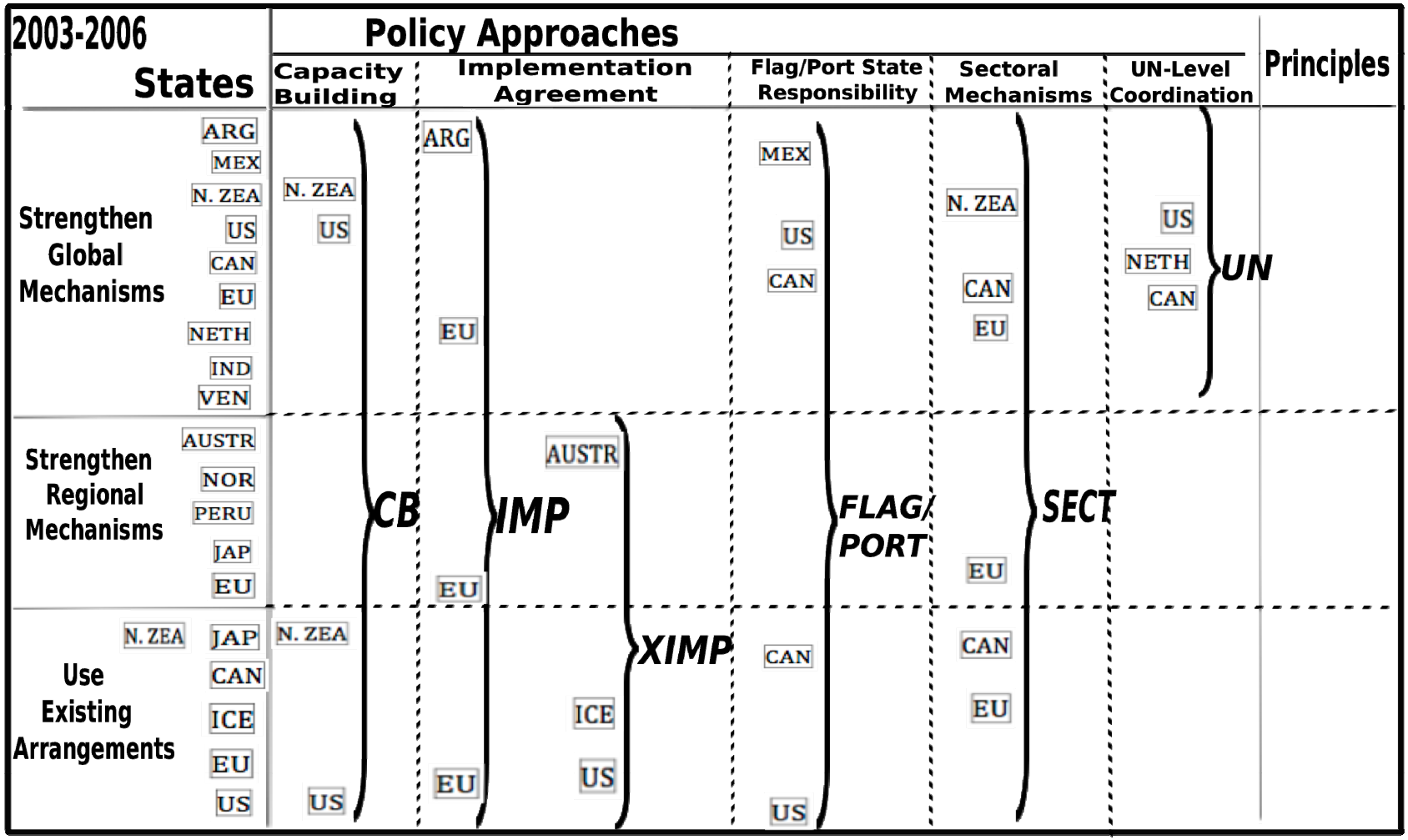

Figure 19. Chart modeling State policy preferences for cooperation and coordination articulated at meetings analyzed during the 2003-2006 time period.

3.5.2 2007-2008 TIME PERIOD

There are indications of the diminishing importance of the cooperation and coordination agenda item in the chart for the 2007-2008 time period, in which fewer States articulated policy preferences in this issue-area. There was a relatively equal number of States articulating preferences for strengthening global mechanisms, strengthening regional mechanisms, and utilizing existing arrangements.

Capacity building for developing States was again highlighted as a central goal of cooperation and coordination, as well as a means of achieving improved governance and management of marine biodiversity beyond national jurisdiction.

The EU and Argentina reiterated their support for the need to develop an UNCLOS Implementation Agreement as a key means to facilitate greater multilateral and cross-sectoral cooperation and coordination. Iceland, Norway, and the US, however, reiterated that such an agreement is not necessary to facilitate increased cooperation and coordination.

Australia and Canada, in statements supporting approaches across the policy spectrum, articulated support for strengthening cooperation and coordination in the context of flag and port State responsibilities. Canada, in addition to the EU and the US, also supported the use of sectoral approaches, and utilizing and developing synergies between the significant experience in sectoral institutional mechanisms to improve cooperation and coordination.

Table 16. Codes and corresponding policy approaches/principles used in Figure 20.

Code	Policy Approach/Principle Designated by Code
CB	Undertake *capacity building* for developing States
FLAG/ PORT	Focus on *Flag and Port State responsibilities*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
SECT	Utilize *sectoral management mechanisms*
XIMP	Not convinced of the need for an *UNCLOS Implementation Agreement*

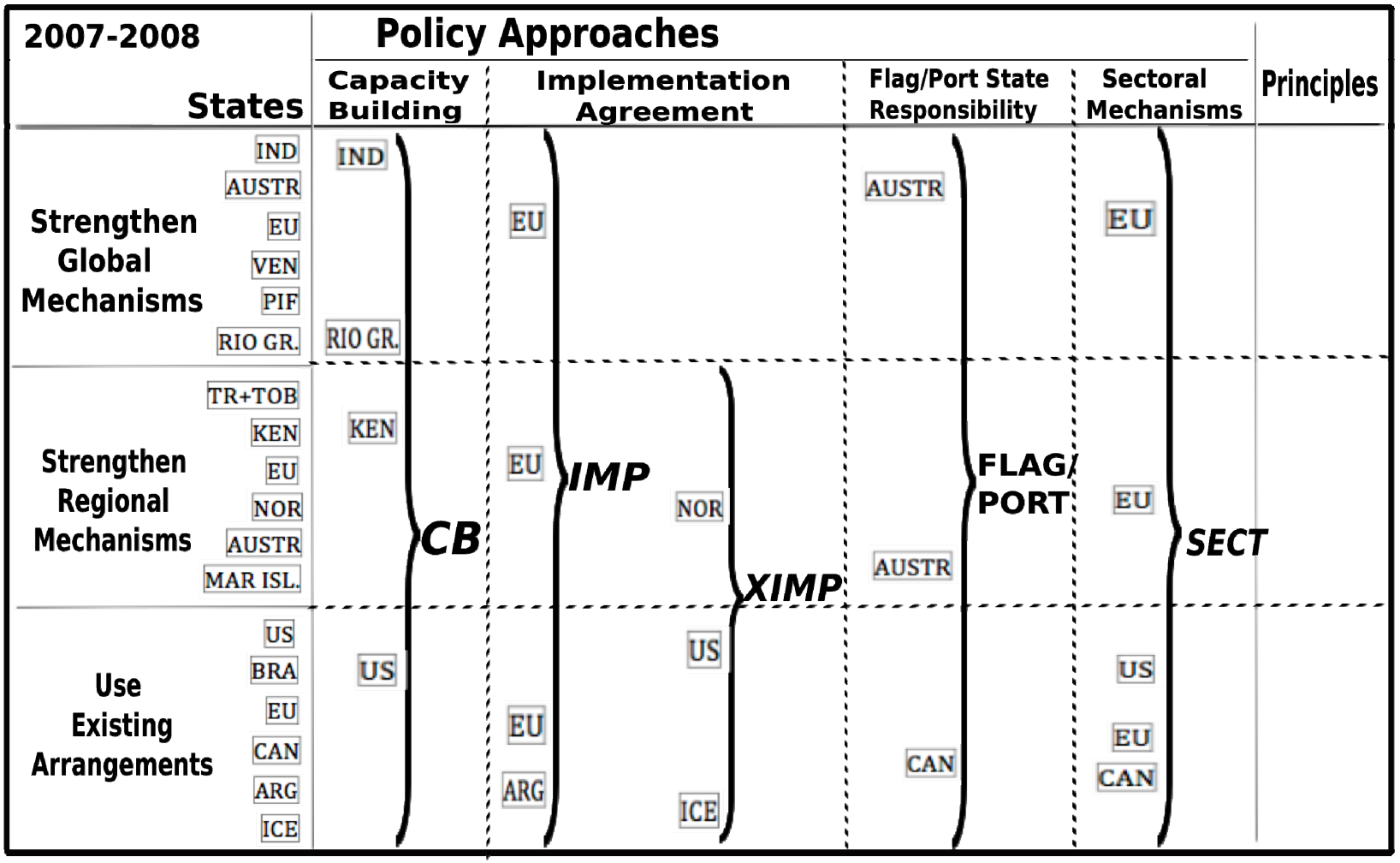

Figure 20. Chart modeling State policy preferences for cooperation and coordination articulated at meetings analyzed during the 2007-2008 time period.

3.5.3 2009-2010 TIME PERIOD

The declining importance of the cooperation and coordination agenda item becomes evident in this time period, as the number of States that articulated policy preferences in this issue-area had decreased and there are even fewer tangible policy approaches proposed and supported. As in previous time periods, there is relatively equal support for pursuing improved cooperation and coordination through strengthened global mechanisms, strengthened regional mechanisms, and utilization of existing arrangements. In this time period, however, a subtle trend becomes evident in that the support articulated for strengthened global mechanisms largely comes from developing States, except for the EU, while the support for strengthened regional approaches and utilization of existing mechanisms comes from developed States. This trend may be a reflection of the political divisions between developed and developing States on potential governance gaps, with developing States supporting new global approaches, including through a potential UNCLOS Implementation Agreement.

Of the few policy approaches that were highlighted, capacity building and the use of sectoral mechanisms were emphasized as important policy approaches in the cooperation and coordination issue-area.

Table 17. Codes and corresponding policy approaches/principles used in Figure 21.

Code	Policy Approach/Principle Designated by Code
CB	Undertake *capacity building* for developing States
SECT	Utilize *sectoral management mechanisms*

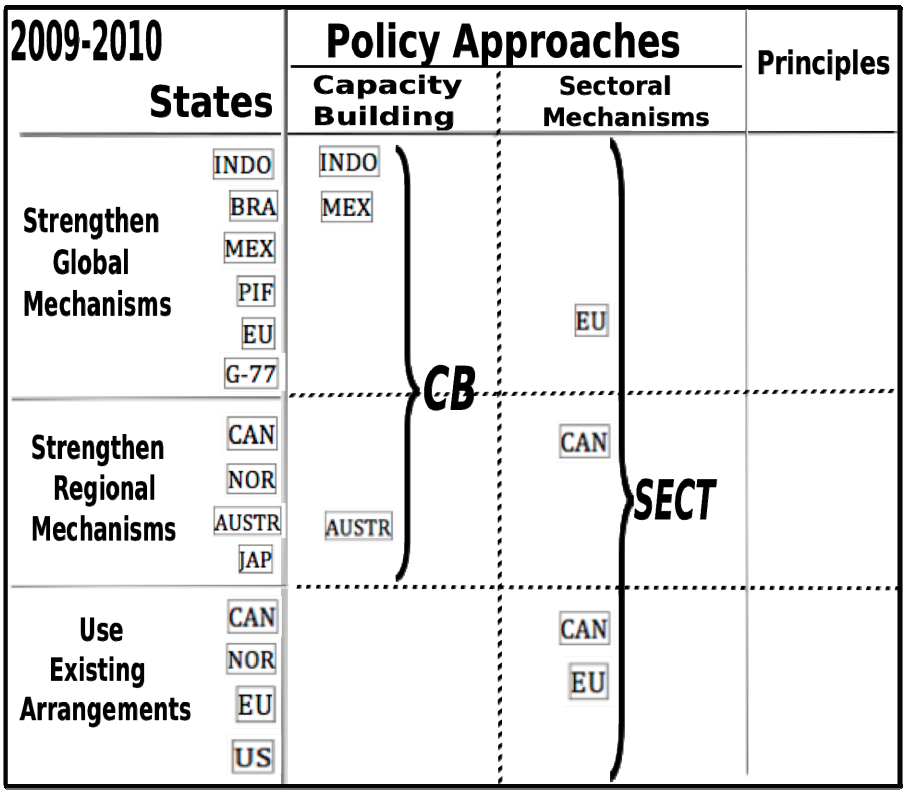

Figure 21. Chart modeling State policy preferences for cooperation and coordination articulated at meetings analyzed during the 2009-2010 time period.

3.6 Governance and Implementation Gaps

This issue-area is one of the primary topics of discussion, and encompasses or has significant implications for the other issue-areas as well, as policy preferences and proposed approaches in this issue-area would address potential management tools, legal

and regulatory frameworks, and various institutional approaches. This issue-area focuses on means to address gaps and weaknesses in the international framework in general. In a number of ways, discussions on potential governance gaps illustrate some of the key characteristics of these debates as a whole. There are notable divisions, primarily between developed and developing States, in many of the policy approaches discussed in this topic. There are also, however, significant areas of agreement and commonality between States with varying policy preferences. Discussions on governance gaps, in general, centers around contention between developing States, in addition to the EU, supporting the need for new mechanisms for more concerted global and regional governance and regulation, including through the development of a new global comprehensive agreement for marine biodiversity in ABNJ, and developed States supporting the utilization of existing tools and regulation where there is demonstrated threat and avoiding overregulation that would hamper important research activities.

