The Inclusion of Fisheries in a New Internationally Legally Binding Instrument for the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction

By

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DISCLAIMER

The views expressed herein are those of the author and do not necessarily reflect the views of the Government of Seychelles, the United Nations, the Nippon Foundation of Japan or the World Maritime University.

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List of Acronyms

ABNJ: Areas Beyond National Jurisdiction

BBNJ: Biodiversity Beyond National Jurisdiction

CBD: Convention on Biological Diversity

COFI: FAO's Committee on Fisheries

DWFM: Distant Water Fishing Nation

EEZ: Exclusive Economic Zone

EFZ: Exclusive Fisheries Zone

EIA: Environment Impact Assessment

FAO: Food and Agriculture Organisation of the United Nations

FCA: FAO Compliance Agreement

IMO: International Maritime Organisation

IOTC: Indian Ocean Tuna Commission

IPOA: International Plan of Action

ISA: International Seabed Authority

ITLOS: International Tribunal for the Law of the Sea

IUU: Illegal Unreported and Unregulated

MGR: Marine Genetic Resources

MPA: Marine Protected Area

MSR: Marine Scientific Research

MSY: Maximum Sustainable Yield

OSPAR: The Convention for the Protection of the Marine Environment of the North-East Atlantic

RFB: Regional Fisheries Body

RFMO: Regional Fisheries Management Organisation

RSO: Regional Seas Organisation

SIDS: Small Island Developing States

SIOFA: South Indian Ocean Fisheries Agreement

SWIOFC: Southwest Indian Ocean Fisheries Commission

The Code: FAO Code of Conduct for Responsible Fisheries

UN: United Nations

UNCED: United Nations Conference on Environment and Development

UNCLOS: United Nations Convention on the Law of the Sea

UNCLOS 1: First United Nations Conference on the Law of the Sea

UNCLOS II: Second United Nations Conference on the Law of the Sea

UNEP: United Nations Environment Programme

UNFSA: United Nations Fish Stocks Agreement

UNGA: United Nations General Assembly

WSSD: World Summit on Sustainable Development

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Abstract

Millions of people rely on fish as a main source of protein, and fishing is the principal livelihood for millions of people around the world, supporting many economies, particularly in less developed countries. For hundreds of years, our oceans and its resources have been considered as resilient and inexhaustible. However, increasing fishing efforts together with unsustainable and destructive fishing practices, particularly over the last few decades are pushing many fish stocks to the point of collapse. According to FAO's 2016 State of Fisheries and Aquaculture Report, approximately 90 per cent of the world's fisheries are either overfished or fully fished. With that said, the damaging impacts of overfishing do not stop at the targeted fish species or at those species incidentally caught such as sea turtles and marine mammals. It goes further, impacting marine habitats and increasingly affecting entire marine ecosystems. It is well known that marine ecosystems are highly complex and interdependent and that the continuous degradation of ocean ecosystems could have serious environmental and socio-economic consequences.

As a way to better manage the world's fisheries, particularly high seas fisheries, the international community has generated a large body of binding and non-binding instruments ranging from UNCLOS, UNFSA and instruments under FAO. These instruments have attempted to address an array of problems associated with fisheries, and each is recognised for bringing some form of contribution towards the conservation, management and sustainable use of living marine resources and their ecosystems. Regardless of this, many argue that more must be done to improve the world's fisheries resources and general health of biodiversity, given their current status. On the other side of the coin, some are arguing that fisheries is already adequately regulated and the focus should be on ratification and implementation of the key instruments already in existence rather than the introduction of new ones. Regardless of this, the international community is once more around the table to discuss the development of a new internationally legally binding instrument, this time around with a focus on biological diversity of areas beyond national jurisdiction. With the large body of international fisheries instruments already in existence and with fisheries being the activity with the most impact on biodiversity, is there a place for it in this new instrument?

Introduction

The ocean is the lifeblood of planet Earth and humankind. It covers over two-thirds of our planet, makes up 97 per cent of all the water on the surface of the Earth and contains an estimated 90 per cent of its living biomass. The ocean connects the world's population and forms an important part of our natural and cultural heritage. The ocean ecosystem generates oxygen for every second breath we take, cushions the blow of climate change by absorbing up to 30 per cent of all anthropogenic carbon emissions released, plays a vital role in the water cycle and climate system and provides over a billion people with food.[1]

For hundreds of years humans have interacted with the ocean. The ocean not only feed and provide a livelihood for millions of people, but economies of many countries depend on it as it generates employment, is a valuable source of foreign currency and contributes substantially through tax revenues. Most importantly, the ocean and its various services are fundamental to human existence.

Until recently, the ocean has been thought to be resilient and its resources have always been thought to be inexhaustible. No one ever imagined that there might be a limit to the number of fish in the sea. The vastness of the ocean and its remoteness from most of our daily lives has played a significant role in the way humans have perceived it for centuries. However, the belief that those huge masses of water are too vast to fail is fast disappearing.

According to the Food and Agriculture Organisation of the United Nations (FAO), fish accounts for over 20 per cent of the intake of animal protein for over 3 billion people. [2] In Small Island Developing States (SIDS) and in less developed coastal States, this figure can be considerably higher. The importance of fish as a diet source is because fish is not only a good source of lean protein but it is also rich in essential micronutrients and minerals.

FAO estimates that the global total capture fishery production in 2014 was approximately 93 million tonnes with around 81 million tonnes coming from the ocean.[3] In addition to that, it

[1] Words of the President of the General Assembly, Peter Thomson talking to Oceans Deeply, an independent digital media project dedicated to covering ocean health, marking the Ocean Conference, June 2017.

[2] FAO, The State of World Fisheries and Aquaculture 2016, Rome, 2016, Pages 3-4.

[3] Ibid.

is estimated that up to 26 million tonnes of fish a year, or more than 15 per cent of the world's total capture fisheries output is unaccounted for through illegal, unreported and unregulated (IUU) fishing.[4] In light of this, estimates suggest that nearly 90 per cent of the of the world's fish stocks are fully exploited, overexploited or depleted, indicating that the world's marine capture fisheries is in a severely troubled state.

The essential cause of declining fish stocks is that there are too many vessels chasing too few fish. The health of many targeted stocks is in decline and bordering collapse, and regardless of this, fisheries subsidies offered by governments are still prevalent and investment in the fisheries sector in many countries continue to increase. Fishing vessels have increased in size and so have their capacity, harvesting and processing efficiency allowing them to access previously remote fish stocks.

Declining fish stocks has been linked to an increase in population which causes growth in the demand for food, medicine, recreation and economic activities. In 2030 it has been estimated that there will be approximately 8.3 billion people to feed and by 2050, this figure would have increased to about 9 billion.[5] As the population continues to grow, human pressures from human activities in the ocean also increases causing a continual decline in the health of the ocean.

In addition to declining marine living resources, the exploitation of other natural resources such as hydrocarbons together with activities such as the laying of pipelines and cables has damaged vulnerable ecosystems. Pollution from both land-based and marine-based sources is on the rise due to industrialisation and globalisation of world trade. Furthermore, ocean warming, acidification and anoxia are further undermining marine resilience as the oceans absorbs accelerating amount of anthropogenic carbon dioxide emissions. Human stresses on the world's oceans are greater than ever before and we are at risk of entering mass extinction of marine species.

Areas beyond national jurisdiction (ABNJ) cover over 64 per cent of the surface of our ocean. They comprise the water column beyond the 200 nautical mile exclusive economic zone (EEZ) of coastal States (or 12 nautical mile territorial sea if the coastal State has not declared

[4] Ibid, pg iii.

[5] Ibid, pg 2.

an EEZ or EFZ) known as the high seas but also include areas of the deep seabed, ocean floor and subsoil that are not subject to national jurisdiction.

