

Session 8: From Science to Policy

Paper 1: Conservation and management of chondrichthyans (sharks, rays and chimaeras) in the Western Indian Ocean¹

Wildlife Conservation Society, Madagascar & Western Indian Ocean Program

Chondrichthyan status in the Western Indian Ocean

The Western Indian Ocean (WIO) has been identified as a global hotspot for chondrichthyan diversity (Dulvy et al. 2014), with 130 shark, 86 batoid (wedgefishes, skates and rays) and 11 chimaera species identified to date. The WIO is one of four global hotspots for chondrichthyan evolutionary distinctiveness (Dulvy et al. 2014), giving the region's chondrichthyans a high irreplaceability index (Stein et al. 2018), and highlighting the need for their conservation.

The WIO is also characterised by extensive fisheries, from the artisanal level to large-scale industrial fleets, as well as illegal, unreported and unregulated (IUU) fishing. There is a high demand for and legal and illegal trade in chondrichthyan products, with a high demand for shark meat for local consumption and for shark and batoid fins for the global shark fin trade. Chondrichthyans are also incidentally taken in a variety of industrial and small-scale fisheries throughout the region. Chondrichthyan species are generally slow growing, with late maturity and low reproductive capacity, making them highly susceptible to overfishing (Worm et al. 2013).

Owing to overfishing and other human impacts, the stocks of numerous species have declined, putting several species under threat (Dulvy et al. 2014). According to the IUCN Red List of Threatened Species (www.iucnredlist.org), 54 chondrichthyan species (24%) in the WIO are considered threatened, i.e. considered to be facing a high to extremely high risk of extinction in the wild (IUCN 2001), while 71 species (31%) are classified as Data Deficient, i.e. there is inadequate information to make a direct or indirect assessment of the species' risk of extinction. The WIO is also identified as one of four global hotspots in terms of the number of imperilled chondrichthyan species (Davidson and Dulvy 2017), and anecdotal evidence suggests that this number is increasing. Recent updates to IUCN Red List categorisations for chondrichthyan species in other regions, such as European and Mediterranean populations, have shown severe increases in threat status, with many species being re-classified into higher threat categories. The same negative result is expected in the WIO, when updated threat categories are published from the WIO species later in 2018. There is thus a critical need for corrective management and improved conservation of the WIO chondrichthyan species, particularly those that are threatened or likely to become threatened.

Overexploitation of chondrichthyan species can have direct impacts on their populations, and indirect impacts through cascading effects on the ecosystems and trophic webs. As thousands of people living in coastal communities within the WIO countries are dependent on fishes, chondrichthyan species and other marine resources for their income and livelihoods, as well as cultural or traditional uses, sustainable utilization of these resources is paramount, and as much a social issue as it is an ecological issue. Human populations, and consequently the demand for marine resources (including sharks and rays), are increasing throughout the WIO. There is also evidence of human migrations towards coastal areas in search of improved food security and livelihoods (Barnes-Mauthe et al. 2013). Consequently, the impacts on chondrichthyan populations are likely to increase. However, there are currently poor data on the catches of chondrichthyan species, and large proportions of the catches, particularly in the artisanal sector and small-scale fisheries, as well as IUU fisheries, are not reported and remain unknown (Worm et al. 2013). There is thus a continued threat to WIO chondrichthyans, the severity of which is likely increasing.

¹ The geographic area referred to here by the term Western Indian Ocean includes the Indian Ocean territorial waters of the ten Nairobi Convention member states, from South Africa in the southwest, to Somalia in the northwest, and to Mauritius in the east, following the delineation of the Indian Ocean by the International Hydrographic Organization (2002), and excludes the marginal seas to the north.

Addressing these issues at international level

The Food and Agriculture Organization (FAO) of the United Nations developed an international plan of action (IPOA-SHARKS) for the conservation and management of sharks and rays (FAO 1999), which advocated that “States that contribute to fishing mortality on a species or stock should participate in its management” and that “States should adopt a national plan of action for conservation and management of shark stocks (Shark-plan) if their vessels conduct directed fisheries for sharks or if their vessels regularly catch sharks in non-directed fisheries”. The IPOA-SHARKS also suggests that this “applies to States in the waters of which sharks are caught by their own or foreign vessels and to States the vessels of which catch sharks on the high seas” (FAO 1999).