The policy spectrum for the governance gap issue area is divided up into two main categories; (1) States who call for new mechanisms to address governance gaps in the international framework, and (2) States who support pursuing improved implementation of the existing framework. Within the first category there are three subcategories. The first (GLOBAL) includes States that support the need to develop new global mechanisms or arrangements. The second (REGIONAL) includes States that support the need to develop new regional mechanisms and arrangements. The third (PRINCIPLES) includes States that support the need to develop a mechanism to integrate principles of environmental governance into the international framework for marine areas beyond national jurisdiction.

3.6.1 2003-2006 TIME PERIOD

The chart for the 2003-2006 time period illustrates the division between developed and developing States as the category for States supporting the development of new mechanisms is populated almost entirely by developing States, except for the EU, and the majority of developed States speaking to this issue voiced support for better implementation of the existing framework to improve governance and management, rather than developing new mechanisms. What is notable, however, is that some States that support the need for new mechanisms, including those that are most vocal in supporting the need to develop a new UNCLOS Implementation Agreement, namely Argentina and the EU, also support the need to better implement the existing framework. This is one of the key elements of commonality in these discussions. It is notable that the vast majority of States in the policy preference zone for new mechanisms support the development of global mechanisms. As demonstrated in the chart, both developed and developing States support the need to address implementation gaps in the existing framework.

Much discussion in this issue-area focuses on management approaches to addressing major gaps in conservation and sustainable use. In this time period, Argentina and the EU were strong proponents of the need to develop a new UNCLOS Implementation Agreement to both address major gaps in the existing framework and to better implement existing mechanisms. A number of developed States, however, strongly emphasized the need to utilize existing mechanisms before considering the development of any new mechanisms. Some of these States, namely Canada, Iceland, and Japan, also highlighted the need to utilize existing sectoral instruments. Canada, Iceland, and Japan also articulated support for the use of existing regional mechanisms, either in their current or expanded form. There was some discussion and support across the policy spectrum on

the need to undertake capacity building for developing States, although this was not strongly emphasized specifically in the context of discussions on governance gaps during this time period. A number of States, both developed and developing voiced support for the area-based approach and the need to identify vulnerable marine ecosystems and designate marine protected areas beyond national jurisdiction.

Discussions also focused on principles to be emphasized in the context of addressing governance and implementation gaps, with States articulating support for the reliance on sound science to support management, as well as the integrated and precautionary approaches.

Table 18. Codes and corresponding policy approaches/principles used in Figure 22.

Code	Policy Approach/Principle Designated by Code
CB	Undertake *capacity building* for developing States
EXI	Better implement *existing mechanisms*
FLAG/ PORT	Focus on *Flag and Port State responsibilities*
GLOBAL	Develop new *global mechanisms/arrangements*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
INT	Support the application of the *integrated approach*
MPA/VME	Pursue efforts for the identification of potential *marine protected area* sites and *vulnerable marine ecosystems*
PRE	Apply the *precautionary approach*
PRINCIPLES	Develop mechanism to integrate *principles* of environmental governance into ABNJ framework
REG	Utilize *regional approaches*
REGIONAL	Develop new regional mechanisms/arrangements
SECT	Utilize *sectoral management mechanisms*

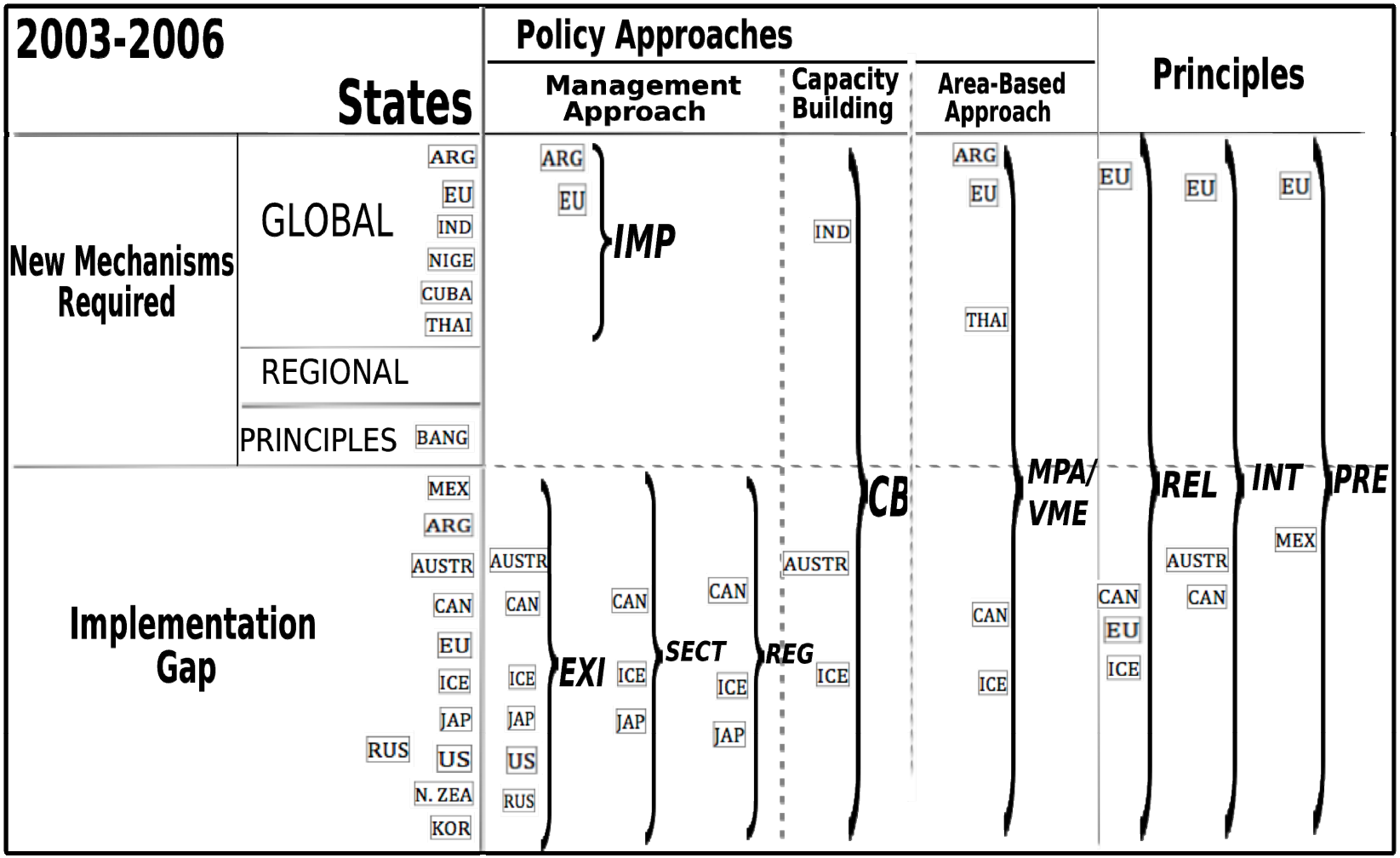

Figure 22. Chart modeling State policy preferences on governance and implementation gaps articulated at meetings analyzed during the 2003-2006 time period.

3.6.2 2007-2008 TIME PERIOD

During this time period, there is, generally, a similar State distribution across the policy spectrum as the previous time period, with many of the developed States supporting the use of existing sectoral mechanisms to address implementation gaps, and developing States also supporting the need address implementation gaps as well as new mechanisms to improve governance. While some states, supported the need for a new global agreement, it is notable that only Argentina and the EU continued to propose and support the need for an UNCLOS Implementation Agreement. Speaking on principles of effective governance, the EU noted that "no detailed international rules or standards exist to assist their coherent application to the full range of ocean-based human activities having an effect on ABNJ within the context of relevant global and regional instruments."[*] As the proposal for an UNCLOS Implementation Agreement garners significant support from a number of States in later years, it is difficult to see why it did not gain momentum during this period, but, in fact, may have lost explicit support from some developing States.This may be due to developing States' desire to avoid this heavy politically polarizing issue and push more strongly for their interests in marine genetic resources, as much more concerted discussion was focused on MGRs during this time period.

Regarding management approaches, the regional approach began to gain increasing support, likely due to the progress being made in the North-East Atlantic through the OSPAR Commission. Japan articulated strong support for RFMOs as the central management bodies for living resources in the high seas.

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[*] Statement delivered by the delegation of the European Union at the second meeting 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, New York, 28 April - 2 May 2008

States also discussed what could be considered factors of effective governance. The EU, Canada, and Norway emphasized the need to ensure that any management measures be supported by effective enforcement and compliance regimes. This is a common position of developed States, both in this issue-area as well as others. Management measures are implemented by States and, if all States are bound to the same commitments to implement certain types of management measures but some States lack the capacity or political will to implement these measures, States abiding by these commitments are put at a disadvantage and harmful trends, such as re-flagging of fishing vessels, are encouraged. States also emphasized the need to improve coordination and cooperation, including information sharing, as essential to achieving effective ecosystem-based governance.

Some States again focused on the significant potential of area-based approaches, both in terms of sectoral and integrated area-based management tools, as an important means to improve governance in marine areas beyond national jurisdiction.

States also emphasized the integrated and ecosystem-based approach as essential principles in implementing both new and existing management measures to achieve viable and effective governance and ensure the conservation and sustainable use of marine biodiversity beyond national jurisdiction.

Table 19. Codes and corresponding policy approaches/principles used in Figure 23.

Code	Policy Approach/Principle Designated by Code
COMP	Develop means to ensure better *compliance*
COOR	Pursue better *coordination* between various management mechanisms
EBA	Apply the *ecosystem-based approach*
EXI	Better implement *existing mechanisms*
GLOBAL	Develop new *global mechanisms/arrangements*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
INT	Support the application of the *integrated approach*
MPA/VME	Pursue efforts for the identification of potential *marine protected area* sites and *vulnerable marine ecosystems*
PRINCIPLES	Develop mechanism to integrate *principles* of environmental governance into ABNJ framework
REG	Utilize *regional approaches*
REGIONAL	Develop new *regional mechanisms/arrangements*
SECT	Utilize *sectoral management mechanisms*

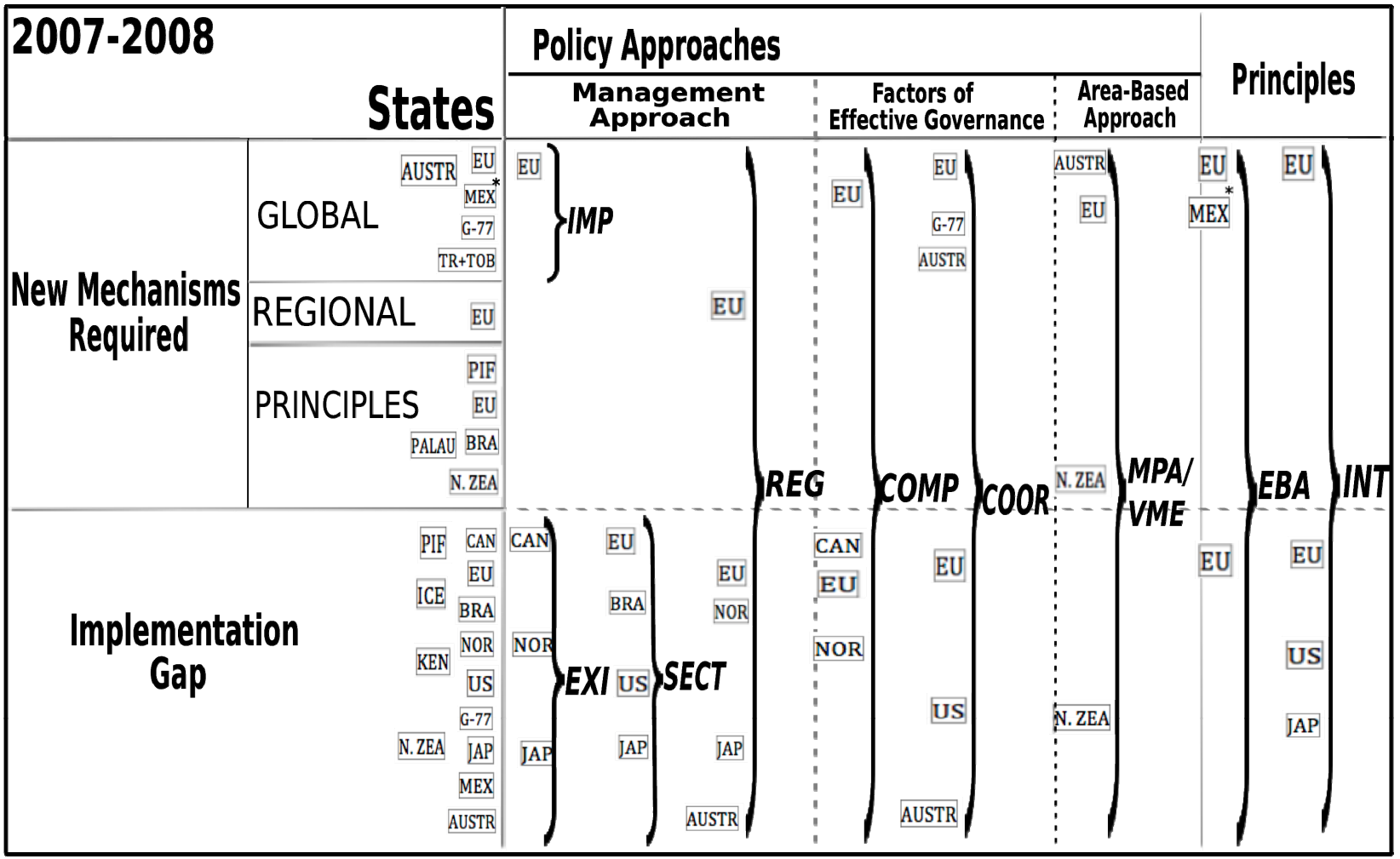

Figure 23. Chart modeling State policy preferences on governance and implementation gaps articulated at meetings analyzed during the 2007-2008 time period.