Biological diversity loss in ABNJ has been attributed to a number of factors mostly linked with increasing pressures from human activities carried out in those areas. Overfishing and destructive fishing practices are widely recognised as the main threats to marine biodiversity in ABNJ.[6] The unsustainable exploitation of the ocean's resources has brought many stocks to the brink of collapse. Destructive fishing practices such as driftnet fishing, bottom trawling, bottom set longlining, ghost fishing and the conduct of IUU fishing is widespread and contributing to the depletion and destruction of marine biodiversity and ecosystems.[7] Such fishing practices lead to the destruction of important habitats and can eventually lead to the depletion and extinction of marine species, particularly endemic species that are often slow to mature and reproduce. Furthermore, during fishing activities both targeted species and non-target species are caught. Non-target species or bycatch such as sea birds, sharks, marine mammal, sea turtles and other species of fish are often caught and discarded at sea because either it is not wanted, has a lower economic value or is not allowed to keep. Unwanted catch is problematic because the animals often die before being thrown overboard and thus cannot reproduce impacting marine ecosystems.[8] Furthermore, bycatch has been associated with the slow rebuilding of overfished stocks and place protected species at further risk.

Other fishing practices such as bottom trawling is particularly detrimental as it not only diminishes target and non-target species on the deep seafloor which are often slow-growing thus vulnerable, but it creates noise when the fishing gear is being dragged across the sea floor, destroys habitats and features such as corals, sponges and seamounts, displaces large amount of sand and also causes the resuspension of sediments in the water column.

[6] Juan Manue Gómez-Robledo and Philip D. Burgess, Transmittal Letter dated 6 March 2006 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, A/61/65, United Nations General Assembly, 61st session, para 33.

[7] Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, Destructive Fishing Practices in the High Seas and Vulnerable Deepsea Ecosystems, Brussels, 2007.

[8] The vaquita, an endemic and critically endangered porpoise found only in the upper Gulf of Mexico. The Vaquita, an unintended bycatch has been driven near extinction due to intense fishing in the 1940s for totoaba, a large fish highly prized in China.

IUU fishing is another practice which severely threatens not only the marine biodiversity, but also the livelihoods of millions of people. In the context of marine biodiversity, IUU fishing is a major factor in overfishing. IUU fishing undermines sustainability of managed fisheries and adds substantial uncertainty to all aspects of evaluating the status of exploited stocks and ecosystems and effectiveness of management actions. Further to that, IUU fishing is highly likely to ignore any specific regulations implemented to protect vulnerable species and habitats and it often tends to focus on high value species that are also highly vulnerable to fishing putting such species at a higher risk of extinction.[9]

In light of the above, it is clear that conservation and management of biodiversity in marine areas beyond national jurisdiction is one of the biggest issues facing the international community at the present. The threats posed by uncontrolled or poorly managed users of these areas are leading to an increase in biodiversity loss and ecosystem alterations which consequently has substantial ecosystem and socio-economic impacts.[10] The impacts which are both direct and indirect on the ecosystem include, mortality of target and non target species as well as the killing of or injury to benthic species increasing their vulnerability to predators and in the long run affecting the predator-prey relationship, increased food availability of discarded fish for predators changing hunting patterns and loss of habitat as lost fishing gears destroys and disturbs the seafloor. [11]

Whereas such areas were once thought to be too vast to fail and that the living resources in those areas were infinite to be exploited free from regulations, it is now clear that stricter international legal instruments and institutions are essential for their survival.

[9] FAO, FAO Fisheries and Aquaculture Report, FAO/UNEP Expert Meeting on impacts of destructive fishing practices, unsustainable fishing, and illegal, unreported and unregulated (IUU) fishing on Marine Biodiversity and Habitats, Report No. 932, Rome, 25 September, 2009.

[10] Palitha T. B Kohana and Liesbeth Lijnzaad, Letter dated 5 May 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, A/69/82, United Nations General Assembly, 69st session, para 9.

[11] UN General Assembly, The Impacts of Fishing on Vulnerable Marine Ecosystems: Actions taken by States and Regional Fisheries Management Organizations and Arrangements to give effect to paragraphs 66 to 69 of General Assembly Resolution 59/25 on sustainable fisheries, regarding the impacts of fishing on vulnerable marine ecosystems, United Nations General Assembly, 61st Session, para 27.

Part I: The Evolution of the General Principles of High Seas Fisheries

Development of High Seas Fisheries

The history of the law of the sea has been dominated by a central and persistent theme: the competition between the exercise of governmental authority over the sea and the idea of the freedom of the seas. Based on this premise, international law governing the ocean has sought to balance those two notions. In doing so, two main theories have developed.

The first is that the high seas is common to all humankind, whether coastal or land-locked and open to use by all.[12] Therefore, no person or nation may validly seek to restrict others from such use by laying a claim of proprietorship over the sea. This notion is borne out by the belief that the geophysical nature of the ocean itself resists any claim of ownership over it. Such a view was championed by Dutch jurist, Hugo Grotius who believed in an open sea or mare liberum.[13] Mare Liberum was his famous piece written in 1609 to push forward the Dutch East India Company's agenda who had employed him to justify their efforts to control trade in the East Indies. According to Grotius, there should be freedom of the seas as it is impossible for any nation to effectively possess them.[14] They are res genitium and res extra commercium, that is to say they belong to all nations. As a consequence, nature does not give a right of appropriation to things that belong to everybody.[15] In summary Grotius' argument for an open high seas was based on two premises (1) no one can acquire property rights in a thing (res) if it cannot be appropriated (2) a thing (res) should be property of another if it might be exhausted if not carefully managed.[16]

The second notion promulgated by John Selden, which came as a challenge to Grotius' Mare Liberum, at the explicit request of King James I of England, seeks to restrict the use of the

[12] Reflected in Article 87 of United Nations Convention on the Law of the Sea, adopted December 10, 1982 in Montego Bay, Jamaica, coming into effect 16 November, 1994.

[13] Grotius Hugo; Edited by Scott, James; Brown; The Freedom of the Seas, or the Right Which Belongs to the Dutch to take part in the East Indian Trade, Oxford University Press, 1916, http://oll.libertyfund.org/titles/552.

[14] Grotius' position on freedom of the seas was arguably limited to the open sea i.e the modern day high seas and not land-locked seas, bays and coastal waters.

[15] S K Verma; An Introduction to Public International Law, Prentice Hall of India, India, 1998, pg 294.

[16]

sea by positing that the sea is amenable to ownership by persons or States. Thus, whoever may bring any part of the oceans under his dominion may validly restrict its use by others, challenging Grotius' argument of res communis seas. The reasoning behind this opposing view is because Grotius' concept invalidated England's extensive claims to waters surrounding her territories. The friction between these two ideas has, over the years been, the shaping rod of the modern law of the sea.

The freedom of the seas established itself as a fundamental principle to justify any use of the seas. This was due to the rise and dominance of the maritime powers and the decline of States which favoured the closed seas. The seas were the major means of communication and were as such essential to the maintenance of trade and, later, the control of colonies in many parts of the world such as Asia and Africa. In so far as the fishery resources of the sea were concerned, as long as those resources were believed to be inexhaustible,[17] no form of regulation or restriction upon the freedom of the seas could be justified, and so fishermen of all countries had free and open access to those resources beyond the relatively narrow limits of the coastal State's jurisdiction.