Addressing these issues in the Western Indian Ocean

Acknowledging the global status of threats to chondrichthyans, and mounting evidence of threats to chondrichthyan species in the WIO, the Nairobi Convention parties decided in 2012 to incorporate sharks in to the Nairobi Convention programme of work.

At the 7th Conference of the Parties (CoP) to the Nairobi Convention, held in Maputo, Mozambique in 2012, Decision CP7/12: *Conservation of Sharks* called for ‘regional collaboration, in consultation with the Secretariats of the Convention on International Trade in Endangered Species, Convention on Migratory Species, regional fisheries management organisations and other partners, on the conservation and management of sharks’ and requested “the Secretariat in collaboration with the Contracting Parties to prepare a regional status report on the state of sharks especially on matters of institutional, legal and capacity and report to the next Conference of Parties”.

At the 8th CoP, held in Mahe, Seychelles in 2015, Decision CP8/9: *Threatened and Endangered Marine Species* was made “To urge the Secretariat, in partnership with the Wildlife Conservation Society, to finalize the Regional Status Report on Sharks and Rays in the Western Indian Ocean and circulate the report to all Contracting Parties for review and submit the final report with findings for consideration at the next Conference of Parties”.

Accordingly, the Wildlife Conservation Society (WCS), in collaboration with TRAFFIC, Florida International University and the IUCN shark specialist group, undertook a widespread assessment of the status of chondrichthyan species, and the fisheries that catch chondrichthyans and impact chondrichthyan populations, throughout the WIO, including all ten Nairobi Convention member states. The status report *Sharks and Rays of the Western Indian Ocean – Biodiversity, Fisheries and Trade, Management and Conservation* is now in the final stages of preparation, and WCS intends to present the report at the 2018 Nairobi Convention CoP.

Status report on chondrichthyans in the Western Indian Ocean region

The regional chondrichthyan status report identifies several recurring issues across the Nairobi Convention member states, and recommended necessary actions to address these issues.

1. **Overfishing (including directed fishing and bycatch) in most sectors is a major threat to chondrichthyan species in the WIO. Populations of several species (for which assessments have been conducted) have declined, and numerous species are listed in the threatened categories of vulnerable (19%), endangered (3%) or critically endangered (2%) on the IUCN Red List. There is thus a critical need for reduction of fishing pressure, fishery-related mortality and bycatch of chondrichthyan species.**
2. **There is limited awareness of the poor conservation status of chondrichthyan species in the WIO and generally a poor understanding of their important ecological role in their relevant ecosystems and trophic webs, and thus a lack of cognisance of the impacts (direct and indirect) of overfishing these species. There is thus a need to raise awareness of these issues, among fishers, governments and other stakeholders.**
3. **Most chondrichthyan species have relatively broad geographic distributions and habitat usage, making them vulnerable to a range of fisheries and fishing gears. It is therefore important to understand the impacts of each fishery on each species. However, within the WIO region, there are little data available on catch rates at the species level for chondrichthyan species. There is**

thus a need to assess the catches of chondrichthyans in the different fisheries in the WIO, to identify trends in the status of the resources, and in resource use.

4. There is poor control of the trade in chondrichthyan products both within and out of the WIO region, and considerable discrepancies in statistics between export volumes (and taxa) from the WIO countries and import volumes into other countries outside of the WIO, which indicate inaccurate reporting, non-reporting and illegal trade in certain instances. There is thus a need for stricter trade controls and improved monitoring, reporting and enforcement.
5. There is a general lack of legislation developed specifically for chondrichthyan species, or legislation which includes these taxa in their text, in most WIO countries. Furthermore, while all ten Nairobi Convention member states have shark-directed fisheries or fisheries that take sharks as bycatch, or harbour species of sharks that are captured by fisheries in the waters of other countries, only four of these states have developed national plans of action (Seychelles, South Africa, Mauritius and Madagascar; Kenya is in the process) for shark and ray conservation and management. There is thus a need for improved legislation and guiding policy, at regional and national levels.
6. A high proportion (24%) of WIO chondrichthyans are classified as threatened on the IUCN Red List; however, few of these species are protected under national or international legislation or conventions. There is thus a need to identify those species whose populations within the WIO require stricter management or warrant full protection, under the annexes of the Nairobi Convention *Protocol concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region*.