3.6.3 2009-2010 TIME PERIOD

Relatively similar trends in state distribution across the policy spectrum emerged during this time period, with both developed and developing States supporting the need to address gaps in implementation, and developing States, aside from the EU, supporting the development of new mechanisms.

One notable difference in this time period, however, is the strong support for the need to develop an UNCLOS Implementation Agreement for marine biodiversity in areas beyond national jurisdiction. It is clear that some consensus-building and lobbying had taken place between developing States to build support for an Implementation Agreement. Nearly all of the States in the first subcategory (+++) of the "New Mechanisms" category, which includes States who support development of new global mechanisms, explicitly supported the need for an Implementation Agreement. In previous meetings, developing States had largely focused on the need for an Implementation Agreement in the context of the need to address issues related to the legal regime for marine genetic resources. However, this option gained increasing support from developing States as a means to address many of the issues related to ABNJ.

Developed States again supported the use of existing and sectoral tools as well as the regional governance approach. Canada, in particular, emphasized the need to give "priority to effective implementation of existing agreements and to ensuring more integrated management while maintaining the integrity of sectors and continuing to work to strengthen them."[*] Some States across the policy spectrum supported the area-based approach, noting the need to identify vulnerable marine ecosystems (VMEs) and designate MPAs. Capacity-building for developing States was also highlighted in the

[*] Statement delivered by the delegation of Canada at the third meeting 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, New York, 1-5 February 2010

context of governance and implementation gaps, largely by developing States. Some States across the policy spectrum also emphasized the important role of prior impact assessment, as a valuable means of achieving effective governance.

There was, however, somewhat less discussion principles of effective governance, with only Canada and the EU highlighted the integrated, ecosystem-based, and precautionary approaches in the context of address major gaps in the international ABNJ framework.

Table 20. Codes and corresponding policy approaches/principles used in Figure 24.

Code	Policy Approach/Principle Designated by Code
CB	Undertake *capacity building* for developing States
EBA	Apply the *ecosystem-based approach*
EXI	Better implement *existing mechanisms*
GLOBAL	Develop new *global mechanisms/arrangements*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
INT	Support the application of the *integrated approach*
MPA/VME	Pursue efforts for the identification of potential *marine protected area* sites and *vulnerable marine ecosystems*
PIA	Utilize *prior impact assessment*
PRE	Apply the *precautionary approach*
PRINCIPLES	Develop mechanism to integrate *principles* of environmental governance into ABNJ framework
REG	Utilize *regional approaches*
REGIONAL	Develop new *regional mechanisms/arrangements*
SECT	Utilize *sectoral management mechanisms*

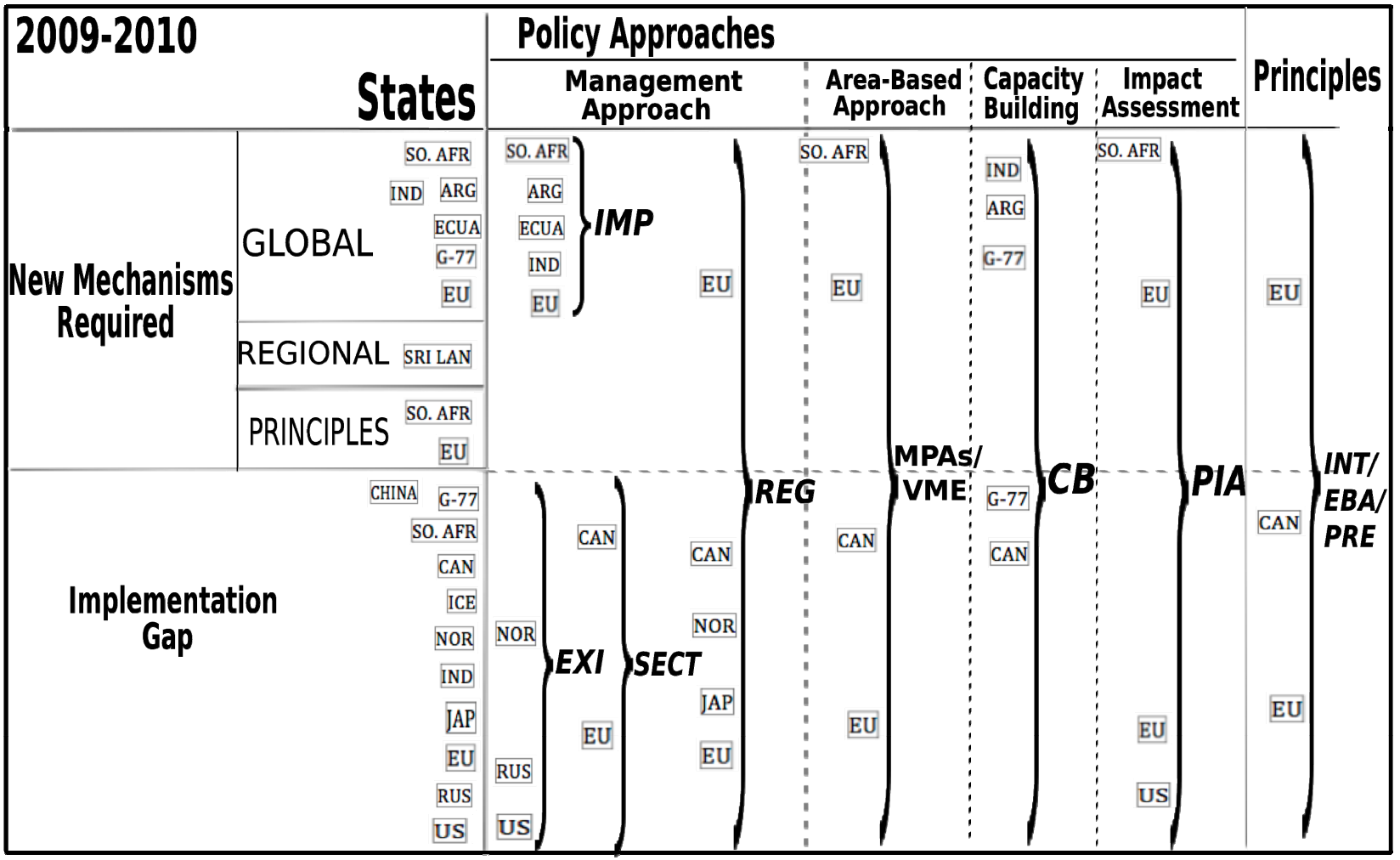

Figure 24. Chart modeling State policy preferences on governance and implementation gaps articulated at meetings analyzed during the 2009-2010 time period.

3.6.4 2011 TIME PERIOD

Discussions proceeded somewhat differently during the fourth meeting of the UN BBNJ Working Group, and focused centrally on the proposal for an UNCLOS Implementation Agreement. While there were some discussions on State policy preferences for capacity building and on the importance of the integrated and ecosystem-based approaches as principles of effective governance, the majority of State policy preferences in this issue-area emerged either in direct response to or in support of an UNCLOS Implementation Agreement. At this meeting, a strong coalition of largely developing States, led by the EU, Argentina (on behalf of the G-77), and Mexico, pushed strongly for the initiation of a negotiation process for an Implementation Agreement. In response, developed States, namely the US, Iceland, Russia and Japan, rejected the need for an Implementation Agreement and reiterated that the existing framework provides mechanisms and opportunities capable of addressing governance gaps.

Australia proposed the creation of a process of intersessional workshops, which was initially supported by the US, Canada, and Japan, to examine complex technical, legal, and policy issues associated with management tools and proposed governance approaches, including the development of an Implementation Agreement.

As discussions on these proposals progressed, largely in closed-door sessions, some developed States compromised on their outright rejection of the need for an Implementation Agreement and agreed to consider the possible need for a new international agreement in future discussions. The recommendations that emerged called for the initiation of a process of intersessional workshops aimed at improving understanding of the scientific, legal, and technical aspects associated with these issues and clarifying key questions, and noted that future discussions would consider the potential need for a new international agreement for marine biodiversity beyond national

jurisdiction. While some States on both sides of the policy spectrum were unhappy with the text, these recommendations signified an important step forward for the debate. In general, States vocalized the need to work together the address important issues more strongly than the importance of their positions and policy preferences.

Table 21. Codes and corresponding policy approaches/principles used in Figure 25.

Code	**Policy Approach/Principle Designated by Code**
AGR	Consider the need for a new *international agreement*
CB	Undertake *capacity building* for developing States
EBA	Apply the *ecosystem-based approach*
EXI	Better implement *existing mechanisms*
GLOBAL	Develop new *global mechanisms/arrangements*
IMP	Address in the context of an *UNCLOS Implementation Agreement*
INT	Support the application of the *integrated approach*
PRINCIPLES	Develop mechanism to integrate *principles* of environmental governance into ABNJ framework
REGIONAL	Develop new *regional mechanisms/arrangements*
WORK	Support the creation of a process of *intersessional workshops* to support and better inform discussions
XIMP	Do not support the development of an *UNCLOS Implementation Agreement*

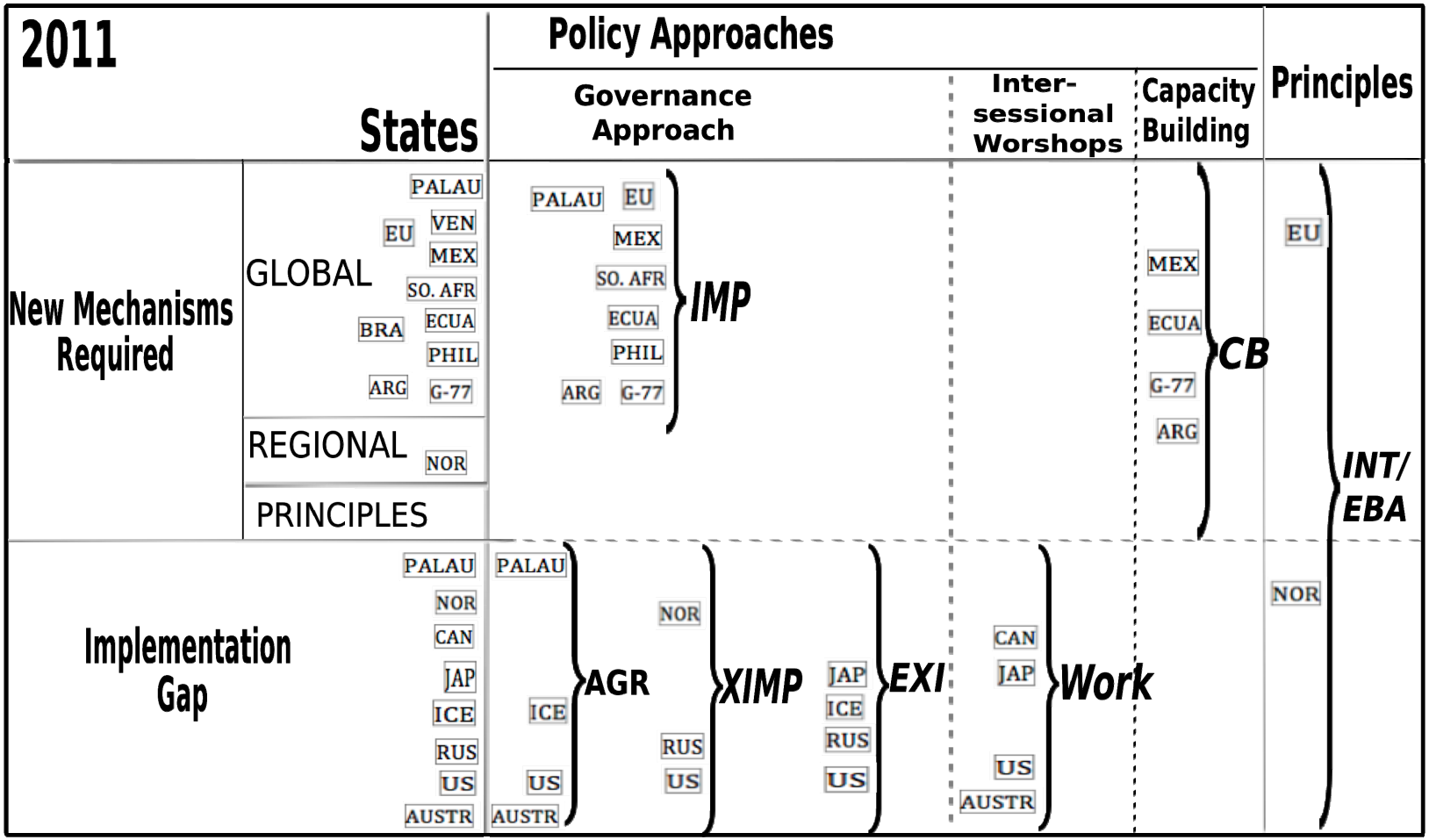

Figure 25. Chart modeling State policy preferences on governance and implementation gaps articulated at meetings analyzed during 2011.

3.7 State of the Debate

The most recent discussions held on BBNJ at the fourth meeting of the UN Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction (UN BBNJ Working Group) in May 2011 represented a significant step forward in building consensus towards a potential resolution to these debates.

At the outset of the meeting, States began to reiterate preferences on many of the central contentious elements under discussion, leading some of those present to fear that the meeting would be dominated by somewhat repetitive and unproductive discussions. Developing States voiced strong support for the application of the common heritage of mankind principle to the marine genetic resources of the Area, and, in cooperation with the EU, pushed for the need to develop an UNCLOS Implementation Agreement for marine biodiversity beyond national jurisdiction. The majority of developed States emphasized the importance of utilizing existing instruments and rejected the need for an UNCLOS Implementation Agreement. As the meeting progressed, however, some encouraging trends began to emerge. First, there was increased cooperation among States supporting the need for a package agreement, namely in terms of delivering statements and interventions that complement each other's rationale for a comprehensive approach. These States also worked together closely to craft joint proposals for text for the working group co-chairs' recommendations to the UN General Assembly. Second, some of the developed States demonstrated signs of compromise on some of the contentious issues, articulating openness to considering potential mechanisms for benefit-sharing as well as the potential need for a multilateral agreement, approaches that developed States had strongly objected to in previous meetings. Third, a few States, in response both to these encouraging developments in the

discussions and to the continued lack of clarity on many legal and technical issues, proposed an intersessional process of workshops to support the discussions of the Working Group by exploring many of the key scientific, legal, and technical issues that have yet to be directly addressed.