Thus freedom of fishing, as one of the freedoms of the seas, meant that no nation could validly assert jurisdiction over fishing activities beyond the narrow limits of their territorial sea, whatever the circumstances might be.[18][19] The fish were subject to the law of capture, i.e the title to them was vested in him who first reduced them to his possession.[20] Freedom of fishing also meant that there could be no limitation on the number of people or vessels, the fishing effort or amount of fish to be caught whatever the circumstances might be. In that light of maris communem usum omnibus ut aeri i.e the sea, like the air is common to all mankind, Vattel observed that:

> "It is manifest that the use of the open sea, which consists in navigation and fishing, is innocent and inexhaustible; that is, he who navigates, or fishes in it, does no injury to any one, and that the sea, in these two respects, is sufficient for

[17] Unlike rivers, streams and lakes which could become polluted or have their fisheries depleted, the sea was believed to be too vast for overuse.

[18] Later reflected in Article 2 of the High Seas Convention 1958.

[19] Freedom of the seas begged the question how close the high seas extended to the shore. The concept of territorial sea at that time was measured by the canon shot rule which was 3 nautical miles.

[20] M Dahmani; The Fisheries Regime of the Exclusive Economic Zone, Martinus Nijhoff Publishers, The Netherlands, 1987, pgs 1-2.

> all mankind; since, every one being able to find in their state of communion what was sufficient to supply their wants, to undertake to render themselves sole masters of them, and exclude all others, would be to deprive them, without reason, of the benefits of nature."[21]

With the above said, it is to be noted that the great majority of ocean fishing at that time occurred relatively close to the shore. The reason is because living marine resources tend to concentrate nearer to the coast along reefs and plateaus which provide rich food sources and protection for the marine life. Minimising the perils of the sea, together with slow developments in fishing gears and vessels capable of carrying out long fishing trips in open waters, fishing expeditions have been more active in nearshore waters.[22]

With the increase in fishing vessels by the early 1800s and changes in fishing methods, coastal States came to a realisation that the surrounding waters could now be seen as a source of economic wealth. As a source of economic wealth also came the need to maximise the use of those living resources to the exclusion of others and at the same time, the idea that the living resources of the sea was inexhaustible was slowly fading and the need to ensure their management and conservation more pressing.[23]

With the increase of steam powered ships in the late 1800's, fishing enterprises become more efficient as the fishing vessels could now spend longer periods of time at sea and go even further from the coast. Together with the developments in fishing gear this eventually led to more competition in the industry generating conflicts between states which eventually prompted the need for the development of fisheries agreement. For instance, Belgium, Britain, Denmark, France, Germany and the Netherlands to address the increasing conflicts in the North Sea concluded the 1882 Convention for Regulating the Police of the North Sea Fisheries. The Convention provided for a three nautical mile territorial sea limit, the registration of vessels of the contracting parties, the marking of vessels with the port of

[21] M D Vattel, The Law of Nations– Book I Ch. XXIII Sec. 281, accessed on http://www.constitution.org/vattel/vattel_01.htm.

[22] Global Ocean Commission, Improving accountability and performance in international fisheries management, Global Ocean Commission, November 2013, pg 1, accessed on http://www.globaloceancommission.org/wp-content/uploads/POP-9_Reform-of-Fisheries-Management_FINAL-1.pdf.

[23] T Pitcher, M Lam; Fish commoditization and the historical origins of catching fish for profit, Maritime Studies, Springer Berlin Heidelberg, February 2015, accessed on http://link.springer.com/article/10.1186%2Fs40152-014-0014-5#.

registry, the minimisation of interference among fishing operations in the same area and the monitoring of infractions.[24]

Eventually, overfishing began generating significant disputes between some coastal States that wished to safeguard offshore fisheries beyond the territorial sea and fishing states that sought to preserve the greatest area of ocean space as high seas subject to the freedom to fish.[25] The move towards fisheries protection was however more driven by their economic interest in fisheries rather than for the intrinsic value of conservation.

Freedom of fishing had two implications for the management of fisheries. First, coastal States as such did not have any right to the fisheries resources of the oceans beyond the narrow limit of their territorial seas. Secondly and most importantly, the system did not promote effective conservation of the living resources of the oceans. This is because fishing States were reluctant to adopt effective conservation strategies because it was in their short-term national interest not to do so.[26]

From the beginning of the 20th century, the need to adapt the traditional concept of the freedom of the seas, to the state of affairs created by the development of new techniques in the use and exploration of the sea, became quite clear. It was only logical that this freedom should come under attack once its premises were no longer valid. The battle between mare liberum, sovereignty and resource management needed to be addressed sooner rather than later.

Although there had been some earlier attempts in controlling the freedom of fishing, and recognition of the need for better conservation measures,[27] such freedom did not come however until UNCLOS 1. It was led by small and underdeveloped countries that brought to the conference a body of resentment towards the former colonial powers. To them the freedom of fishing benefited mainly those countries with the necessary capital and technology to invest in the fishing industry i.e the industrialised countries. For the fishermen

[24] Ibid.

[25] Bering Sea (Fur Seal) Arbitration (United States v. United Kingdom), 1893, International Environmental Law Reports, Vol.1, 1999, p. 43.

[26] Hey, Ellen (Ed); Developments in International Fisheries Law, Kluwer Law International, Netherlands, 1999, pgs 14-16.

[27] Such as President Harry S. Truman, President Truman's Proclamations on U.S. Policy Concerning Natural Resources of Sea Bed and Fisheries on High Seas.

of the technically underdeveloped countries, freedom of fishing was illusory because they had no practical possibility of making use of it.

The 1958 Convention on the Territorial Sea and the Contiguous Zone codified the customary position in relation to resource sovereignty in the territorial sea, which included unfettered control over fisheries resources, subject to no limitation on conservation.[28] The Continental Shelf Convention gave to coastal States rights over sedentary fisheries on the continental shelf, again accompanied by no duty of conservation.[29] The High Seas Convention affirmed the freedom of fishing as one of the high seas freedom, and imposed no limitations on fishing activities beyond the territorial sea, other than the vague stipulation that the freedom to fish must be exercised with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.[30] Nonetheless, at the Conference there was some awareness of overfishing and conflicts between coastal States and other fishing nations, and, in response, agreement was reached on a further convention.

The Conservation Convention was the first attempt by the international community to truly address the issue of conservation. The Convention was adopted at UNCLOS 1 and later became the source of articles 116-120 of UNCLOS. The Conservation Convention contained in its provisions the right for national of State parties to engage in fishing on the high seas subject to their rights and obligations under the treaty and taking into account the interests of coastal State in the process.[31] Paragraph 2 of the same article provides that all States have the duty to adopt, or to cooperate with other States in adopting, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. Emphasis was placed on the need for high seas fisheries to be conserved to ensure optimum sustainable yield, so as to ensure maximum supply of food and other marine products.[32] Article 4 of the Conservation Convention states that where the nationals of two or

[28] Articles 1 and 2, Convention on the Territorial Sea and Contiguous Zone, adopted 29 April 1958, Geneva, entered into force 10 September 1964, herein after referred to as the Territorial Sea Convention.

[29] Article 2, Convention on the Continental Shelf, adopted 29 April 1958, Geneva, entered into force 10 June 1964, herein after referred to as the Continental Shelf Convention.

[30] Article 2, Convention on the High Seas, adopted 29 April 1958, Geneva, entered into force 30 September 1962, herein after referred to as the High Seas Convention.

[31] Article 1, Convention on Fishing and the Conservation of the Living Resources of the High Seas, adopted 29 April 1958, Geneva, entered into force 20 March 1966, hereinafter referred to as the Conservation Convention.

[32] Article 2, Conservation Convention.

more countries are engaged in fishing of the same stocks, they shall enter into negotiations with a view to agreeing upon measures to conserve the living resources affected. The Convention did not however enter into force until 1966 and never attracted widespread ratification and as such never thought a success. With that, although the Convention did not deal with the requirement for States to cooperate though RFMOs expressly, the above articles formed the basis for the current regime.