Roadmap for the Conservation and Management of Sharks and Rays of the Western Indian Ocean

In response to the need for guiding policy in the WIO, a region-wide initiative was undertaken, to develop a policy document to guide and prioritise conservation and management activities for chondrichthyans in the WIO region. This initiative was supported by the Indian Ocean Commission (IOC) and the Nairobi Convention, and led by WCS and TRAFFIC.

A regional workshop, held in Mauritius in April 2017, brought together relevant stakeholders from all ten Nairobi Convention member states. Using the outcomes of the regional status report as a baseline, the workshop delegates identified key issues facing chondrichthyans in the WIO and the conservation and management objectives to overcome these issues, as well required actions to meet these objectives. From this process a draft regional roadmap for shark and ray conservation was developed.

A subsequent workshop, held in Dar es Salaam in November 2017, brought together stakeholders from seven Nairobi Convention member states. At this meeting, delegates refined the objectives and required actions presented in the draft roadmap, to produce a final *Roadmap for the Conservation and Management of Sharks and Rays of the Western Indian Ocean*. WCS now intends to present this document for consideration for acceptance at the 2018 Nairobi Convention CoP.

Species listing

One of the objectives of the regional status report was to identify shark and ray species for consideration for listing on the Annexes of the Nairobi Convention *Protocol Concerning Protected Areas and Wild Fauna and Flora in the East African Region*. WCS and Florida International University (FIU) collaborated to produce a list of species for consideration, which details the IUCN Red List status and legal status of these species under relevant conservation agreements. Supporting information on which to identify species requiring listing on Annex II, III or IV of the Protocol was obtained through several global and regional assessments and conventions, including assessments conducted by the IUCN shark specialist group (Dulvy et al. 2014), the Western Indian Ocean Fisheries Project (WIOFP, Kizska and van der Elst 2015), the Convention on the Conservation of Migratory Species of Wild Animals (CMS, www.cms.int), the Convention on International Trade in Endangered Species (CITES, www.cites.org), the Indian Ocean Tuna Commission (IOTC, www.iotc.org), and through consultation with regional experts. The initiative resulted in the preparation of the document *Preliminary Recommendations for the Listing of Sharks and Rays in Annexes II, III, and IV of the Nairobi Convention Protocol Concerning Protected Areas and Wild Fauna and Flora in the East African Region*. WCS intends to submit this document for consideration at the 2018 Nairobi Convention CoP.

Policy recommendations

In summary, there is a need for improved chondrichthyan conservation and management in the WIO, and the implementation of guiding policy at regional and national levels, to ensure that the necessary actions are taken to reduce the impacts of human activities on chondrichthyans in the WIO, to manage chondrichthyan populations sustainably and allow the stocks of imperilled species to recover.

Appropriate and immediate management interventions could reduce human impacts on chondrichthyan populations and allow sustainable utilization of the resources. Failing to act now will allow further negative impacts, further population declines and cascading impacts on the associated ecosystems, and will reduce the possibility of retarding population declines or effecting recoveries. Immediate actions are thus required.

Considering the highly migratory nature of many chondrichthyan species, as well as the global trade in chondrichthyan products, it is necessary to have international cooperation and coordination of shark and ray management, which would benefit from regional action plans. In addition, species that are identified as requiring strict protection or careful management in one or more states should be suitably listed at the regional level, to ensure regional level management and/or protection.

Draft Decision on SHARKS and RAYS (SPECIES PROTECTION)

1. **Note** the progress made in the finalization of the report on Sharks and Rays, and commend efforts of responsible partners in this regard;
2. **Request** the Secretariat and responsible Partners to expedite the process of finalization and validation of the Status Report and report at the next COP
3. **In the meantime, approve/endorse the proposed roadmap...and species list**