Following multiple rounds of plenary and closed-door discussions, States arrived at consensus on the following recommendations to the UN General Assembly (UN A/66/119):

> 1. The Ad Hoc Open-ended Informal Working Group, having met from 31 May to 3 June 2011 in accordance with paragraph 163 of General Assembly resolution 65/37 A, recommends that:
> (a) 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 the United Nations Convention on the Law of the Sea;
> (b) This process would address 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, and environmental impact assessments, capacity-building and the transfer of marine technology;
> (c) This process would take place: (i) in the existing Working Group; and (ii) in the format of intersessional workshops aimed at improving understanding of the issues and clarifying key questions as an input to the work of the Working Group;
> (d) The mandate of the Working Group be reviewed and, as appropriate, amended, with a view to undertaking the tasks entrusted by the present recommendations;
> (e) The Secretary-General be requested to convene a meeting of the Working Group in 2012 to make progress on all issues under examination within the Working Group and to provide recommendations to the General Assembly at its sixty-seventh session.

The most notable aspects of these recommendations are that States agreed to recommend that the UN General Assembly develop a process that would address issues

related to conservation and sustainable use "together and as a whole" and would take place:

(1) Within the Working Group, following an explicit reconsideration of the Working Group's mandate so as to make it better able to address these issues; and

(2) Through intersessional workshops aimed at improving understanding of the scientific, legal, and technical aspects associated with these issues and clarifying key questions.

Although the discussions of the Working Group meeting again brought the contentious issues to the forefront, these discussions proved much more productive and action-oriented than previous meetings, with practical proposals and counter-proposals put forth throughout the week. There also appeared to be more cooperation and compromise at this meeting. States were less entrenched in their positions, moving away from unproductive reiteration of positions on controversial issues. There was widespread agreement on the need to make tangible progress on issues of common concern and a demonstrated convergence of opinion on the need to address issues related to conservation and sustainable use in an interlinked or package approach, possibly in the form of a comprehensive agreement. While a few nations were generally opposed to the package approach, there was a large coalition of nations supporting this type of eventual outcome. In fact, some of the States initially opposed to a package deal approach, such as the US, voiced openness to considering the need for a new international agreement by the end of the meeting. What emerged from these discussions were forward-looking recommendations to the UN General Assembly containing text that aims to stimulate progress on both the political and practical issues associated with the conservation and sustainable use of biodiversity beyond national jurisdiction.

There are a number of factors that may have facilitated the productive discussions taking place at this meeting. One potential factor could have been the general

disappointment with the relatively weak recommendations emanating from the third meeting of the Working Group in 2010. The convening of this meeting in two consecutive years for the first time since its initial meeting in 2006 may have also contributed to the growing sense of urgency to work towards more action-oriented outcomes. The progress being made in other global and regional fora either directly or indirectly related to ABNJ issues, such as the Convention on Biological Diversity and the OSPAR Commission, may have also contributed to this sense of urgency. Another potential factor facilitating progress at this meeting was the growing understanding of the various technical issues associated with implementing various management tools, and the recognition of the fact that many of these technical issues can be surmounted. When issues related to biodiversity beyond national jurisdiction first became a focus of international discussion, there was relatively little understanding as to how to resolve the various technical issues associated with implementing tools such as MPAs and EIAs in ABNJ. However, recent progress in at the global and regional levels, combined with a growing base of analysis in the form of scholarly literature and expert workshops, are demonstrating the viability of potential avenues for addressing these issues.

The most notable trend of the fourth meeting of the BBNJ Working Group was the significant momentum on the need for a comprehensive agreement, particularly in the form of an UNCLOS Implementation Agreement that would address the spectrum of issues related to BBNJ. A package deal approach to address issues related to marine biodiversity beyond national jurisdiction had long been supported by many countries, as well as many non-governmental organizations, scientists, international lawyers and policy experts, and members of academia. However, discussions on a package approach at this meeting were notable in that States proposing and supporting this approach worked much more closely together both in terms of statements and interventions as well

as in crafting joint text for the co-chairs' recommendations and lobbying other States to support their text, focusing on their efforts at the meeting heavily on building momentum and support for a new comprehensive agreement. Also noteworthy is that some developed States that had not previously supported package approach (or had previously rejected the need to consider such an approach), now indicated willingness to seriously consider the need for a new international agreement, as illustrated in the co-chairs' recommendations. In light of significant focus of discussion on this approach, discussions on the potential development of a new multilateral will likely play a more prominent role in future discussions on BBNJ.

Many in the environmental and academic community have long supported the development of such an agreement, however, increasing State support and willingness to compromise on the consideration of such an agreement signifies an important step towards potentially reaching consensus on this issue.

Chapter 4

CHARACTERIZING PREFERENCES AND IDENTIFYING OPPORTUNTIES FOR RESOLUTION

4.1 Major Areas of Contention and Commonality

Examining State preferences in the key issue-areas discussed illustrates a number of persistent areas of contention, as well as some key areas of commonality and consensus. While State preferences on certain aspects of the more contentious areas may be irreconcilable and there remain some differences in opinion within areas of commonality, it is clear that there is significant agreement on many policy approaches for advancing conservation and sustainable use of marine biodiversity beyond national jurisdiction. Combined with growing political attention and support for collaborative approaches to addressing issues related to BBNJ, there are a number of options and many valuable opportunities to make progress in these debates towards achieving common goals.

The central differences in opinion and disagreements between States with respect to BBNJ primarily relate to the following:

- *The legal regime for marine genetic resources and implications for access and benefit-sharing (ABS)*— One of the central areas of disagreement between developed and developing States is their position on the legal regime for marine genetic resources and the implications of different legal provisions for access and benefit-sharing for MGRs. Developed and developing States hold largely differing

perspectives on the appropriate legal regime for MGRs and the existence of a legal basis for ABS. Debates in this issue-area, in many ways, exemplify the central underlying differences in perspectives between developed and developing States, with developing States objecting to the exclusive exploitation of these resources (which many of them hold are the common heritage of mankind). This is exemplified by a statement of the G-77 in 2010, in which they state that "the exclusive exploitation [of marine genetic resources] by a few has serious global economic and social implications."[*] Developed States, on the other hand, stress the high costs associated with these activities and the many societal benefits to be gained from MGRs, including improved scientific knowledge and medicinal products. As some developed States see it, mandated ABS not only hinders commercially and socially valuable activities, but also infringes upon their rights under UNCLOS, as they hold that MGRs are subject to the "freedom of the seas" provision of the Convention.

However, at the fourth meeting of the BBNJ working group, some of the developed States that had strongly objected to ABS for genetic resources in previous meetings indicated openness to considering possible options for future benefit-sharing arrangements. While States are indicating increasing willingness to compromise on their long-held opposition to ABS for MGRs and there is relative consensus on the need to examine intellectual property rights (IPR) issues as they may relate to MGRs, positions on the legal regime for MGRs do not appear to be reconcilable in the foreseeable future. In this respect, many States and other stakeholders have emphasized the need to focus less on differing legal interpretations and prospects for economic benefits arising from development of commercial products from MGRs (which are still highly prospective), and more on the value of the knowledge and scientific information to be gained from MGR research and on potential avenues for cooperation and, including through collaborative scientific research initiatives between developed and developing States.

- *Degree of regulation*—Some States prefer more regulation, based heavily on the precautionary approach, for potentially harmful activities. At the third meeting of the UN BBNJ Working Group, Palau warned that "if we are not careful, we may end up destroying a valuable species or ecosystem before we can appreciate what it has to offer."[*] Other States highlight the need to ensure that regulation is based on evidence of demonstrated threat to the health and well-being of biodiversity and ecosystems and that overregulation would unnecessarily hinder important activities through large logistical and administrative enforcement costs. They hold that these added costs,

[*] Statement delivered by the G-77 at the third meeting 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, New York, 1-5 February 2010

[*] Statement delivered by the delegation of Palau at the third meeting 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, New York, 1-5 February 2010

including those associated with performing impact assessments and reporting to management bodies would limit the degree to which such activities could be undertaken, thus, depriving the companies/actors of the monetary benefits as well as general society from potentially beneficial products to be gained from these activities (food, scientific knowledge, medicinal products, industrial products, etc.). In some ways, these differences extend from the exclusive nature of activities in ABNJ, due largely to the high costs and technical expertise needed to conduct these activities, and the desire of many developing States to curb damage to, and unsustainable use of, living resources by an exclusive group.

- *Scale of governance and management*—States differ in opinion as to the appropriate scale for specific governance and management approaches, with differing support for global approaches, regional approaches, and state-level approaches. There is consensus on the need for greater multilateral cooperation and coordination in governance of ABNJ, although states differ as to how this should be done. In this respect, some States have highlighted the need to either designate or create global and/or regional coordination mechanisms for ABNJ governance and management. While others object to the need for institutional mechanisms at all and hold that cooperative approaches are best undertaken directly between States. Some States also articulate preferences for different scales of implementation for different types of management approaches, supporting one scale of governance for one management tool, and a different scale for another. However, nearly all States highlight the need to improve cooperation and coordination between States, as well as with international organizations.

- *An UNCLOS Implementation Agreement for BBNJ*—This proposed option has long been a central area of contention, particularly between developing States, in addition to the EU, and developed States. Developing States and the EU hold that a new comprehensive agreement in the form of an UNCLOS Implementation Agreement is required to address major gaps in the existing framework, provide a framework for implementing management tools, and facilitate conservation and sustainable use of BBNJ. A number of developed States, however, hold that the existing framework, implemented properly, can achieve these goals and that a new agreement is unnecessary. While this has been one of the major dividing issues in these debates, recent progress has been made at the fourth meeting of the UN BBNJ Working Group, where States agreed to consider the potential need for a new international agreement for issues related to marine biodiversity beyond national jurisdiction.

Although these areas of contention are significant and will continue to present notable obstacles to consensus building and resolution, there are, however, a

number of important areas of commonality and agreement between States that have emerged from the analysis of State preferences. They are as follows:

- *Principles of modern ocean governance*—The ecosystem-based, integrated, and precautionary approaches are all principles that have been widely accepted by the global community and incorporated into management frameworks at global, regional and national levels. The effectiveness of these principles, including through significant experience in implementation of tools such as MPAs and EIAs, demonstrate their value. Furthermore, they can be highly effective in gaining political momentum and support to address BBNJ issues. They can also provide valuable policy guidance at various levels and can guide the implementation of management approaches, which must be flexible and respond to the unique circumstances of different areas and to the varying needs and interests of States. Principles of modern ocean governance are especially important at this stage in the debates on BBNJ. As these debates progress, there will be much more focus on tangible and actionable policy development for ABNJ, crafting the future for governance and management. In light of the lack of experience in implementing governance and management in ABNJ and the important legal and technical uncertainties, these principles will be important to providing the appropriate guidance needed in this policy development stage.

- *Implementation of management tools*—There is widespread consensus on the need for greater efforts in implementing management tools, such as MPAs and EIAs (which the global community has much experience in applying to terrestrial and coastal areas) in marine areas beyond national jurisdiction. There are some differences in opinion as to the general approach and implementation of these tools, including appropriate scale of implementation and appropriate designation of authority over implementation and management, but States strongly agree on the need to further apply these tools. Application of management tools in ABNJ has, thus far, been limited by important logistical issues and technical uncertainties, lack of general policy guidance, and lack of political momentum. Many States argue that the current framework does not provide the necessary policy environment to effectively implement these tools and that a new agreement is required to facilitate implementation of these tools, while others hold that the current framework provides adequate mechanisms to do so.

- *Cross-sectoral approaches*—A large portion of States have articulated the need to pursue a cross-sectoral and integrated approach to governance and management of activities in ABNJ. This aligns with the strong support for the principles of the integrated and ecosystem-based approaches to governance and management. States differ, however, on the means by which to implement cross-sectoral approaches. Some States support the need to rely more strongly upon, or create new, cross-sectoral institutional mechanisms at different scales. Other States support improved

cross-sectoral collaboration and coordination between sectoral mechanisms, as some sectoral management bodies often have a strong legal and institutional basis and have proven effective within their mandate. The appropriate approach (cross-sectoral mechanisms vs. coordination between sectoral mechanisms) will likely vary depending on a number of factors, including the political support for existing or new mechanisms, the effectiveness of existing sectoral mechanisms, the activities and resources being managed, and the area or location under question. Although there are some important questions that remain, there is a valuable basis and foundation in State support to directly address these questions and pursue cross-sectoral approaches.

- *Voluntary approaches and codes of conduct*—Voluntary approaches to mitigating the potentially adverse impacts of various activities, namely scientific research, have been emphasized by States as valuable tools for environmental protection. In these debates, States have recognized the value of codes of conduct and guidelines for scientific researchers, such as the InterRidge Code of Conduct, to mitigate the potential impacts of research activities. Some States have also highlighted that it is in the interest of scientists to not cause undue harm to marine ecosystems so as to preserve the integrity of the ecosystem for future research and that codes of conduct can prove highly effective in this respect. Regarding MGRs, some have also noted that the relatively small samples required for research minimize the environmental impacts of extraction. Some, however, have noted the commercial potential of MGRs and the likelihood for increasing influence of the private sector in scientific research could undermine these voluntary approaches. Many States, largely developing States, recognize the value of codes of conduct and support their development and promotion, but also hold that regulatory frameworks are necessary to address the potential environmental impacts of research activities, especially in light of the limited understanding of these potential impacts.