UNCLOS I and the subsequent UNCLOS II were not able to forestall unilateral assertions of fisheries jurisdiction seawards of the territorial limit and there were still uncertainty revolving the distance of the territorial sea and fisheries zones. In the late 1940s, several Latin American States had made claims of a 200nm maritime zone whereby they claimed sovereign rights over the living and non-living resources. Iceland also extended its exclusive fisheries zone progressively form 3 to 4, to 12 and eventually to 50 which were refuted by Germany and the United Kingdom, making its way to the ICJ as the Fisheries Jurisdiction Case.[33] The ICJ held that a 12nm Exclusive Fisheries Zone could be claimed as it is consistent with international law. The court went on further to say that Iceland had preferential fishing rights beyond the 12nm to a non-specified distance on the basis that such rights of a coastal State arise when the intensification in the exploitation of fishery resources makes it imperative to introduce some system of catch-limitation and sharing of those resources so as to preserve the interests of their rational and economic exploitation.

With the implementation of the 200nm EEZ in the 1970s,[34] resulting in larger bodies of water falling within the jurisdiction of the coastal State, the need to negotiate new fisheries arrangements to protect their interests became even more dire.

[33]Fisheries Case, United Kingdom v Norway, Merits, Judgment, [1951] ICJ Rep 116, ICGJ 196 (ICJ 1951), 18th December 1951, International Court of Justice.

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[34] Ibid.

High Seas Fisheries Conservation and Management under the United Nations Convention on the Law of the Sea 1982

After years of negotiation, the United Nations Conventions on the Law of the Sea was finally adopted in 1982 as a package deal and came into effect on the 16 November 1994, 12 months after Guyana deposited the sixtieth instrument of ratification with the UN Secretary General according to Article 308(1) of the Convention. UNCLOS was the product of the Third Conference on the Law of the Sea which ran from 1973 to 1982 and was the first international instrument to provide a comprehensive framework on all aspects of oceans governance. Because of this holistic approach taken by UNCLOS, it is often referred to as the "Constitution of the oceans".

UNCLOS compared to the 1958 Conventions, provides a more comprehensive legal framework for regulating marine fishing activities based on three basic regimes; coastal State sovereignty,[35] coastal State sovereign rights[36] and flag State jurisdiction;[37] and six regimes related to stocks that occur in two or more maritime zones, stocks occurring in several EEZs,[38] straddling stocks,[39] highly migratory species,[40] marine mammals,[41] anadromous stocks[42] and catadromous[43] stocks.[44]

Under UNCLOS, the territorial sea limit was extended from three to twelve nautical miles from the coastal State's established baselines. In the territorial sea, the coastal States has sovereignty over all the resources subject to any treaty obligations, requirements under

[35] Articles 2(1), 49(1) and (2), UNCLOS.

[36] Articles 56(1)(a), 62, 77(4).

[37] Articles 87 and 116-120, UNCLOS.

[38] Article 63(1), UNCLOS.

[39] Article 63(2), UNCLOS.

[40] Articles 64(1), UNCLOS.

[41] Articles 65, UNCLOS.

[42] Article 66, UNCLOS.

[43] Article 67, UNCLOS.

[44] Hey, Ellen (Ed); Developments in International Fisheries Law, Kluwer Law International, Netherlands, 1999, pgs 19-26.

UNCLOS and other rules of international law.[45] In addition to extending the territorial sea, a new sui generis zone was also created called the Exlcusive Economic Zone (EEZ). Under UNCLOS, the EEZ which has a limit of 200 nautical miles from the State's established baseline is neither territorial sea nor high seas from a jurisdictional point of view. The EEZ regime revolutionised the management and conservation of living marine resources particularly fisheries as it brought a large proportion of marine space which was prior to UNCLOS on the high seas and governed by freedom of the high seas, under the exclusive jurisdiction of the coastal State.

While most of the world's commercial fishing takes place within the EEZ, the high seas remains equally important for the purposes of fishing, although arguably, UNCLOS did not sufficiently recognise its importance. As a consequence of the establishment of the EEZ, coastal States gained sovereign rights within that zone for the purpose of exploring, exploiting, conserving and managing the living and non-living resources found therein.[46] As a result of this, fishing vessels of distant fishing States therefore had to move their fishing operations outside this zone into the high seas if they wanted to continue fishing free of the coastal States' fisheries regulations. This is because unlike the EEZ, on the high seas fishing is in principle open to all States. Other than escaping the coastal States's fisheries regulations, high seas fishing was becoming increasingly appealing to distant water fishing States as many coastal stocks had also become overexploited. The high seas had valuable discrete fish stocks such as the Pantagonian Toothfish and also certain stocks that migrated between EEZs and the high seas such as tuna and billfish and therefore could be caught outside a coastal State's EEZ during that period of migration, feeding and breeding.

The high seas, as previously highlighted, is essentially characterised by the principle of freedom of the seas, and order in the high seas is ensured primarily by the flag State. UNCLOS maintains this principle inherited from early conventions and customary international law and recognises the freedom of fishing on the high seas, that is areas beyond coastal State's 200 nm limit, if a coastal State has declared one, as reflected in Article 87.
However, unlike Grotius' notion, the modern day freedom is not absolute and Article 87(2) qualifies it by stating that "these freedoms (which includes fishing) shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the

[45] Article 2, UNCLOS.

[46] Article 56(1)(a), UNCLOS

high seas, and also with due regard for the rights under this Convention with respect to activities in the Area". As mentioned above, Part VII of UNCLOS prescribes the basic rights and duties of States and their nationals with respect to high seas fishing activities.

Articles 116 to 120 prescribe the basic rights and duties of States when their nationals engage in high seas fishing. It lays down a duty on interested States to cooperate in the management and conservation of high seas fishery resources, which inter alia includes fish and making use, where appropriate, of international fisheries bodies. The aim of such management measures should be to maintain or restore populations of harvested species at level which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the special requirements of developing States and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards' (art 119(1)(a)).

Article 116 reiterates the freedom of high seas fishing stated in Article 87(1)(e) and goes on to say that all States have the right for their nationals to fish on the high seas subject to: (a) their treaty obligations (b) the rights and duties as well as the rights of coastal States provided for, inter alia in Article 63(2), and Articles 64 to 67 (c) the provisions of this section. This article, originally found in article 1 of the Conservation Convention[47] is believed to be an important provision as it also has the the ability of resolving disputes over fisheries between States. In the Fisheries Jurisdiction Case,[48] the ICJ declared that the regime of high seas fisheries moved from laissez-faire treatment of the living resources of the sea to the recognition of a duty to have due regard to the rights of other States and of the needs of conservation for the benefit of all. [49] Such treaty obligations, notably the FAO Instruments and UNFSA[50] will be addressed later.

[47] Conservation Convention.

[48] I.C.J. Reports 1974, at p. 31, para. 72; I.C.J. Reports 1974, at pp. 200-201, para. 64.

[49] S Borg, The Conservation of Marine Living Resources under International Law, in IMLI Manual on International Law, Edited by Attard, Fitzmaurice Martinez, Volume 1, Oxford University Press, 2014, pg 33.

[50] 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, adopted 4 December 1995, New York, entered into force 11 December 2001, herein after referred to as UNFSA.

States are also expected to form or join regional or subregional agreements to manage and conserve stocks occurring between more than one EEZ or between EEZs and the high seas. This is to ensure that not only the high seas stocks are properly managed but that the rights of the coastal State are also taken into account. In essence, this would be given effect by joining Regional Fisheries Management Organisations and Arrangement (RFMO/As) as reflected in Articles 63(2), 117 and 118.

Article 117 imposes an obligation on all States to take or to cooperate with other States in taking such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas. Article 118 further obliges States to cooperate in the conservation and management of living resources when their nationals harvest the same species or different species in the same area of the high seas. From that, discretion is however left to the States to work out on the way to attain these conservation measures by acting either unilaterally or multilaterally through an RFMO.