Literature cited

- Barnes-Mauthe, M., K.L.L. Oleson and B. Zafindrasilivonona. 2013. The total economic value of small-scale fisheries with a characterization of post-landing trends: An application in Madagascar with global relevance. *Fisheries Research* 147: 175-185.
- Davidson, L. and N.K. Dulvy. 2017. Global marine protected areas to prevent extinctions. *Nature Ecology & Evolution* 1 (0040). DOI:10.1038/s41559-016-0040.
- Dulvy, N.K., S.L. Fowler, J.A. Musick, R.D. Cavanagh, P.M. Kyne, L.R. Harrison, J.K. Carlson, L.N.K. Davidson, S.V. Fordham, M.P. Francis, C.M. Pollock, C.A. Simpfendorfer, G.H. Burgess, K.E. Carpenter, L.J.V. Compagno, D.A. Ebert, C. Gibson, M.R. Heupel, S.R. Livingstone, J.C. Sanciangco, J.D. Stevens, S. Valenti and W.T. White. 2014a. Extinction risk and conservation of the world's sharks and rays. *eLife* 3 (2014): e00590.
- International Hydrographic Organization. 2002. *The Indian Ocean and its sub-divisions*. International Hydrographic Organization, Special Publication N°23.
- Kiszka, J. and R.P. van der Elst. 2015. Ch. 11: Elasmobranchs (sharks and rays). In: van der Elst R.P. and B.I. Everett (eds). *Offshore fisheries of the Southwest Indian Ocean: their status and the impact on vulnerable species*. Oceanographic Research Institute Special Publication 10. Durban, South Africa. 448pp.
- Stein, R.W., C.G. Mull, T.S. Kuhn, N.C. Aschliman, L.N.K. Davidson, J.G. Boy, G.J. Smith, N.K. Dulvy and A.O. Mooers. 2018. Global priorities for conserving the evolutionary history of sharks, rays and chimaeras. *Nature Ecology and Evolution* <https://doi.org/10.1038/s41559-017-0448-4>.
- Worm, B., B. Davis, L. Kettner, C.A. Ward-Paige, D. Chapman, M.R. Heithaus, S.T. Kessel and S.H. Gruber. 2013. Global catches, exploitation rates, and rebuilding options for sharks. *Marine Policy* 40: 194-204.

Recommended citation

UNEP-WCMC (2018). Regional cross-sectoral planning in Areas Beyond National Jurisdiction. Pp. 1- 10.

1. Introduction

This short paper provides an introduction to the project “Sustainable Fisheries Management and Biodiversity Conservation of deep-sea living marine resources and ecosystems in the Areas Beyond National Jurisdiction” (also known as the “ABNJ Deep Seas Project”). It focuses on component 4 of the project, which seeks to identify and test opportunities for coordinated approaches to biodiversity conservation in Areas Beyond National Jurisdiction. The paper will explain the focus of the project including its expected outcomes, the need for and importance of biodiversity conservation in Areas Beyond National Jurisdiction, and its expected policy recommendations.

2. The ABNJ Deep Seas Project

Project’s approach to delivering ‘efficient and sustainable deep sea fisheries and enhanced conservation of deep sea living resources’ is through the systematic application of an ecosystem approach.

The Project seeks to develop, test and promote frameworks, processes, tools and best practices that can be applied to support planning and management for sustainable Deep Seas Fisheries (DSF) and biodiversity conservation in ABNJ, and to build individual and institutional capacity to deploy these. It aims to achieve this by working with the Regional Fisheries Management Organizations (RFMOs) and their contracting parties, relevant Regional Seas Programmes (RSPs) and their member states, and other competent authorities, such as the International Seabed Authority (ISA) and the International Maritime Organisation (IMO), as well as relevant industry partners and other stakeholders to pilot new approaches and solutions and transfer and disseminate best practice. Capacity building efforts include development and promotion of best practice guides, management and enforcement tools, and identification of Vulnerable Marine Ecosystems (VMEs) and Ecologically or Biologically Significant Marine Areas (EBSAs), enhancing data platforms for dissemination of information and experiences, and adaptation of area-based planning tools, with training in their use. The UN Food and Agriculture Organisation (FAO) is the lead Global Environment Facility (GEF) implementing Agency (IA) for the Project, responsible for the overall coordination and the reporting to GEF; UN Environment is the GEF co-implementing agency, responsible for project component 4, which is executed through the UN Environment-World Conservation and Monitoring Centre (UNEP-WCMC). The specific outcomes of the project include:

1. Enhancing legal and policy frameworks to support existing governance arrangements of the ABNJ (current international agreements and requirements);
2. Reducing the impacts on, and improving the protection of, VMEs and components of EBSAs;
3. Improving sustainable management practices for deep sea fisheries; and
4. Developing and testing methodologies and tools for multi-sectoral area-based planning for ABNJ.