- *Flag State responsibility*—Although much attention in these debates is focused on potential means to strengthen the international framework for ABNJ, States have also emphasized the importance of flag State responsibility. The effectiveness of any given international regime is largely dependent on how it is implemented by countries. States have strongly emphasized the existence of a clear implementation gap for ABNJ, highlighting the failure to effectively implement tools and provisions of the existing framework and to live up to their general commitments under international law for ABNJ. Many States, however, lack the capacity to effectively implement these provisions. This problem is often exacerbated, namely in the fisheries sector, by the persistent issue of "flags of convenience," in which vessels are purposely registered to developing States that lack the capacity to effectively enforce management provisions. Some States, in this respect, have articulated the need to establish a 'genuine link' between registered vessels and flag States that they are registered to, to begin to curb this problem. This general lack of capacity among many states outlines the need for developing States to articulate their capacity needs

to effectively govern activities of their flagged vessels and nationals in ABNJ, and for developed States and the global community to provide the necessary support to developing States in supporting effective governance and enforcement. Building the capacity of developing States to effectively govern and manage will facilitate the development of a robust international framework in general, providing incentives for developed States to more effectively govern and manage if all States have some capacity to live up to their responsibilities, resulting in a more effective and robust enforcement regime. However, this also outlines the need for a more coherent articulation and understanding of the responsibilities of States, as well as the need to hold States accountable for the actions of their flagged vessels in ABNJ. The complex web of legal provisions and international instruments that are in place, as well as the generally vague language, make it relatively unclear as to what exactly are the responsibilities of States, especially with respect to new and emerging activities, and how these various responsibilities relate to each other. At the very least, a robust study into the responsibilities of States with respect to governance and management of ABNJ would do well to clarify this issue. However, some have articulated the need for a new mechanism or agreement for ABNJ to bring these various duties and responsibilities under one coherent framework, or at least provide the foundation for more direct coordination between the organizations charged with guiding the implementation of multilateral instruments (i.e. International Maritime Organization, International Seabed Authority, UN Food and Agriculture Organization, Secretariat of Convention on Biological Diversity).

- *Regional approach*—The regional approach has been progressively gaining support for its potential application in ABNJ, largely due to the progress in the North-East Atlantic in cross-sectoral area-based protection in ABNJ. While regional mechanisms have been in place for some time, there is an increasing paradigm shift towards collaborative and cross-sectoral regional approaches to ocean governance. Regional approaches present a number of key benefits for addressing issues related to marine biodiversity in ABNJ. They facilitate an ecosystem-based approach, as marine ecosystems and species don't recognize political maritime boundaries. Regional multilateral approaches are often facilitated by the fact that neighboring States often have similar levels of development and management capacity, similar concerns, similar commercial interests, and often have long histories of regional cooperation, including through existing institutional mechanisms. Regional approaches can also more effectively facilitate data-sharing and sharing of best practices and can also provide a viable institutional mechanism for capacity-building and benefit-sharing. Regional approaches can be tailored to the unique circumstances of different regions. There are a number of existing regional mechanisms that can prove valuable to facilitating cooperation in the conservation and sustainable use of BBNJ, including regional fishery bodies (RFBs), regional seas programs (RSPs), and large marine ecosystem (LME) programs, among others, which enjoy growing support from governments and international organizations. There are also promising regional

advances in the developing world, including through the Coral Triangle Initiative and the Pacific Oceanscape Initiative. Regional institutional mechanisms could also be designated as an authority for implementing and managing tools such as EIAs and MPAs, as developing standardized global approaches and designating a global authority for management would likely be difficult and would encounter significant political, technical, and logistical obstacles.

There are some key considerations to be taken into consideration regarding the application of the regional approach in ABNJ. Although regional mechanisms are gaining an increasingly important role in ABNJ, some States prefer direct State cooperation at the regional level in managing activities in ABNJ, rather than through institutional mechanisms. A few States, especially Argentina, highlighted that regional agreements and arrangements should not hinder the activities of States that are not a part of those arrangements.

- *Greater participation in global framework*—Extending from the above discussion on flag State responsibility is the importance of active participation and representation in the global, as well as regional, fora and processes addressing transboundary ocean governance. States in these discussions, and especially in the discussions in fisheries-related issues, have emphasized the importance for more States to ratify global instruments, such as the UN Fish Stocks Agreement, to actively participate in multilateral discussions and deliberations regarding their implementation, and to implement the duties and responsibilities under these instruments. However, as previously stated, implementing the provisions of these instruments requires a certain degree of capacity that many States lack. In this respect, many developing States have noted that ratifying international conventions is meaningless if States are unable to implement their provisions. As well, some developing States lack the capacity to effectively participate in these processes. In many cases, agencies and offices from developing States lack the manpower and resources to actively participate in the many various fora address ocean governance issues and would require additional support to provide viable representation at these meetings, as well as support in negotiating policy development. Many developed States provide members of their delegations with robust training in negotiation strategies and orientation with respect to the issues being discussed. Most developing States lack these types of training and orientation programs, putting them at an immediate disadvantage in adequate representing the interests of their government in these fora.

- *Capacity building*—Both developed and developing States have clearly articulated the need to build the capacity of developing States both to participate in activities in ABNJ, allowing them to equitably enjoy the benefits of these resources, and to effectively govern and manage the activities of their flagged vessels in ABNJ. This becomes especially important in light of the significant costs of conducting activities in ABNJ and the financial and technical requirements for effective governance, including through adequate monitoring, control, and surveillance (MCS). Supporting

developing States in this respect, will likely yield benefits to the global community as a whole by strengthening the global regime and closing gaps and opportunities for potential violators. In spite of the clear recognition for capacity building for developing States, there has been relatively little tangible action in pursuit of this common goal. One reason may be the general absence of a mechanism or framework that could facilitate the provision of capacity-related resources to developing States from developed States, increasing the potential risk associated with investment. Another reason may be the relative lack of understanding of the capacity needs of developing States. As developing countries generally lack technical expertise regarding the conduct of activities in ABNJ, they may also lack knowledge of the amounts and types of resources required to do so and, therefore, may have difficulty assessing their capacity needs with respect to ABNJ.

- *Cooperative research*—States have voiced much support for capacity-building for developing States and for the need to support and recognize the importance of scientific information and research activities. In this respect, cooperative marine scientific research between developed and developing States could prove highly valuable to improving the capacity of developing States to undertake research in ABNJ, or at least develop technical knowledge and applicable skills required to prepare viable proposals for research grants and attract outside investment in scientific research initiatives in developing States. Scientists from developing countries could be invited to train with scientists from developed countries and could actively participate in research endeavors, gaining valuable skills required to undertake this research. Developed countries could open research branches in developing States (possibly near an area of scientific interest in ABNJ, thereby reducing costs to transport equipment) that could also serve to train scientists from the host country and could eventually be fully staffed by developing country scientists. This would encourage North-South cooperation in scientific research, providing developing States with a valuable form of capacity-building through training and technology transfer for research. Although this may require additional input of resources from developed States to train scientists, many developed States have explicitly articulated the need to build the capacity of developing States to participate in research. There are also potential sources of funding from international organizations, such as the International Seabed Authority's Endowment Fund, which promotes collaborative marine scientific research in the international seabed area by supporting the participation of qualified scientists and technical personnel from developing countries in marine scientific research programmes and activities. Collaborative research initiatives between developed and developing States could also serve to mitigate some of the political tensions surrounding marine genetic resources by reducing the exclusive nature of MGR research, building cooperation and goodwill between States, and focusing greater attention on the importance of the scientific information from these activities and less on the economic benefits to be gained from commercial products deriving from MGRs. Improving the technical

capacity of developing States could also facilitate the eventual development of their capability to develop commercial products from MGRs.

- *Emerging issues*—Many States have voiced strong support for the need to gain a fuller understanding of the potential impacts of emerging issues in ABNJ, including issues and activities such as ocean fertilization and carbon sequestration, and to ensure that viable regulatory mechanisms are in place to prevent adverse impacts on the marine environment in ABNJ. At present, there is a relatively limited understanding of the potential impacts of many proposed experimental approaches, as well as the extension of activities such as offshore aquaculture and deep sea mining, on marine species and ecosystems in ABNJ. In light of the relative lack of knowledge of these areas, the inadequate understanding of their sensitivity to changes in factors such as ocean chemistry, and in the inherent difficulty in monitoring these activities and their potential impacts, many States have identified a gap in the international ocean framework to address the potential impacts of emerging issues. As some of these approaches may present notable benefits with relatively little environmental impact, many States have articulated the need for a regulatory framework to address potential impacts as many approaches are still in the experimental phase.

  Some international instruments have begun to address emerging issues, with the Parties to the CBD recently declaring that iron fertilization should not take place "...until there is an adequate scientific basis on which to justify such activities, …with the exception of small scale scientific research studies within coastal waters" (CBD Decision IX/16), and the Parties to the London Convention and London Protocol for Marine Dumping (LC/LP) concluding similarly that, given the present state of knowledge, ocean fertilization activities other than legitimate scientific research should not be allowed. However, States voiced the importance of continuing to focus on new and emerging issues to research the potential adverse impacts and to ensure that there are adequate and appropriate regulatory mechanisms in place.

Despite the prominent areas of contention, some of which may be irreconcilable in the foreseeable future, there are many key areas of commonality in the intergovernmental discussions on BBNJ and many potential avenues for multilateral cooperation and collaboration in advancing the conservation and sustainable use of BBNJ. Future discussions and debates should focus more directly on these areas of commonality among States as potential building blocks for concerted cooperative action to work towards common goals, regardless of whether they were to be implemented in

the context of a comprehensive agreement or on a case-by-case basis, and should engage in more direct and fruitful discussions with other experts and members of civil society to answer key technical, scientific, and logistical questions that remain.

4.2 Potential Avenues to Address Issues Related to Marine Genetic Resources

While the legal regime for MGRs and the potential development of ABS for MGRs presents a conundrum for the intergovernmental process, it is important to recognize and examine other potential avenues to address these issues. Regarding access and benefit-sharing there is strong State support to examine intellectual property rights (IPR) issues as they may relate to MGRs. In this respect, there are a number of options that could be explored and discussed that could elucidate potentially acceptable approaches to developing an ABS regime acceptable to all parties.

The International Treaty on Plant Genetic Resources for Food and Agriculture could provide a viable model for an ABS framework for MGRs, especially through its Multilateral System of access and benefit-sharing that provides for exchange of information, access to and transfer of technology, capacity building, and the sharing of benefits arising from commercialization of genetic resources as well as its Standard Material Transfer Agreement that, inter alia, provides for payment into an international fund to help conserve and sustainably utilize the source material, sometimes referred to as a 'conservation trust fund' (Hart 2008). The Budapest Treaty on the International Recognition of the Deposit of Micro-organisms for the Purposes of Patent Procedure and Regulations could also be a viable means to ensure access to and sharing of information for patented resources if it is possible to trace the origin of genetic material to ABNJ. The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO) is also relevant in that it confers strict IPR to patent

owners as well as the rights to assign, transfer, and conclude licensing contracts based on a patent, provided that the details of the product are disclosed in a sufficiently clear manner (Arico 2010). The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization also presents important implications for areas beyond national jurisdiction, although it address only genetic resources within national jurisdiction. The Protocol aims to create greater legal certainty and transparency for both providers and users of genetic resources by establishing more predictable conditions for access to genetic resources and developing a viable framework for ABS, from which lessons could be drawn for future discussions on possible ABS for MGRs.

In light of the differences in State preferences regarding scale of governance and growing support for the regional approach, future discussions and research could explore the potential development of regional ABS frameworks. There are a number of existing regional ABS frameworks in place or being formulated in different regions of the world including in the Andes, Africa, Central America, and Asia. The Andean Community of Nations Common Regime of Access to Genetic Resources is a legally-binding instrument that came into force on 17 July 1996 and is effective in Bolivia, Colombia, Ecuador, Peru, and Venezuela. The African Model Law came into force in 2003 and provides a model for the development of ABS legislation in African countries. These regional ABS frameworks all cover areas where there are multiple biodiversity hotspots and are, in essence, ABS agreements that have, in some cases, been incorporated into existing regional economic integration frameworks and national legislation (Oli and Dhakal 2008). Although there are a number of inherent legal and technical complications associated with developing and implementing regional ABS frameworks in ABNJ, there are a number of benefits presented by this approach. As differences in State support for

ABS can vary from regionally, regional frameworks can be put in place where support exists, potentially avoiding political resistance. Furthermore, regional approaches can facilitate technical cooperation and information exchange. Regional frameworks could facilitate the development of a regional fund, sources from a portion of access fees to MGR sites or fees on downstream commercial products, for biodiversity conservation and scientific research for developing States (Oli and Dhakal 2008). Also, regional ocean management organizations or other regional institutional arrangements could serve as a secretariat for these agreements.

States have also articulated the need to focus on the importance of the scientific benefits to be derived from MGRs and to facilitate the participation of developing States in these activities. While this will not directly address issues related to the legal regime for MGRs or benefits derived from commercial products of MGRs, it can serve to focus progress in this area into a more fruitful realm. Some policy experts are emphasizing the need for a new approach to discussing the value of MGRs, moving away from debates on the economic benefits and focusing on knowledge and information. As Glowka (2010) notes, there could be potential in deriving a set of global principles that would support fair and equitable access to the Area's genetic resources as well as the need to ensure that continued access is not undermined by subsequent uses of intellectual property rights, avoiding the need to legally enclose one of the world's last open-access genetic commons through additional regulation and dramatically new or expanded institutional mandates. Furthermore, capacity-building for developing State participation in research, including through joint research initiatives and public-private partnerships, could reduce the exclusivity of this area and potentially mitigate political sensitivities, allowing developing States to enjoy the benefits of these resources as well.

4.3 Issue Linkages

Issue-linkages in the context of intergovernmental negotiations, involve developing an approach or outcome that addresses two or more issues under discussion to achieve mutually beneficial outcomes, and can be a valuable means of building consensus and reaching agreement. Traditionally, issue-linkages in international negotiations center on identifying trade-offs based on clearly articulated outcome expectations by those involved in the debates. For example, a successful issue-linkage could involve one State compromising on a given issue to achieve a beneficial outcome in another area. In this way, the overall outcome, which may involve certain elements that are less desirable to the State, produces a pareto-optimal situation, meaning all states would are better off than in the absence of an outcome.