In addition to Articles 116 to 120, it is also important to also highlight certain other articles which deals with certain specific stocks which are commonly fished on the high seas notably the straddling fish stocks and the migratory fish stocks. For the purpose of this paper, marine mammals, anadromous and catadromous stocks will not be considered. The aforementioned stocks occur both in coastal States' EEZ and the high seas and to be able to effectively conserve and manage such stocks, a holistic approach must be taken. Article 63(2) deals with straddling fish stocks (the term is however not expressly used in the convention), states that where the same stocks of associated species occur both within the EEZ of two or more coastal States or both within the EEZ and in an area beyond and adjacent to it (high seas) the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate subregional or regional organisations to agree upon the measures necessary for the conservation of these stocks in the adjacent area. In other words, as far as this article relates to high seas fishing, if stocks straddle between one or more EEZ and the high seas, the coastal State(s) and other States fishing for that stock, such as distant water fishing States, should cooperate to establish subregional or regional organisations to manage the stocks within the high seas.

Article 64 on the other hand deals with highly migratory species[51] and states that coastal States and other States whose nationals fish in the region for highly migratory fish species shall cooperate directly or through appropriate internatoional organisations with a view to ensuring conservation and promoting the objective of optimum utilisation of such species throughout the region, both within and beyond the EEZ. In regions for which no appropriate international organisations exists, the coastal State and other States whose nationals harvest these species in the region shall cooperate to establish such an organisation and participate in its work. Comparing the language of Article 64 to Article 63, it appears that unlike Article 63, under Article 64 there is an obligation for coastal States and other States that fish in the different zones to cooperate in the conservation and optimum use of these species.

States obligations with respect to the protection and preservation of high seas living resources in areas beyond national jurisdiction are also contained in certain provisions of Part XII of UNCLOS. Although this is highly contentious, Article 192 places an obligation on States to protect and preserve the marine environment. Article 194(5) further expands this provision by stating that States should also take necessary measures to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.[52] Although this Article is entitled "Measures to prevent, reduce and control pollution of the marine environment" there are arguments stating that this duty to protect the marine environment and marine life can also extend to fisheries. This would be the case if a broad interpretation of the term pollution is taken and as such, fishing practices such as bottom trawling on the benthic environment could arguably fall within this definition.[53] Whether this provision can be used to supplement the other UNCLOS provisions on fisheries or not, fact remains that States are under a general obligation to protect and preserve the marine environment and Article 197 expands on this by placing States under a duty to cooperate on a global and where appropriate a regional basis and through competent organisations to develop additional rules and standards as necessary to protect and preserve the marine environment.

[51] Highly migratory species is similarly not technically defined in UNCLOS, but a list of species falling in that category is provided in Annex 1 of the Convention and includes tuna and tuna-like species.

[52] Articles 192, 194(5), UNCLOS.

[53] Yoshinobu Takei, Filling Regulatory Gaps in High-Seas Fisheries: Discrete High Seas Fish Stocks, Deep-Sea Fisheries and Vulnerable Marine Ecosystems, Martinus Nijhoff Publishers, 2013, pgs 79-81.

Post UNCLOS Developments: The United Nations Fish Stocks Agreement (UNFSA), 1995

Although UNCLOS is considered the most comprehensive international agreement on oceans, codifying long-standing customary law, delineating jurisdictional zones and with extensive provisions on the conservation and management of resources, both living and non-living, it however fell short of specifying measures to deal with the conservation and management of living resources in areas beyond national jurisdiction, which was being subjected to increasing pressures particularly to fishing.

In light of this, it was clear that the conservation and management of such resources particularly the straddling and highly migratory fish stocks had been inadequately addressed and that these stocks were under increasing threat of over-exploitation. Although UNCLOS through its articles 63, 64 and 116 to 120 was undoubtedly an improvement over the previous international instruments relating to high seas fisheries, gaps in the international framework governing transboundary fish stocks were of increasing concern to the international community linked to changes in fishing gears, efficiency of fishing vessels and the poor conservation status of many of those stocks.

As a result of this, 10 years after UNCLOS was adopted, Agenda 21 of the United Nations Conference on Environment and Development in 1992 was adopted by more than 178 Governments.[54] Agenda 21 highlighted that the management of high seas fisheries, including the adoption, monitoring and enforcement of effective conservation measures were inadequate in many areas and that some of the resources were over-utilised. As such, it was felt that cooperation through bilateral, regional, sub-regional and global levels was essential for the conservation and management of those stocks. To be able to achieve this, it was recommended that States should convene an intergovernmental conference under the United

[54] Agenda 21 is a non-binding programme for sustainable development managed by the United Nations. It is to be implemented globally, nationally and locally by the relevant institutions. Chapter 17 of Agenda 21 is devoted to "Protection of oceans, all kinds of seas, including enclosed and semi-closed seas and coastal areas, and the protection, rational use and development of their living resources. Section C of this chapter deals specifically with the sustainable use and conservation of marine living resources of the high seas, accessed on https://sustainabledevelopment.un.org/outcomedocuments/agenda21

Nations auspices to discuss ways to effectively implement the provisions of UNCLOS relating to those species.[55]

Based on the recommendations of paragraph 17.50 of Agenda 21 and pursuant to resolution 47/192 of the General Assembly, the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks was convened in 1993. It completed its work in 1995 with the adoption of the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the UNFSA). The UNFSA entered into force on 21 December 2001 and currently has 86 Parties, including the European Union and aims at fortifying the UNCLOS provisions regarding the conservation and management of straddling and highly migratory fish stocks. It is considered to be the most important legally binding global instrument to be adopted for the conservation and management of fishery resources since the adoption of the UNCLOS in 1982.[56]

UNFSA builds on articles 63 and 64 together with Part VII of UNCLOS (Articles 116 to 120) emphasising that States should cooperate to ensure conservation and promote the optimum utilisation of straddling and highly migratory fish species both within coastal States' EEZ and in areas beyond national jurisdiction. This is because as those stocks are transboundary in nature, occurring both within coastal States' EEZ and the high seas, there is a requirement for the measures adopted to be compatible both within the EEZ and the high seas so as not to undermine its effectiveness.[57] Below are some of the key features of the Agreement;

The agreement is based upon fundamental principles contained in Part II which requires States to adopt and apply conservation and management measures to ensure the long-term sustainability and optimum utilisation of straddling and highly migratory fish stocks. States in adopting such measures must ensure that the measures are based on the best scientific evidence available. They must also adopt ecosystem-based approaches by ensuring that the

[55] United Nations, Report of the United Nations Conference on Environment and Development, Conference on Environment and Development, 13 August 1992, Rio de Janeiro,

[56] Summary of the Eighth Round of Informal Consultations of State Parties to the UN Fish Stocks Agreement, Earth Negotiations Bulletin, 2009, http://www.iisd.ca/vol07/enb0764e.html.

[57] Article 7, UNFSA.

measures adopted also take into account the effect of fishing activities on species belonging to the same ecosystem or dependent on the target stocks. States must also use selective, environmentally safe and cost effective fishing gears and techniques so as to reduce overfishing, pollution, bycatch and discards so as to minimise impacts on marine biodiversity and the marine environment.[58] In line with the above, a precautionary approach is also to be taken when adopting fisheries management measures. What this means is that in the absence of statistics and scientific information or inadequate statistics and scientific information, States should not use this lack of information on the fishery as a reason not to take conservation measures. In that respect, it is important to highlight that UNFSA has broadened the scope of fisheries management by also including protection of the marine environment in its provisions. This places States under a secondary duty to take into consideration and adopt measures to conserve marine biodiversity other than the targeted species living within the same ecosystem as the targeted species.