3. Developing and testing multi-sectoral area-based planning methodologies for ABNJ

The most relevant component of the ABNJ Deep Seas Project for the Nairobi Convention is Component 4.

The aim of component 4 is how competent authorities concerned with different sectors involved with the deep seas could use area-based planning frameworks and tools in their decision-making. It aims to develop appropriate methodology and tools for area based planning that can be applied to ABNJ across multiple competent authorities and build capacity for these. Testing and demonstrating these tools in pilot regions is important. It should be noted that the aim of Component 4 is not to plan for the creation of formal Marine Protected Areas (MPAs) in ABNJ. It is to improve understanding, cooperation and capacity among competent authorities and stakeholders for the use of area-based planning

methodologies in ABNJ. Lessons learned from these steps will then be used to inform the ongoing discussions, at the international level, on how to undertake planning in ABNJ. Component 4 has the following expected accomplishments:

- Output: Multi-sectoral marine area-based planning approaches, tools and good practices for use in deep-sea ecosystems in ABNJ developed, adapted and made available to all competent authorities
- Output: Inter-sectoral marine area-based planning tools for ABNJ tested and demonstrated in pilot regions and results captured and disseminated
- Outcome (including information from components 1-3): Improved area-based planning tools and information to assess potential multi-sectoral impacts (including cumulative impacts) to deep sea ecosystems and options to mitigate these available to regional marine planning processes, including Regional Seas Programmes and Regional Fishery Management Organisations.

4. Biodiversity Relevance

Why is biodiversity beyond national jurisdiction important to adjacent coastal states?

There are a number of reasons why biodiversity in ABNJ is of interest to coastal states. Ecosystem boundaries do not necessarily align with national waters of countries, or other political, economic and human-derived boundaries. Therefore areas within and outside national jurisdiction can be highly connected. Many species which transit through ABNJ, or spend significant portions of their lifecycle there, also have economic and cultural relevance to coastal states. The potential to receive benefits from species which transit between different jurisdictions requires transnational coordination, including considerations for ABNJ. The marine environment is fluid and dynamic by nature, meaning that impacts generated by any activity can move and affect areas far distant from the initial event. For example, single use plastics are found in the deepest ocean trenches. Evidence strongly suggests that connectivity plays a key role in maintaining the integrity and functionality of ecosystems and their associated services. As well as the later type of connectivity (between Exclusive Economic Zones and ANBJ), it is important to consider vertical connectivity (between the deep ocean and surface waters). The deep ocean contains unique and extraordinary species and habitats. In some deep sea areas, there are extreme environments which, by their isolated nature, contain distinctive species. Accounting and planning for unique marine habitats, organism movements and their importance in maintaining the provision of services, is essential in developing robust and ecologically appropriate spatial plans and should be considered in effective area based planning efforts. It is important to understand the connected nature of the marine environment and, therefore, to account for connectivity in marine area-based planning processes.

5. Biodiversity Risk

Is biodiversity at risk in areas beyond national jurisdiction?

The ocean provides human societies with valuable and diverse goods and services, including food (from fisheries and aquaculture), coastal protection, tourism, transportation and energy². Together, these are of significant economic, social and cultural importance. Marine ecosystems and biodiversity are, however, negatively impacted by human activities. Such activities, in turn, threaten the very processes and resources that support these goods and services³. Furthermore, the anticipated effects of climate change will fundamentally reorganize marine communities⁵. As human uses of the ocean continue to grow at a rapid pace², including in the deep seas (e.g., deep-ocean fishing and seafloor mining)⁶ the need

² See Harris and Tuhumwire, 2016

(https://www.researchgate.net/profile/Peter_Harris14/publication/291958124_Chapter_1_Introduction_-_Planet_Oceans_and_Life/links/56a795c608ae860e025577cf.pdf)

³ See Halpern et al. 2012 (<https://www.nature.com/articles/nature11397>)

⁴ See Eassom et al. 2016

⁵ Pinsky et al. 2013 (<http://science.sciencemag.org/content/341/6151/1239>)

⁶ Ramirez-Llodra et al 2011 (<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022588>)

for better and more integrated planning of the use of the marine space and its resources is growing⁷⁸. Such efforts come with significant challenges given that human management of the seas is based on administrative and jurisdictional delineations (i.e. national waters of countries), while ecological processes do not respect such boundaries.