However, in the intergovernmental discussions on marine biodiversity beyond national jurisdiction, identifying potential issue-linkages in a specific outcome document becomes somewhat difficult for a number of reasons: (1) Aside from support for certain policy approaches or the need for, or opposition to, an overarching comprehensive agreement, states do not often articulate preferences in what they would hope to see as an outcome from the intergovernmental debates for each issue-area or for the debates as a whole; and (2) in the discussions on the recommendations to the UN General Assembly that emerge from the informal fora (i.e. UN BBNJ Working Group, UNICPOLOS), states will debate on specific language to be included and will often compromise on one piece of text to include another piece that is more important. However, discussions on the more contentious elements of the text are often held in closed door meetings involving only the host secretariat and small number of delegations, making it unclear as to which states made concessions and why.

Therefore, this analysis will take a different approach. Rather than focusing on where issue-linkages and trade-offs can be made in the negotiation of some type of resolution, for which there exits insufficient data on state preferences, it will instead identify potential synergies and opportunities gained by linking and jointly implementing various approaches, in the context of areas of commonality and agreement identified in the earlier stages of this analysis. This is especially relevant in light of significant consensus on the need for integrated, cross-sectoral, and ecosystem-based approaches, and improved cooperation and coordination.

The table below illustrates interlinkages among various issue-areas and potential opportunities for synergies in the context of the central commonalities and elements of agreement as articulated by States in the intergovernmental fora addressed in this study.

Table 22. Potential interlinkages between various issue-areas and possible opportunities for synergies provided by joint approaches in the context of articulated State preferences.

	High Seas Fishing	MGRs	Cooperation and Coordination	EIAs	MPAs
Gaps	--Mechanisms and/or instruments to address gaps in RFMO coverage and provide for cross-sectoral linkages would address governance gap highlighted by many States	--Clarification of the applicability of the international framework and the duties of states with respect to MGRs and bioprospecting would address gap highlighted by many States	--Development of mechanisms to facilitate cooperation and coordination between States and competent organizations would address gap noted by many States	--Implementation of EIAs in ABNJ, and development of regional and global framework(s) for EIAs in ABNJ would address implementation and governance gap highlighted by many States	--Framework(s) for high seas MPAs would address implementation and governance gap highlighted by many States
MPAs	--Joint efforts and collaboration between regional fishery bodies (i.e. RFMOs), regional ocean governance bodies (i.e. Regional Seas Programmes), and competent global sectoral organizations (i.e. IMO) and could be pursued in designating MPAs in ABNJ --In some cases, it may be appropriate to expand the mandate of regional fishery bodies to implement area-based protection to address threats to biodiversity and ecosystems from activities other than fishing	--Research activities largely occur in ecologically/ biologically significant areas, making area-based management appropriate for MGR-related activities --If ABS is deemed appropriate, an area-based management mechanism could regulate access to the area through, for example, the issuing of permits, and could serve as mechanism for benefit-sharing --Agency/body/ government managing area could facilitate information-sharing or serve as a clearinghouse mechanism for MGR information	--Cross-sectoral area-based approaches, either through the use of integrated mechanisms or coordination between sectoral mechanisms is an important means of multilateral cooperation and coordination	--Activities that may adversely impact biodiversity and ecosystems are likely to occur in the same area where human activities would take place (research, fishing, etc.) --The agency /body/government with authority to manage the area could also be responsible for developing standards for impact assessment and reviewing the EIA for proposed activities. --Where no area-based management exists, vulnerability shown by EIA could provide basis for area-based protection	

EIAs	--UNGA Resolution 61/105 requires impact assessment for bottom fishing in high seas --EIA requirements could be expanded to address other species, ecosystems, or potential harmful fishing practices in the high seas not already covered by UNGA resolutions and RFMO mandates	--EIA requirements for potentially harmful activities could mitigate impacts on MGRs --In a potential ABS system, EIA could be required for access to MGRs --EIA reporting could facilitate development of repository of information on MGRs	--Cross-sectoral impact assessments, which States have voiced support for, requires cooperation and coordination --Cooperation and coordination is needed to improve the capacity/ capability of many developing States to implement EIAs
Cooperation and Coordination	--Need for cross-sectoral cooperation between fisheries bodies and other sectors to achieve ecosystem approach --Cooperation and coordination needed to improve capacity of States to implement duties of international conventions, conduct MCS, assess stocks, etc.	--Cooperation and coordination required to reach consensus on key areas of contention with respect to MGRs --Improved cooperation and coordination in joint research would facilitate capacity-building and information-sharing	
Marine Genetic Resources	--Framework to support the development of international repository of genetic information on high seas fish stocks could facilitate conservation and sustainable use		

4.4 Developing a Comprehensive Approach

The table above illustrates the significant opportunities and potential benefits to be gained by jointly implementing different approaches and pursuing common goals through coordinated cross-sectoral approaches. It is possible that joint approaches could be undertaken on a case-by-case basis, including through bilateral agreements and the utilization of existing sectoral mechanisms, as some states have noted. However, in light of the growing state support for a package deal agreement and the many potential beneficial synergies to be gained through a global cross-sectoral integrated approach, it is valuable to consider how this approach could fulfill mutual interests of states based on articulated preferences.

Although there are a number of valuable mechanisms and legal instruments in place to address issues related to marine biodiversity beyond national jurisdiction, the framework as a whole is largely piecemeal and does not provide for an enabling policy environment for implementation of provisions for conservation and sustainable use. There is little sanction against non-compliance, partly due to the lack of political will amongst the signatories to international agreements. There are a number of notable gaps and weaknesses that significantly hinder the effectiveness of the current framework, including (Greenpeace 2008a, Hart 2008):

--Lack of regulatory provisions for new and emerging activities;

--No formal political recognition of the need to conserve and sustainably utilize marine biodiversity in ABNJ;

--Lack of clarity on the applicable regime relating to bioprospecting and equitable use of marine genetic resources (MGR) in ABNJ;

--Lack of coordination between different relevant instruments;

--Inadequate frameworks and guidance to implement tools such as MPAs and EIAs in ABNJ;

--Lack of vested authority to manage certain activities and implement management tools;

--Lack of an instrument to ensure that modern conservation principles are consistently incorporated and/or applied in ABNJ; and

--Lack of effective compliance and enforcement mechanisms

It is possible that many of the existing gaps and weaknesses could be addressed in the absence of a new agreement. However, it could be quite difficult to achieve multilateral coordination to address many different complex and inter-related issues within the existing framework. Although negotiating a new agreement would likely be quite difficult and would require significant expenditure of time and resources on the part of states and relevant international organizations, these costs are likely to be significantly less than the costs associated with improving the application of the current framework, which could result in duplication of efforts, continued gaps in implementation, and lack of policy coherence. Furthermore, addressing these existing weaknesses and inadequacies would require significant effort and political engagement at the national level. This type of political attention could be more effectively stimulated by the development of a new agreement that would aim to provide a coherent overarching framework to address issues related to marine biodiversity beyond national jurisdiction. In light of the interconnectedness of marine ecosystems and many potential beneficial synergies to be gained through linked approaches, the development of a package deal approach appears to be a more viable and effective option to achieving conservation and sustainable use of BBNJ.

4.4.1 POTENTIAL VEHICLE OF AN AGREEMENT

One of the key elements of uncertainty that remains in the discussions on a potential package deal agreement is the form that such an agreement might take. There

has been growing State support for an UNCLOS Implementation Agreement. Many States and stakeholders have emphasized some of the inherent benefits of such as an approach, noting benefits such as the following (Greenpeace 2008a):

- UNCLOS is regarded as the framework for addressing all issues related oceans and coasts and contains specific provisions for ABNJ;
- UNCLOS provides a binding dispute settlement mechanism;
- An Implementation Agreement would already be consistent with the Convention on Biological Diversity, requiring no amendment to the CBD, as per Article 22(2), which obliges contracting parties to implement the Convention with respect to the marine environment consistently with the rights and obligations of States under UNCLOS.

There is, however, some political opposition to the development of an UNCLOS Implementation Agreement, mainly from a few large industrialized developed States. At the fourth meeting of the BBNJ Working Group, the US agreed to consider the need for a new agreement but remains opposed to an UNCLOS Implementation Agreement. This is likely due to the fact that the US has yet to ratify UNCLOS as it currently stands. Although only one nation, the US is a major maritime power conducting activities in ABNJ, making it important to have the participation of the US in any new agreement on BBNJ. While there is consistent political support in the US for ratifying the Convention, the development of an Implementation Agreement to UNCLOS would likely hinder progress in ratifying UNCLOS. However, as with the UN Fish Stocks Agreement, an Implementation Agreement for BBNJ could be developed so as the states that are currently parties to UNCLOS, or would ratify it in the future, could choose not to ratify the Implementation Agreement and vice versa.

Regardless of whether the agreement would be an Implementation Agreement to UNCLOS or a free-standing agreement, such an agreement would ideally

provide a solid legal underpinning without altering the rights and obligations of states under international law. It should provide appropriate levels of policy guidance, mechanisms for cooperation and coordination, and means to encourage and facilitate capacity-building and technology transfer. This agreement, however, would also need to be flexible enough to be tailored to the unique physical, biological, and ecological characteristics of various open ocean and deep sea biodiversity and ecosystems. Similarly, it must also be flexible enough to be accommodate different political climates, social needs, and commercial activities. Another potentially beneficial aspect of the development of an international agreement for BBNJ is its positive impact it is likely to have on the development and articulating of State preferences in the ongoing political process. As previously noted, there is a clear need for State preferences to be more action-oriented and for greater State participation in these discussions. The development of a negotiation process for a new agreement could achieve this desired result by making a new agreement a viable near-term and immediate possibility. This could lead to greater participation by States in the global debates and States would likely be more thoughtful and outcome oriented in developing and articulating their preferences to ensure that their needs and concerns reflected in such an outcome.

There has been increasing momentum and growing consensus on the need for a new international agreement, particularly a new UNCLOS Implementation Agreement, for marine biodiversity beyond national jurisdiction. Regarding the content, there is relative agreement on the need to address issues related to BBNJ "together and as a whole" (UNGA 2011), namely in the form of a package approach. However, there is seemingly little recognition in these debates of the other potentially viable vehicles that could be used to achieve these goals. Vehicles that present their own inherent benefits as well and are worthy of consideration in future discussions.

One alternate vehicle could be a soft law agreement, such as a new Global Programme of Action (GPA) for marine biodiversity beyond national jurisdiction, which would address many of the key issues and areas of commonality. Although less able to directly address some of the legal uncertainties in UNCLOS related to BBNJ, it would also avoid some of the political difficulties and would be less difficult to develop. A protocol to the Convention on Biological Diversity might also be considered as well, although there is still some difference of opinion regarding the applicability of the CBD to many of the issues related to BBNJ. Parties could also consider designating an existing global body or fora, such as the UNCIPOLOS or the UNGA, as an official coordinating mechanism for activities and issues related to ABNJ that could provide policy advice for the implementation of management tools, stimulate examination of key issue-areas, host action-oriented discussions, facilitate improved cooperation and coordination, and synthesize the existing provisions of the international framework for BBNJ and clarify States' responsibilities under the current framework. Again, there are limits to what these instruments can accomplish that a new legal instrument, such as an UNCLOS Implementation Agreement could, but their inherent benefits should, nonetheless, be considered. However, these should be taken into consideration as they may avoid some of the legal and political difficulties associated with developing a new international legal instrument.

In light of the significant advances made at the recent UN BBNJ Working Group meeting on some of the politically contentious issues, there is a chance for political backlash to some of the advances made in the working group, particularly on discussions for the potential need for a new international agreement and access and benefit-sharing for MGRs, in fora such as the UN General Assembly or the UN Conference on Sustainable Development. Therefore, further discussions and analysis

should continue to occur on the content and push forward on consensus on the potential vehicle, discussions should, however, also consider other potential vehicles for agreement. Other analysis and multistakeholder dialogues, such as the Global Ocean Forum's 2008 Workshop on Governance of Marine Areas Beyond National Jurisdiction, have considered other potential vehicles, yet dialogues such as these have not factored into the discussions of the UN BBNJ Working Group.

Consideration of various potential vehicles for agreement is another way in which the global discussions on BBNJ have been somewhat removed from ongoing analyses in the scholarly community and civil society. In this respect, the intergovernmental fora on BBNJ should ensure greater provisioning of expert advice to these discussions and States should endeavor to seek out greater input from other members of society that have a wealth of knowledge and experience to consider all potential viable options. This was the motivation behind the UN BBNJ Working Group co-chairs' recommendation for the establishment of an intersessional process to inform the discussions of the Working Group and explore key issue areas. However, States should also seek out greater input from various experts to inform the development of actionable proposals.

In considering different vehicles for an agreement, the potential risk of failure must also be considered. The more ambitious and comprehensive that a potential agreement become, including in addressing contentious issue-areas, the larger the risk of failure becomes. As negotiating multilateral agreements entails significant expenditure of time and resources, this becomes an important factor in crafting a potential resolution. Failure to come to agreement can also hamper political momentum on a given issue, limiting future prospects for agreement. Alternately, a weak or lowest common denominator agreement should also be avoided as well. In this finding a balance between

an approach that is ambitious and effective, but does not possess an unnecessarily large risk of failure, is an important factor in developing a potential agreement.

4.4.2 LESSONS FROM THE UN FISH STOCKS AGREEMENT

Regarding the potential vehicle of an agreement, many States have strongly emphasized the need for an UNCLOS Implementation Agreement, while some of the developed States held that an UNCLOS Implementation Agreement might not be the best option considering that some key states, namely the US, have yet to ratify UNCLOS and the addition of a new Implementation Agreement under the Convention would further delay or serve to halt discussions within the US government on the ratification of UNCLOS. In either case, there remains much uncertainty as to how such a package deal could be crafted and what form it may take.