UNFSA also contains detailed provisions on the duty to cooperate and unlike UNCLOS, elaborates the manner in which this duty is to be given effect. UNFSA provides that States are required to give effect to their duty to cooperate by becoming members of relevant RFMOs.[59] It goes on to say that where no subregional or regional fisheries management organisation or arrangement exists to conserve a straddling or highly migratory fish stock, States shall cooperate to establish such an organisation.[60] However, UNFSA provides that this duty cannot be discharged by States merely through the creation of an RFMO. It requires that States not only become members of RFMOs, but also that they participate in and respect the conservation measures imposed by the RFMO concerned.[61] This requirement applies to members of RFMOs and non-members alike and establishes that where a State persistently fails to comply with the measures, it will be in breach of the duty to cooperate. Furthermore, only member States and States that have agreed to apply the RFMO's conservation and management measures shall have access to the fishery resources to which those measures apply.[62] In essence, non-State members and those not complying with the RFMO's measures are to be excluded from the fishery.

[58] Ibid, Article 5.

[59] Ibid, Article 8.

[60] Article 8(5), UNFSA.

[61] Ibid, Article 8(6).

[62] Ibid, Article 8(4).

Further to the above, the duties of flag States are also addressed and the agreement places a duty on them to ensure that they exercise appropriate level of supervision and control over the vessels flying their flag and that those vessels are not engaging in activities that undermines the effectiveness of the measures adopted by the relevant RFMO.[63] In the event of non-compliance, flag States are under a duty to take appropriate actions against those vessels.[64] UNFSA also sets out an improved regional cooperation in high seas enforcement. Parties to UNFSA which are also members of an RFMO can use duly authorised inspectors to board and inspect fishing vessels flying the flag pf another party to the agreement. Such boarding should however take place according to established procedures by the RFMO.[65] To further ensure compliance with the RFMO's conservation and management measures, Port States are also placed under a duty to promote the effectiveness of such measures by inspecting the catch record, fishing gears and other documents when vessels voluntarily enter its port.

It is clear from these provisions that RFMOs are meant to be the principle vehicle for the conservation and management of high seas fisheries and UNFSA therefore seeks to ensure that the governance frameworks established are used, and in cases where they do not exist, then they are established according to a set of minimum standards. There are currently approximately 53 regional and subregional bodies or arrangements operating worldwide, with diverse mandates, structures and functions with about half established since the adoption of UNCLOS.[66] There are significant differences between those bodies established under the FAO Constitution[67] and those created under international agreements between two or more States with the most prominent one being the ability to adopt binding conservation and management measures compared to those that are only able to provide conservation and management advice to its member States.

[63] Ibid, Article 18.

[64] Ibid, Article 20.

[65] Ibid, Article 21.

[66] FAO, Regional Fishery Bodies (RFB) - Web Site. Regional Fishery Bodies (RFB). FI Institutional Websites. In: FAO Fisheries and Aquaculture Department [online]. Rome. Updated 21 April 2017. [Cited 21 August 2017]. http://www.fao.org/fishery/rfb/en

[67] There are currently 11 such bodies.

The FAO's Instruments and Other Relevant Instruments

After UNCLOS was adopted in 1982, the rate of development of global instruments impacting on fisheries has significantly increased. Since the early 1990s, after the 1992 UNCED a number of international fisheries instruments, both binding and non-binding have been generated at an attempt to address the issues surrounding fisheries management particularly high seas fisheries. These instruments, some spearheaded by FAO aims at closing gaps and strengthening global fisheries management.

Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High seas 1993

The FCA,[68] negotiated quickly in the aftermath of UNCED, provides an instrument for countries to deter the reflagging of fishing vessels by their nationals as a means of avoiding compliance with applicable conservation and management rules for fishing activities on the high seas.[69] Improved monitoring, control and enforcement by flag States on its vessels is one of the main purposes of the FCA, which came into force in 2003. It was aimed mainly at States with vessel registries whose vessels fished on the high seas. Because the freedom of fishing on the high seas is granted to States, and nationals have to seek authorisation from their States to exercise such freedom, the instrument was introduced to ensure that vessels flying the flags of their respective States were conducting fishing activities in a manner consistent with international and management measures so as to ensure sustainable fisheries.[70] The primary obligation on flag State is to exercise control over its vessels and to provide information to a global record of fishing vessels. The raison d'être behind this binding instrument was to circumvent the issue of international fisheries regulations by re-flagging vessels to flag of States that are unable or unwilling to enforce such conservation and management measures.[71] As such, it was hoped that the FCA would solve the problem of reflagging of vessels which is a key mechanism through which IUU fishing operations are

[68] Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High seas, adopted on the 24 November 1993, Rome, Came into force 24 April 2003.

[69] W Edeson, Fisheries and Aquaculture topics: FAO Compliance Agreement-Topics Fact Sheets In, FAO Fisheries and Aquaculture Department, FAO, Rome, 27 May 2005, http://www.fao.org/fishery/topic/14766/en.

[70] Ibid.

[71] Ibid.

carried out. The FCA specifies measures that flag States must implement to ensure that their vessels do not undermine the conservation and management measures of RFMOs. It provides that flag States must take such measures as may be necessary to ensure that fishing vessels entitled to fly their flag comply with the regulatory authority of RFMOs. The FCA also requires Parties to cooperate in the implementation of the agreement, particularly with regards to information sharing.

The Code of Conduct for Responsible Fisheries 1995

The Code of Conduct for Responsible Fisheries (the Code)[72] endorsed by FAO's Committee on Fisheries, adopted in 1995 was negotiated at the same time as the UN Fish Stocks Agreement and, in fact, certain formulations of the Code reflect the outcome of the negotiations at the UNFSA. The Code, however, compared to the UNFSA is far more encompassing. Because it is voluntary in nature, it has been able to cover much more than could have possibly been included in a legally binding instrument such as the UNFSA. Although the Code is a non-binding instrument, many of its provisions reflect general principles of international fisheries law and as such have acquired status of customary international law.[73]

The Code has the main purpose of facilitating structural adjustment to ensure that fisheries and aquaculture are developed in a comprehensive and balanced manner under the concept of responsible fisheries. This concept promotes the long-term sustainable utilization of fishery resources in harmony with the environment and the use of capture and aquaculture practices that are not harmful to ecosystems, resources or their quality.[74]

The Code has global coverage and applies to all States and fishing entities, regional, subregional and global organisations and all persons concerned with the conservation and management of fisheries resources both within and beyond zones of national jurisdiction. Furthermore, the Code addresses a wide range of pressing fishery issues such as overcapacity of the global fishing fleet, inadequate flag State control, the inadequate provision of fishery

[72] The Code of Conduct for Responsible Fisheries, adopted in 1995, Rome.

[73] Rolf Willmann, International Instruments for Managing Fisheries in the Indian Ocean, FAO, 2001, pgs 19-22.

[74] Ibid.

data to both flag States and coastal States for fisheries management, and trade restrictions intended to achieve environmental protection.[75]

The articles of the Code cover a wide range of issues facing modern fisheries conservation and management. The precautionary approach is included and specifically related to those fishing practices that are particularly damaging to the environment. The essence of the Code is best captured in its article 6 which states that "the right to fish carries with it the obligation to do so in a responsible manner so as to ensure effective conservation and management of the living aquatic resources". The Code, as do other modern international fisheries instruments, places high priority on the role of RFBs in providing the mechanism for establishing a responsible international fisheries regime.[76] To support the implementation of the Code, FAO later released a series of technical guidelines and international plans of action.