6. The relevance of the Law of the Sea

UNCLOS is a framework convention that includes provisions to address a number of different maritime activities, including shipping, mining, fishing, laying of cables and pipelines, marine scientific research and marine environmental protection.

Under the conditions established by the United Nations Convention on the Law of the Seas (UNCLOS) and other rules of international law, all coastal and land-locked States can exercise the freedom of the high seas,⁹ which comprise, *inter alia*:

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

The associated conditions include a general obligation of states to protect and preserve the marine environment¹⁰ and to cooperate on a global and regional basis, either directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with UNCLOS, for the protection and preservation of the marine environment.¹¹

a. A new Implementing Agreement for ABNJ (the BBNJ Process)

A new Implementing Agreement, under UNCLOS, is being negotiated through the United Nations. The agreement will focus on the conservation and sustainable use of biodiversity beyond national jurisdiction (BBNJ).

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

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

In the Rio Earth Summit outcome document, the “The Future We Want” importance of the conservation and sustainable use of marine BBNJ was recognised. Following the work done by the BBNJ Working Group, and the potential for increasing pressures in ABNJ, the UNGA adopted the BBNJ Working Group’s

⁷ Carneiro et al. 2017 (<http://nora.nerc.ac.uk/id/eprint/517721/>)

⁸ Baker et al. 2016 ()

⁹ Article 87 UNCLOS

¹⁰ Article 192 UNCLOS, and included in Part XII on Protection and Preservation of the Marine Environment

¹¹ Article 197 UNCLOS

recommendation in Resolution 69/292 ([A/RES/69/292](#)) and decided to develop a new implementing agreement under UNCLOS for the conservation and sustainable use of BBNJ. Since 2015, four Preparatory Committee meetings have been held to explore and provide recommendations to the General Assembly on the elements of a draft text for a new instrument. On the 24th December 2017, the UNGA adopted Resolution 79/249 to convene an intergovernmental conference to “consider the recommendations of the Preparatory Committee and to elaborate the text of an international legally binding instrument” under UNCLOS ([A/RES/79/249](#)). The conference will occur over four sessions between 2018 and 2020, with the first session commencing from the 4-17 September 2018.

7. Cross Sectoral Planning

Effective cross-sectoral area-based planning in ABNJ is fully reliant upon cooperation between relevant institutions.

There are a number of sectors potentially active in Areas Beyond National Jurisdiction (ABNJ) including fishing, shipping and cable laying. In addition to these, mining concessions have been leased in a number of locations although, to date, mining is at the exploration stage. All these sectors have individual frameworks in which they are active. Fishing is managed regionally through RFMOs, shipping is supported by various Conventions under the IMO and mining areas are leased through the ISA. The challenge is that coordination between these sectors is limited. The need for coordination comes from the possibility that actions from one sector, may compromise the ability of another to fulfil their potential. Outside the jurisdiction of any single State government, sectoral area-based management tools can only be implemented in ABNJ under an appropriate intergovernmental authority or instrument. While UNCLOS provides the overarching legal framework for activities in ABNJ, including specific implementing agreements that bestow a management mandate upon key sectoral authorities in ABNJ (i.e. RFMOs for straddling fish stocks and ISA for deep sea mining), it does not provide any provisions related to the implementation of cross-sectoral area-based planning. Effective area-based planning in ABNJ is therefore reliant upon the coordinated involvement of institutions who have a mandate to implement area-based management measures (rather than general measures, e.g. methods, quotas or targets) in ABNJ. However, institutions with a purely (scientific) advisory or coordinating role can play an important role in catalysing or facilitating relevant processes.

Activities could be more effectively coordinated with cross sectoral area-based planning.