In light of the inter-related nature of many of the issues affecting marine biodiversity beyond national jurisdiction, the complex web of existing legal provisions and governance mechanisms addressing these issues, and the politically contentious nature of this topic, constructing a package deal agreement is a considerable undertaking. It is helpful, therefore, to look to other similar examples from which to draw lessons. Although global fish stocks are still being depleted at an unsustainable rate and face notable threats, the UN Fish Stocks Agreement (UNFSA) has provided a robust regime and solid foundation to address these issues.

The UN Fish Stocks Agreement provides a useful example for a number of key reasons, as follows:

--It addresses issues related to both conservation and sustainable use of living resources;

--It deals with inherently multilateral issues that affect multiple States and require coherent and coordinated governance approaches;

--It addresses issues that have significant social, economic, scientific, ecological, and political implications;

--It provides for a general global framework with policy guidance for implementation at the regional and state level; and

--It is (generally) robust, providing the policy guidance and generating political momentum to support implementation, but is also crafted to the flexible to respond to the unique circumstances of different areas and the interests of states.

The question that might now arise is that, if this agreement shares so many characteristics with the issues being discussed in the discussions on marine biodiversity beyond national jurisdiction, why not simply utilize the provisions of the UN Fish Stocks Agreement to deal with these issues as well? In fact, some stakeholders have supported the extension of fisheries management provisions and instruments, including the mandates of Regional Fisheries Management Organizations (RFMOs), to address issues related to living resources in general. However, many RFMOs are not designed to deal consider broader biodiversity interests in an integrated way, including pressures from other sectors. Action through RFMOs is unlikely to provide the degree of international ownership, policy integration and permanency that is required and, in general, would not effectively facilitate cross-sectoral ecosystem-based governance of activities impacting marine biodiversity (Hart 2008).

The development and negotiation of the UNFSA was a remarkable achievement in multilateral policy development involving a large number of actors with often conflicting preferences which built consensus on common interests and concerns, namely the common desire to ensure the equitable and sustainable use of highly migratory and straddling fish stocks, and the need to address the vagueness and imprecision of certain provisions of UNCLOS.

Much of the disagreement in the debates on straddling and highly migratory fish stocks stemmed, to some extent, from differences between coastal states and distant water

fishing nations (DWFNs). Coastal states wanted distant water fishing states to exercise more responsibility in fishing activities in areas immediately adjacent to their EEZs. Distant water fishing nations had distinct difficulties with this approach, fearing that the maritime boundaries that had been carefully negotiated in UNCLOS would be compromised. DWFNs also wanted to ensure that any new obligations on their part would be complemented by similar duties on the part of the coastal states to adopt compatible measures in their own EEZs. These debates may have remained deadlocked were it not for the fact that both coastal States and DWFNs shared one common interest: to reduce conflicts and put an end to overfishing (Fontaubert 1996).

The lack of clarity in UNCLOS in how to address many of these issues was also at the center of these debates. A document prepared for the UN, in anticipation of the UN Conference of 1993–95, stated that Articles 63 and 64 of the Convention, which calls upon coastal States and DWFNs to cooperate in the management of straddling/highly migratory stocks, had fallen upon deaf ears (UN 1992). The source of this lack of cooperation may have been due to the vagueness and imprecision of Articles 116-120 of UNCLOS (Munro 2001). The lack of clarity and policy guidance provided by UNCLOS became clear and, by the 1990s the inadequacy of the treatment of straddling and highly migratory stocks in the 1982 Law of the Sea Convention could no longer be ignored (Juda 2001).

Some of the central difficulties in managing highly and migratory fish stocks outlining the need for a new Implementation Agreement to UNCLOS, differences between developed and developing states (generally) and the lack of clarity provided by UNCLOS, is similar to some of the central issues underlying states' calls for more effective governance and management of marine biodiversity beyond national jurisdiction.

Rather than delving into the negotiation of the UN Fish Stocks Agreement, we can examine the central framework provided by the agreement and how, in light of many similarities between these two issue areas, these provisions might be applicable to a potential multilateral agreement addressing marine biodiversity beyond national jurisdiction.

The UN Fish Stocks Agreement legally binds States to conserve and sustainably manage fish stocks and to peacefully settle any disputes that arise over fishing on the high seas. Specifically, the treaty (UNDPI 1997):

--Establishes the basis for the sustainable management and conservation of the world's fisheries;

--Addresses the problem of inadequate data on fish stocks;

--Provides for the establishment of quotas;

--Calls for the establishment of regional fishing organizations where they do not exist;

--Addresses problems caused by the persistence of unauthorized fishing;

--Sets out procedures for ensuring compliance, including the right to board and inspect vessels belonging to other States; and

--Prescribes options for compulsory and binding peaceful dispute settlement of disputes between states.

In an effort to advance the objective of ensuring sustainable use of straddling and highly migratory fish stocks, the Agreement provides for an ecosystem-based approach to fisheries management, emphasizing concepts such as,

--Unity of stocks and the need for management of stocks over their entire range;

--The imperative for compatibility of EEZ and high-seas fisheries regimes;

--A concern with the catch of non-targeted species and the interdependence of stocks;

--The need for a precautionary approach to fisheries management; and

--Transparency in regional fisheries management organizations and arrangements. (Juda 2001)

The UNFSA especially stresses the role of regional fisheries bodies, providing that enforcement in the high seas within the jurisdiction of regional fisheries organizations or arrangements is not limited to a fishing vessel's flag state. Fishing vessels of states party to the Agreement may also be subject to enforcement measures, by authorized vessels of other states that belong to the fishery organization or are participants in a regional arrangement. These developments represent movement away from the traditional practice of exclusive flag state control, with some exceptions, over the activities of ships on the high seas. State parties also must accept that, if ships of their flag are to fish in high seas areas in which there are regional organizations or arrangements for conservation and management, then the state is to join the organization or participate in the arrangement in order to access the fishery resources that are governed by that organization or arrangement. In this way, the Agreement represents an effort in the progressive development of international law (Juda 2001).

Although providing a viable framework for addressing issues related to straddling and highly migratory fish stocks, there Agreement has not yet been successful in ensuring the sustainable use of these resources. Global marine fish stocks are continuing to be depleted, IUU fishing and destructive fishing practices are still major global problems, and some States have not fully lived up to their obligations under the UNFSA or have not ratified the Agreement at all. The Review Conference for the UNFSA, which took place in 2006 and resumed in 2010, also identified the need for more practical reliance on the precautionary approach, the need for better data, the

existence of gaps in RFMO coverage, and the need for better monitoring, control, and surveillance (MCS), and compliance and enforcement.

Despite these shortcomings, the UNFSA provides the foundation for a viable framework for addressing issues related to sustainable fishing. The issues and discussions associated with the UNFSA are certainly different than the issues address in the global debates on ABNJ, and success in the development of the UNFSA does not necessarily indicate that a similar approach will be effective for these debates. However, there are a number of useful lessons for the debates on marine biodiversity beyond national jurisdiction that can be drawn from the experience of the UNFSA, including the following:

--States can come to an agreement on contentious issues when it is in their interest to work towards a common goal (conservation and sustainable use);

--Despite significant differences in state preferences, it is generally in all States' interest to address vagueness and potential gaps in UNCLOS, and this can be effectively accomplished through a new agreement in the context of UNCLOS;

--A global framework, implemented at the regional and state level, can provide viable top-down policy guidance, and facilitate cooperative multilateral approaches to ocean governance, as well as the necessary flexibility to address the various interests of States and the unique circumstances of different ocean areas and marine species.

4.4.3 POTENTIAL ELEMENTS OF A COMPREHENSIVE AGREEMENT

While there are various forms that an agreement could take, it is essential to consider, in the context of an international agreement based areas of commonality and agreement based on State preferences articulated in the intergovernmental discussions, the potential contents of a comprehensive agreement for BBNJ. Any new agreement that may emerge must build on, and be consistent with, the existing framework established by UNCLOS, the CBD, and other existing conventions and legal frameworks, focusing on

implementing existing agreements and commitments, and utilizing existing mechanisms. It should provide a clear mandate and legal duty to protect biodiversity in ABNJ, based on ecosystem-based management and the precautionary principle, and promote coordination and cooperation between relevant international and regional instruments (Hart 2008). The central elements of such an agreement could be as follows:

- Principles of effective ocean governance
    - Instill the following principles into the international framework for marine biodiversity beyond national jurisdiction and clarify the application of these principles into governance and management measures:

        -Ecosystem-based approach

        -Integrated approach, focusing on cross-sectoral coordination

        -Precautionary approach

        -Reliance on best available science

- State Responsibility and Compliance
    - Emphasize the duties of States to implement new and existing responsibilities and hold their flagged vessels and nationals accountable for their actions in ABNJ
    - Oblige flag states to develop appropriate domestic legislation and policy mechanisms
    - Consolidate existing State duties and responsibilities related to ABNJ
    - Consider the development of cooperative multilateral enforcement mechanisms in areas regulated by a regional ocean management organizations, such as RFMOs and Regional Seas Programmes

- Regional Governance Approach
    - Oblige States to undertake cross-sectoral regional transboundary ocean governance approaches, namely by expanding the mandates of existing regional mechanisms and/or establishing new regional environmental management organizations

- Provide standardized framework for indicators of effectiveness for regional management bodies

- Encourage States whose nationals and vessels undertake activities in the jurisdiction of a regional management body to become a party to that regional arrangement

- Integrated Area-Based Approach

  - Develop common criteria for the designation of special areas in need of protection and management, based especially on the EBSA approach of the CBD and the VME approach of the FAO and building on existing inventories

  - Establish a mechanism for cross-sectoral coordination at the global and regional level for the application of area-based management measures

  - Assign authority and give a clear mandate to designate and manage MPAs at the global level and/or provide guidance on assigning authority at the regional level

- Environmental Impact Assessment (EIA)

  - Clarify existing provisions and responsibilities for EIAs, as they apply to ABNJ, and provide guidance on implementing EIAs in ABNJ, building on the EIA provisions of UNGA Resolution 61/105

  - Create or advise the creation and/or designation at the global or regional level of a body, supported by a scientific advisory group, to mandate and review/approve EIA

  - Oblige parties and management organizations to integrate issues associated with cumulative impacts on biodiversity and ecosystems into EIA provisions, including though the development of cross-sectoral EIA processes and joint implementation and review of EIAs

- Marine Scientific Research (MSR) and Bioprospecting

  Joint Research, and Technology and Information-Sharing

  - Encourage collaborative research efforts and coordination of scientific research, focused on North-South collaboration and capacity-building for developing states

  - Elaborate requirements under UNCLOS provisions to publish and disseminate information arising from research

- Create mechanisms or advise creation of mechanisms to provide for training and participation of developing country scientists to build on existing UNCLOS provisions for capacity building and collaborative research

Mitigating Potential Adverse Environmental/Ecological Impacts

- Provide the necessary framework for internationally-agreed standards for impact assessment for MSR, with implementation of impact assessment decentralized to the regional level, when preferred by states

- Support the use of voluntary approaches by industry and research groups, including through the potential development of a global code of practice/conduct for MSR and bioprospecting

Bioprospecting

- Provide a universal definition of "bioprospecting"

- Clarify the mandate of the ISA with respect to living resources of deep seabed, including the potential to broaden the mandate of the ISA for regulation of impacts in deep seabed

Potential Benefit-Sharing

- Provide guidance on regional access and benefit-sharing arrangements, building on framework laid out by Nagoya Protocol and taking lessons from International Treaty on Plant Genetic Resources for Food and Agriculture, the Nagoya Protocol, the TRIPS Agreement, and other examples of regional ABS frameworks

- High Seas Fisheries

  - Facilitate the adoption of strict precautionary rules for new and emerging fisheries and destructive activities not covered by RFMOs

  - Establish new RFBs or regional ocean governance mechanisms to address the full-range of biodiversity-related concerns

  - Create mechanism(s) for consultations between global and regional bodies dealing with biodiversity conservation in ABNJ and RFMOs, FAO and global and regional bodies with sectoral or conservation interest or competence in ABNJ

  - Establish a framework for an integrated approach to conservation and sustainable use of biodiversity, with the central involvement of RFMOs

  - Support the further implementation of the UNFSA, the FAO Compliance Agreement, the FAO Code of Conduct for Responsible Fisheries, and the

International Plan of Action to Prevent, Deter, and Eliminate IUU Fishing

- Capacity Building
    - Provide for the creation of capacity-building mechanisms at the global and regional levels for the participation of developing State scientists in research relating to marine biodiversity in ABNJ
    - Create mechanisms for the sharing of best practices and lessons learned for management of activities of flagged vessels in ABNJ that may adversely impact marine biodiversity and ecosystems, including training programs
    - Support the development of funding for capacity-building for ABNJ activities within international funding institutions and development banks
    - Create mechanisms to support the provision of financial assistance, technical assistance and training, human resources development, technology transfer, and consultation services, directed towards improving capacity for enforcement; data collection, stock assessment, and reporting; and monitoring, control, and surveillance (MCS)
- Emerging Issues
    - Provide for notification and impact assessment for new and emerging uses of ABNJ, including experimental activities, to appropriate global and/or regional bodies

These proposed elements relate either directly to commonality and areas of agreement emanating from articulated state preferences, or from proposed elements that would build upon articulated areas of commonality. There are likely to be other potential elements that would prove beneficial that states may agree upon. There are also important questions related to logistical issues and modalities for implementation that would need to be addressed that are beyond the scope of this analysis.

Building on the existing provisions and set within the broad framework of UNCLOS, any revised regime should primarily (Hart 2008):

--provide a clear mandate and legal duty to protect biodiversity on the high seas, based on ecosystem-based management and the precautionary principle;

--promote coordination and cooperation between relevant global and regional instruments;

--clarify the rules governing marine genetic resources, including potential provisions for access to and the sharing of benefits derived from these resources; and

--provide adequate implementation tools, including a mandate to establish and manage marine protected areas in ABNJ.