The International Plans of Actions (IPOAs)

FAO has sought to address a number of other important threats to sustainable fisheries by a series of non-binding instruments called IPOA. At its 23rd session in 1999, the Committee on Fisheries adopted three IPOAs aiming at: reduction of incidental catch of seabirds in longline fisheries; conservation and management of sharks; and management of fishing capacity. Subsequently, in 2001 at its 24th session, COFI adopted the IPOA to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. All four IPOAs are voluntary in nature and have been elaborated within the framework of the Code of Conduct calling for greater regional and international cooperation with respect to research and development; situation assessments; exchange of relevant data and information through appropriate channels including regional fisheries management organizations (RFMOs) and through FAO; and education, training and public awareness creation. In applying the IPOAs, States are asked, where appropriate, to develop a national plan of action. Similarly, RFMOs are requested to develop plans of action for their area of competence. As all the IPOAs and NPOAs are in furtherance of implementing the Code, reporting on their progress at

[75] Ibid.

[76] Ibid.

international level has been made an integral part of countries' regular biennial reporting to FAO on their implementation of the Code of Conduct.[77]

United Nations Resolutions on Sustainable Fisheries

The international community recognising the negative impacts of large-scale pelagic driftnets on target and non-target species of living marine resources through the UNGA adopted Resolution 46/215 which imposed a global moratorium on large-scale pelagic driftnets.[78] The UNGA Resolution called on States to reduce large-scale driftnet fishing efforts by 50 per cent and to ensure that such fishing practices are not carried out on the high seas and enclosed and semi-enclosed seas. The issue of large-scale pelagic driftnet fisheries has been also tackled in subsequent UNGA resolutions on sustainable fisheries.[79]

Since 2003, the UNGA has been adopting resolutions on sustainable fisheries which contain provisions on a number of issues such as overfishing, flag State control and IUU fishing. These resolutions support the other fisheries instruments such as UNFSA and the Code of Conduct and stresses the importance of principles and standards established by those instruments. For instance, some resolutions have supported measures adopted under the Code of Conduct, the Compliance Agreement and UNFSA such as effective control over nationals, monitoring and control of transhipments and intergovernmental cooperation.[80] In addition to these, the UNGA has adopted other resolutions on responsible fisheries in the

[77] FAO, Implementation of the 1995 FAO Code of Conduct for Responsible Fisheries - Web site. International Plans of Action, FAO Fisheries and Aquaculture Department, Rome. Updated 18 April 2016.

[78] A/RES/46/215 - Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas, 1991.

[79]A/RES/69/109 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2014.

[80] see A/RES/58/14 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2003.

marine ecosystem particularly on the impact of bottom fisheries on vulnerable marine ecosystems and the long-term sustainability of deep sea stocks.[81]

Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem 2001

The Reykjacvik Declaration, the product of a conference organised by the Republic of Iceland and FAO and co-sponsored by Norway focused on the issue of introducing more ecosystem considerations into fisheries management and at the same time recognising that fisheries have significant impacts on the marine ecosystem and that those same ecosystems also impact the status and productivity of fishery resources. At the conclusion of that Conference, the 2001 Reykjavik Declaration was issued. It declared the intentions of the signatory countries to work collectively towards incorporating ecosystem considerations into fisheries management. The Reykjavik Declaration also requested FAO to develop guidelines for the inclusion of ecosystem considerations. In 2003 FAO published a set of technical guidelines for the EAF within the context of the 1995 FAO Code of Conduct[82]

Johannesburg Plan of Implementation 2002

The Plan of Implementation adopted by the World Summit of Sustainable Development (WSSD) in South Africa, is a political declaration and a plan of implementation addressing sustainable development building on the achievements made since UNCED. In relation to fisheries, the Declaration recognises the continuous depletion of fish stocks and loss of biodiversity as part of environmental degradation. The Plan of Implementation did not propose new approaches but sought to consolidate and reinforce the implementation of existing instruments and setting deadlines for the achievement of important targets such as the application of the ecosystem approach and the maintenance and restoration of stocks to

[81] A/RES/61/105 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2006.

[82] KL Cochrane, DJ Doulman, The rising tide of fisheries instruments and the struggle to keep afloat. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, pgs 4-5.

levels that can produce maximum sustainable yield. In essence, the Plan urges States to ratify or accede and to effectively implement the relevant international and regional instruments.[83]

[83] M. A. Palma, M. Tsmenyi and W. Edeson, Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing, Martinus Nijhoff Publishers, Leiden, 2010, pg 81.

Modern High Seas Fisheries Governance-A Regional Approach

Since the adoption of UNCLOS, international law has recognized the importance of regional cooperation as an important tool in the conservation and management of marine biodiversity. UNFSA went further by placing RFMOs and arrangements at the heart of international fisheries management. RFMOs are part of the wider cooperating mechanism of Regional Fisheries Bodies. RFMOs compared to other regional bodies which often have only an advisory role, have a management mandate and can amongst other things, adopt fisheries conservation and management measures that are binding on its member.[84] RFMOs were set up with the principal goal of facilitating cooperation between countries, with a common interest in the management of fish stocks, notably shared stocks. With the development of the UNFSA and the FAO instruments such as the Compliance Agreement which amplified the role of RFMOs placing them at the heart of international fisheries management, the international community felt the need to strengthen this role.[85] It was hoped that a multilateral set of rules which created a stronger legal basis for such bodies to manage the stocks in areas under their jurisdictions, even with regards to non-member States, would rescue the bulk of the world's fisheries from the continuous decline and possible extinction.

There are currently approximately 17 RFMOs responsible for the world's fisheries governance. Some have specific mandates and manage single species while others are broader in scope managing multiple species. Although RFMO coverage is now more widespread both in area of competence and species, the current state of affairs remains bleak; high seas fisheries continue to decline. According to the FAO's Report on the State of World Fisheries and Aquaculture 2016 nearly 31.4 per cent of global fish stocks are estimated as overfished and a further 58.1 per cent fully fished.[86]

The Indian Ocean is the third largest of the earth's five oceans. It is bounded to the west by Africa, to the north by Asia, to the east by Australia and the Australasian islands and to the south by the Southern Ocean. As experienced in other parts of the world, the Indian Ocean

[84] Regional Fishery Bodies (RFB) - Web Site. What are Regional Fishery Bodies (RFBs)?.FAO Institutional Websites. In: FAO Fisheries and Aquaculture Department, Rome. Updated 17 October 2013. http://www.fao.org/fishery/topic/16800/en

[85] OECD, Strengthening Regional Fisheries Management Organisations, OECD, 2009, pg 11, http://browse.oecdbookshop.org/oecd/pdfs/product/5309031e.pdf.

[86] FAO, 2016 The State of World Fisheries and Aquaculture Report, FAO, Rome, 2016, pgs5-6.

also witnessed an increase in capture fisheries. Between 1950 and 2010, catches increased from 861,000 tones to 11.3 million tonnes. In the Western Indian Ocean alone, in 2013 fish landing was at 4.6 million tonnes[87]. Although globally the majority of catch is taken from the EEZ of coastal States, estimated at 90 per cent, in the Indian Ocean this figure is significantly lower. In 2003, high seas catches in the Western Indian Ocean was around 39 per cent.[88] This figure clearly shows the importance of high seas fisheries in the region.

Within the Indian Ocean, there are currently three bodies mandated to deal with fisheries resources; the Indian Ocean Tuna Commission (IOTC), the South West Indian Ocean Fisheries Commission (SWIOFC) and the Southern Indian Ocean Fisheries Agreement (SIOFA).