Although the remoteness and difficulty of exploiting the resources located in ABNJ has historically contributed to maintain their preservation, recent shifts in technological capacity and market opportunities eased the capacity of humans to expand their interest in ABNJ. This increasing interest has resulted in the development of different human activities, which all have the potential to generate significant threats to the marine species and ecosystems of the high seas. Threats include the over exploitation of resources, habitat degradation, pollution, exploitation of mineral resources, climate change and climate engineering, ocean acidification, and new human activities. Because of these threats, MSP in ABNJ is increasingly needed to ensure the sustainable use of natural resources and the resilience of marine ecosystems in these areas.

Any efforts to undertake cross-sectoral area-based planning in ABNJ are likely to involve both global and regional legal instruments and institutions.

Currently, activities that are regulated through *global-scale* mandated area-based management tools in ABNJ are shipping (through the IMO), seabed mining (through the ISA). For both fisheries and environmental management there is no global-scale institution that has a mandate to establish area-based management tools, and ABNJ management is undertaken through regional instruments, namely the RFMO/As and, in some locations, the Regional Seas Conventions and Action Plans. Neither RFMOs nor Regional Seas Conventions and Action Plans have comprehensive global coverage in their regional organizations, and there remain large areas of ABNJ that are not under any sectoral management regime. In the case of Regional Seas Conventions and Action Plans, only some have the mandate to establish area-based planning measures in ABNJ.

Inter-agency cooperation could be strengthened at both national and regional levels.

With regard to establishing cross-sectoral cooperation, some institutions only respond to the general obligation to cooperate that is included in UNCLOS and their constituting agreements, while others have more specific cooperation mandates that are either included in their constituting agreements (e.g. IMO), or received by their members (e.g. IWC). Intergovernmental organizations are member-driven organizations but the same Member State will usually be represented by different government departments within the relevant intergovernmental organizations. Interviewees suggested that there is insufficient communication or integrated policy established between government departments. Consequently, very little demand for cross-sectoral engagement emerges from Member States.

8. Supporting regional cross sectoral planning in ABNJ

In order to undertake regional scale cross-sectoral planning in ABNJ, the following conditions are likely to provide a supportive context:

- **Objective:** A clear objective is needed for any regional initiative to undertake area-based planning in ABNJ, which should also determine the selection of the relevant stakeholders;
- **Stakeholder engagement:** All relevant stakeholders should be on board from the very beginning of any regional initiative, and collectively agree on the objective of the initiative;
- **Capacity:** Capacity will need to be strengthened at the national and regional level related to issues of ecological connectivity and the subsequent identification of common concerns for different stakeholders;
- **Policy development:** the further development of national and regional ocean policies can play an important role in providing a common understanding of the objectives of the region;
- **Identification of common issues:** Issues of common concern should be communicated from the perspective of the different stakeholders, thus making the point why it is necessary in some cases to collaborate in order to achieve an organization's mandate; and
- **National level communication:** Increasing communication at the national level between different government representatives and departments who attend the various meetings of the governing bodies of the intergovernmental organizations would support more joined up outcomes. A more coordinated approach at the national level is likely to result in more coordinated activities between regional or global intergovernmental organizations.

9. Next Steps

The Science to Policy workshop in Durban South Africa will provide an opportunity to learn more on the following topics:

- **Connectivity between EEZs and ABNJ;**
- **Case Studies of ABNJ planning from other Regions;**
- **Approaches for area-based planning (existing tools and potential for application of cross sectoral tools); and**
- **Capacity Assessment results – there will be an opportunity to guide future planned activities.**

Proposed Decisions

Decision CP9/7: Support to Implementation of Projects

To request Contracting Parties, the Global Environment Facility, Green Climate Fund, and other partners, as appropriate, to support projects on Sustainable fisheries management and biodiversity conservation of deep-sea living marine resources and ecosystems in the areas beyond national



jurisdiction by the Food and Agriculture Organization of the United Nations, and the United Nations Environment Programme.

Decision CP9/10: *Marine Spatial Planning for Blue and Ocean Economy*

To *urge* Contracting Parties, within the framework of UNCLOS, to cooperate with existing regional institutions on ocean governance and conservation of marine biodiversity in adjacent areas beyond national jurisdiction, to build and develop area based management tools such as marine spatial planning to promote blue economy pathways in the Western Indian Ocean Region.