Crafting a new global agreement for marine biodiversity beyond national jurisdiction must also consider the financial costs associated with implementing various approaches and where such funds might come from. Potential financial costs are an important aspect of crafting an agreement, which may call for the creation of new institutional mechanisms. Developing a more coordinated approach could reduce duplication of effort and overlapping mandates, and facilitate positive synergies between different management bodies and organizations, thereby reducing costs. Nonetheless, greater focus on governance and management in areas beyond national jurisdiction will likely entail greater expenditure of funds, the amount of which and efficiency with which these funds are used is dependent on the nature of the agreement. Unfortunately, the debates have not discussed financial issues associated with various means to improve governance and management in ABNJ.

It is clear that there are certain unanswered questions and areas of uncertainty within some of these proposed elements. These are due both to the vagueness inherent in many State preferences articulated during these debates as well as the general lack of knowledge regarding potential means to address important questions. While a flexible and open framework is useful in some senses and can allow governance and management approaches to be crafted to the unique circumstances and the respective needs and interest of stakeholders in different areas, a lack of clarity and clear policy guidance can

also hinder governance and management in the future when unanticipated issues arise. This is best illustrated by the lack of clarity provided by UNCLOS for ABNJ issues necessitating discussions such as these. Therefore, States should be more explicit and action-oriented in developing and articulating policy preferences in the intergovernmental debates and must also consider both the content and the vehicle of a potential resolution(s). Clearly, there will be key areas of uncertainty that States will not be able to address. In this sense, there is a central need for more direct involvement of members of civil society, including various policy experts and practitioners with relevant on-the-ground experience, to provide valuable input to the debates and work with States in developing and refining their policy preferences. As well, members civil society examining these debates, especially international organizations and non-governmental organizations should make greater efforts to take State preferences into consideration when developing their proposals and recommendations to the political process. Aligning policy proposals and recommendations with States' priorities will allow for more effective uptake of the substantive and conceptual input from civil society and reduce the substantive isolation of the political process from other relevant ongoing lines of analysis and study in civil society.

4.5 Conclusion

4.5.1 BUILDING ON AREAS OF CONSENSUS TO WORK TOWARDS RESOLUTION

When examining State perspectives on the various issues under discussion in the intergovernmental debates on marine biodiversity beyond national jurisdiction, it becomes clear that there are a number of key areas of commonality and agreement that hold much potential for tangible progress in ensuring conservation and sustainable use of marine biodiversity beyond national jurisdiction. A large portion of the initial discussions

examined in this analysis focused centrally on areas of differing opinions and perspectives, rather than on the clear opportunities inherent in the many areas of commonality. As the debates progressed, however, States began to focus more on clear opportunities for progress and converge towards consensus on some key aspects of a potential resolution. While there remain some important questions and some potentially irreconcilable differences, there are a number of potential options and avenues in need of further examination and promising opportunities to build on commonality and work towards common goals.

The obvious question that extends, however, is why more progress has not been made on the ground thus far, if there exists such commonality? Perhaps there aren't enough direct and pressing threats to living resources to foment policy development and implementation, or a lack of strong political leadership at the international level. Many, however, hold that a central underlying factor for the delay in concerted action is the fragmented nature of existing legal and institutional framework for marine areas beyond national jurisdiction, which is composed of a complex web of conventions and mechanisms at various scales with potential gaps and overlaps, no clear overarching mechanism or framework to facilitate multilateral cooperation and collaboration, and lack of clarity regarding states' duties and responsibilities in ABNJ.

While the mechanisms that are already in place may be able to address some, or all, of these issues associated with BBNJ, it is more likely that this complex web of legal provisions, institutions and policy mechanisms lacks the overall coherence to generate global policy momentum to effectively mobilize the urgent State action and multilateral cooperation required to address major threats and to ensure conservation and sustainable use of marine biodiversity.

As evidenced by the growing attention paid to this issue by countries from all over the world (developed and developing countries, alike), policy experts, scientists, the private sector, and others, this is truly a global issue and one that while occurring at the furthest reaches of the earth, could have significant social, economic, political, and scientific implications for the global community. Therefore, in light of the complexities of the issues addressed, the significant common interest in addressing these issues, and the slow rate of policy development a more comprehensive approach could prove necessary to bring these complex measures under a coherent policy umbrella, facilitate the provision of capacity to developing States to effectively govern activities in these areas and equitably enjoy the benefits provided by living resources in these areas, provide the enabling policy environment required for collaborative and coordinated approaches to ensure the conservation and sustainable use of BBNJ.

In light of the growing state support for a new comprehensive multilateral agreement and the inherent interlinkages and potential synergies between the various issues and management approaches, a comprehensive agreement could be the key to providing such a policy environment. A framework that emerges from any type of comprehensive agreement must be crafted by the States and must be flexible enough to address new and emerging challenges as they develop. Based on the analysis of state preferences, developing global comprehensive approaches to managing activities impacting marine biodiversity in ABNJ would encounter a certain degree of political resistance from some States and would also present a large number of technical and logistical complications for already overburdened international organizations. Therefore, decentralizing management approaches to the regional level, with standards and guidance provided by a competent global body, such as the UN General Assembly, could serve to overcome some political contention, build on common interests and perspectives, utilize

existing instruments and institutional mechanisms as well as histories of cooperation, and allow States to craft approaches that are appropriate for their given area. There also remain many important technical and logistical questions regarding the implementation of management tools in ABNJ that have not yet been answered and will require dialogue among scientists, policy experts, legal scholars, and governments. Many of these questions have persisted since the onset of these debates, yet concerted dialogues between governments and experts to address these questions have not yet occurred. The inception of a negotiating process for marine biodiversity in ABNJ could stimulate these discussions, giving impetus to governments and stakeholders to face the reality of an emerging new regime and tackle important practical questions.

A comprehensive agreement will not, of course, be a "silver bullet" to immediately address all issues and provide for effective governance. Even if a new agreement were to be developed and agreed to by the majority of States and a viable and mutually-agreeable framework established, complications and disagreements between States would very likely continue to arise, including from factors such as new scientific findings, unforeseen environmental or ecological impacts of human activities, the implications of natural phenomena (such as climate change), and new and emerging uses. The goal, however, is not to address every issue that may arise and account for all present and potential activities. The goal is to develop more viable and effective policy environment that would provide for effective multilateral cooperation, address gaps and weaknesses in the existing framework, clarify the duties and responsibilities of states with respect to ABNJ, and provide a framework that would better facilitate the conservation and sustainable use of marine biodiversity beyond national jurisdiction. How effectively this framework would be implemented and common goals achieved is largely up to States.

The details of how a new multilateral package agreement could be developed are not altogether clear. Furthermore, implementing such an agreement would likely be highly contentious and complicated. However, the input of resources required to negotiate such an agreement would likely outweigh both the costs associated with overlap, duplication of effort, administrative expenditures for coordinating activities and governance approaches between states under the existing framework, as well as the ultimate costs to the health and well-being of marine ecosystems through ineffective governance and management, with direct implications for society. While there is no guarantee that a package approach would be successful, if developed, is it clear that there are many common goals, opportunities, and incentives for developing outcomes and approaches that could benefit all stakeholders. The development of a negotiation process could also lead to greater State participation in global dialogue on BBNJ and articulation of more outcome-oriented policy positions, providing a more robust understanding of the full spectrum of stakeholder preferences.

This study has also demonstrated the need for more active involvement of civil society in the intergovernmental discussions on BBNJ. As issues related to marine biodiversity beyond national jurisdiction are highly complex and posses interlinkages with other issue-areas, and are also at a key phase in the policy development field, there is a critical need for input from all relevant experts and stakeholders and for creative and innovative policy thinking. The outputs of expert policy analyses and valuable mutlistakeholder dialogues have factored into the discussions, but only to a limited extent. Fora hosting discussions on BBNJ issues, as well as States themselves, should seek input from a wider array of experts who could provide valuable input in addressing key questions and assisting in the development of viable and actionable policy.

The intergovernmental process is currently at a critical juncture. There is a strong possibility for the development of an intersessional process of workshops that could address key questions, strong support and growing momentum for the development of a new international agreement for BBNJ. In this sense, the relevance of this study becomes obvious. Regarding the possible inception of a negotiation process for a new agreement, this study provides a synthesis and analysis of State preferences articulated thus far in the process that can factor into further discussions on the content of such an agreement. Taking stock of previous discussions is important to avoiding the unproductive repetition of well-known policy positions and advancing the overall dialogue towards more productive and action-oriented outcomes. Regarding the valuable role of civil society in this process, this study also could provide a reference point for members of international organizations and non-governmental organizations providing input to the political process, helping them to align their recommendations with States' preferences and priorities, facilitating greater impact on and relevance to the political process.

4.5.2 AREAS IN NEED OF FURTHER ANALYSIS

This study brings to light a number of key areas in need of further research and analysis regarding policy approaches to ABNJ. One of the key questions that remain with respect to multilateral approaches to implementing management tools, namely at the global and/or regional level, is the question of where and how to assign authority for implementing and managing these tools. This study has proposed that, for many tools, global guidance providing for regional-level implementation could overcome many issues and build on commonalities among state preferences, it is not clear what the elements of such global guidance could be, what types of regional bodies would be in the

best position to be designated as management authorities, and what such authority would entail with respect to tools such as MPAs and EIAs, in light of the important role of flag States. Research should focus address issues associated with the operationalization of the regional approach in ABNJ with respect to specific management tools and issue-areas, such as an examination of potential options for regional ABS arrangements.

Further research might also address the potential effectiveness of voluntary guidelines and codes of conduct for scientific research. Although codes of conduct have been supported by many states in these debates, both developed and developing, and there exists a potential need for further sponsorship and articulation of the importance of these codes, there have been no overarching studies on the effectiveness of these various codes of conduct with respect to ABNJ, and key elements of effective voluntary guidelines that could be focused on in developed more global and standardized codes.

This study has also emphasized that there exists significant consensus on the need for capacity building for developing states, but also a relatively inadequate understanding of what these capacity needs are. Future studies could attempt to elucidate the capacity needs of developing states with respect to both effectively govern ABNJ and undertake activities in ABNJ, and could also identify ideal means of channeling support to developing countries and potential platforms for North-South cooperation.

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Appendix A

LIST OF STATES/DELEGATIONS INCLUDED IN STATE PREFERENCE CHARTS AND CORRESPONDING ABBREVIATIONS AND ACRONYMS USED

Abbreviation	Country/Delegation Indicated
ARG	Argentina
AUSTR	Australia
BAH	Bahamas
BANG	Bangladesh
BRA	Brazil
CAN	Canada
CARICOM	Caribbean Community
CHILE	Chile
CUBA	Cuba
EC	European Commission
ECUA	Ecuador
EU	European Union
FRA	France
G-77	Group of 77 developing nations
GRE	Greece
GUAT	Guatemala
GUY	Guyana
ICE	Iceland
IND	India
INDO	Indonesia
JAM	Jamaica
JAP	Japan
KEN	Kenya
KOR	Korea
MAR ISL.	Marshall Islands
MAYL	Malaysia
MEX	Mexico
N. ZEA	New Zealand
NETH	The Netherlands
NIGE	Nigeria
NOR	Norway

PALAU	Palau
PERU	Peru
PIF	Pacific Islands Forum
RUS	Russian Federation
SENE	Senegal
SEY	The Seychelles
SO. AFRICA	South Africa
SRI LAN	Sri Lanka
THAI	Thailand
TR+TOB	Trinidad and Tobago
TUN	Tunisia
UGA	Uganda
US	United States
VEN	Venezuela

Appendix B

LETTERS OF PERMISSION

Permission to use Figures 1 and 3

From: Clive Schofield <clives@uow.edu.au>
Subject: **RE: Permission for Use of Maritime Zone Graphic**
Date: November 9, 2011 11:41:35 PM EST
To: Joseph Appiott <jappiott@comcast.net>
1 Attachment, 264 KB

Dear Joe,

Many thanks for your message. Only one snag - the graphic you mention isn't actually one of mine! In fact it is an Australian government one (which I had permission to use).

No worries, though, please see the attached one which may do the trick?

This is one of mine and I hereby grant you permission to use it in your Masters thesis. This image was published in a chapter of mine as follows:

Schofield, C.H. (2011) 'The Delimitation of Maritime Boundaries: An Incomplete Mosaic', Ashgate Research Companion to Border Studies (Ashgate) (Chapter 32).

Unfortunately I can't give you the page number. While I know that it is out, I have not received my author copy as yet.

Please note use of "M" for nautical miles in the figure. This is correct (if ugly when written on the page) as "n.m.", despite being in common-usage means, nanometres(!).

What is your thesis on by the way?

Best regards,

Clive

Professor Clive Schofield, PhD
Director of Research and ARC Future Fellow
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-----Original Message-----
From: Joseph Appiott [mailto:jappiott@comcast.net]
Sent: Saturday, 5 November 2011 12:48 PM
To: clive.schofield@theglobalexperts.org; Clive Schofield
Subject: Permission for Use of Maritime Zone Graphic

Dear Dr. Schofield:

I would like to request permission to use an image found in one of your previous presentations, namely in your presentation to the 2003 ABLOS Conference (http://www.gmat.unsw.edu.au/ablos/ABLOS03Folder/SESSION3.PDF). I would very much like to use the the image, "Legal Regimes of the Oceans and Airspace" in my Master's thesis, which is focused on analyzing State preferences on issues related to marine biodiversity in areas beyond national jurisdiction.

The University of Delaware requires written approval (email is fine) for the use of each image in my thesis that I did not generate.

I very much hope to hear from you soon.

Thank you and best regards,
Joe
--

Joe Appiott
Policy Researcher
Global Ocean Forum
Gerard J. Mangone Center for Marine Policy
University of Delaware
Newark, DE 19716

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