The Indian Ocean Commission

Tuna fisheries in the Indian Ocean is the second largest in the world. Tuna is highly migratory and its management is complicated because these species migrate thousands of miles across oceans and international boundaries and are fished by many nations. Effective conservation and management therefore requires international cooperation as well as strong domestic management to ensure the viability of the species. As a consequence of this it was evident that the long-term institutional arrangements for the management and regulation of tuna fishing in the region needed to be addressed. [89]

IOTC is an intergovernmental organisation established in 1993 under Article XIV of the FAO Constitution and came into effect in 1996.[90] It has the responsibility of managing and conserving the highly migratory tuna and tuna-like species (Table 1) in the Indian Ocean and

[87] Ibid, pg 44.

[88] Alex G O Elferink, The Indian Ocean and the Law of the Sea: A work in Progress, in The Oxford Handbook of Law of the Sea, Edited by Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens, Oxford, 2015, pgs 701-722

[89] IOTC-PRIOTC02 2016, Report of the 2nd IOTC Performance Review, Seychelles 2-6 February & 14-18 December 2015, IOTC-2016-PRIOTC02-R[E].

[90] Agreement for the Establishment of the Indian Ocean Tuna Commission, adopted by the FAO Council, 25 November 1993.

adjacent seas, notably FAO areas 51 and 57 (Figure 1).[91] The Commission which is located in Victoria, Seychelles has as its main purpose, the promotion of cooperation among its Members with a view to ensuring, through appropriate management measures, the conservation and optimum utilisation of stocks covered by the Agreement and encouraging sustainable development of fisheries.[92] It is to be highlighted that such measures should be based amongst other things on best available scientific evidence, as stipulated in Article V(2)(c) of the Agreement.

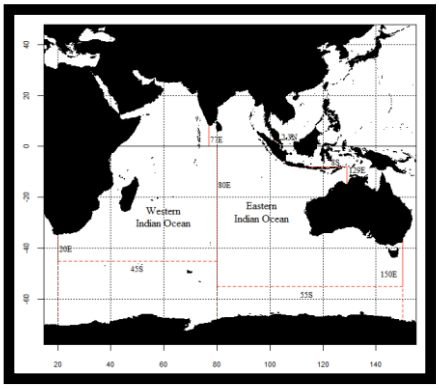

Figure 1: IOTC's Area of Competence

English Name	Scientific Name
Yellowfin Tuna	Thunnus albacares
Skipjack	Katsuwonus pelamis
Bigeye tuna	Thunnus obesus
Albacore tuna	Thunnus alalunga
Southern bluefin tuna	Thunnus maccoyii
Longtail tuna	Thunnus tonggol
Kawakawa	Euthynnus affinis
Frigate tuna	Auxis thazard
Bullet tuna	Auxis rochei

[91] Competence: Area & Species, IOTC, http://www.iotc.org/about-iotc/competence.

[92] Article V(1), IOTC Agreement.

English Name	Scientific Name
Narrow barred Spanish mackerel	Scomberomorus commerson
Indo-Pacific king mackerel	Scomberomorus guttatus
Blue Marlin	Makaira nigricans
Black Marlin	Makaira indica
Striped Marlin	Tetrapturus audax
Indo-Pacific sailfish	Istiophorus platypterus
Swordfish	Xiphias gladius

Table 1: Species managed by IOTC

Membership to the IOTC is open to Indian Ocean coastal States and to States or organisations which are members of the UN or one of its specialised agencies and are fishing for tunas DWFN as its members.

The Commission currently has 32 full members and 5 cooperating non-contracting parties who are not members of the IOTC.[93] Decisions at the Commission are generally reached through consensus by form of resolutions or recommendations. Resolutions are binding on the Members, unless there is a specific objection on the part of a Member, and require a two-thirds majority of Members present and voting to adopt them.[94] Recommendations are slightly different in that they are not binding on the Members and rely on voluntary implementation. The Commission may, by a simple majority of its Members present and voting, adopt Recommendations concerning conservation and management of the stocks for furthering the objectives of the IOTC Agreement.[95]

South West Indian Ocean Fisheries Commission (SWIOFC)

[93] Structure of the Commission, IOTC, http://www.iotc.org/about-iotc/structure-commission.

[94] Article IX(1), IOTC Agreement.

[95] Compendium of Active Conservation and Management Measures for the Indian Ocean Tuna Commission, IOTC, October 2014, pg 5, http://www.iotc.org/cmms.

Unlike the IOTC, the SWIOFC is an RFB established in 2004 by Resolution 1/127 of the FAO Council under Article VI(1) of the FAO Constitution with the objective of promoting the sustainable utilisation of the living marine resources of the South West Indian Ocean region, by the proper management and development of the living marine resources, and to address common problems of fisheries management and development faced by its members without prejudice to the sovereign rights of the coastal States. SWIOFC currently has 12 members and according to its rules of procedure, membership is limited to members of FAO who are coastal States and whose territories are situated wholly or partly within the area of competence of the Commission. The area of competence of the Commission is all the waters of the South West Indian Ocean within the national jurisdiction of coastal States, being all waters of the Indian Ocean bounded by a line drawn as follows: from a point on the high water mark on the East African coast at latitude 10° 00 N, thence due east along this parallel to the longitude 65°00 E, thence due south along this meridian to the equator, thence due east along this parallel to the longitude 80° 00 E, thence due south along this meridian to a parallel 45° 00 S, thence due west along this parallel to the longitude 30° 00 E, thence due north along this meridian to the coast of the African Continent. (Figure 2) As such, compared to other regional fisheries bodies in the region, SWIOFC deals exclusively with fisheries resources within national jurisdiction i.e EEZ of coastal States in the region particularly in FAO fishing area 51.

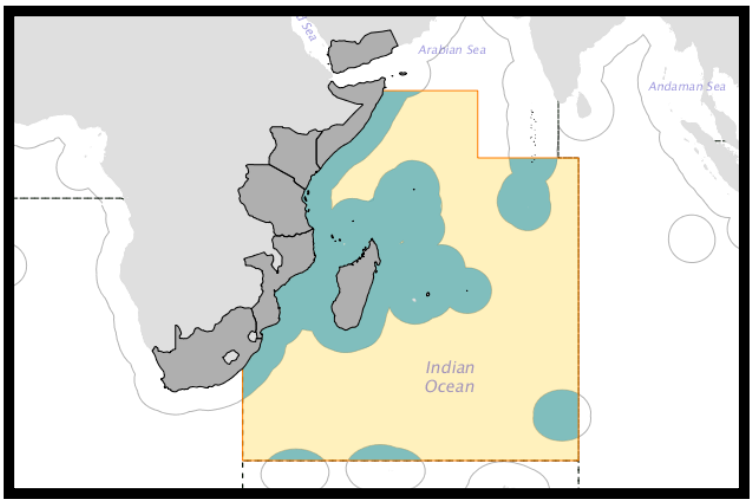

Figure 2: Area of Competence of SWIOFC

According to its statutes, the mandated stock of SWIOFC covers all living marine resources but without prejudice to the management responsibilities and authority of other competent fisheries and other living marine resources management organisations and arrangements in its area of competence. Although the Commission's mandate covers all living marine resources, the Scientific Committee of the Commission in its second meeting decided to focus on 8 species groups which they identified due to their regional distribution, assessment status and economic importance and include: spiny and rock lobsters, coastal tunas and related species, penaeid shrimps, sharks, slope water snappers, octopus, sea cucumber and bivalve molluscs. In addition to the focus groups, they have also 3 non-focus groups which include small pelagics, demersal fish and reef fish. Based on the aforementioned species, coastal States are required to pay special attention when making their national assessements and their reports should be presented at every Scientific Committee meeting. [96] It is important to note that compared to the IOTC, the SWIOFC only has an advisory role and cannot adopt binding management and conservation measures.

Southern Indian Ocean Fisheries Agreement (SIOFA)

SIOFA unlike the two other bodies mentioned above was established outside the FAO framework in 2006 and came into force in 2012 and has its headquarters based in La Reunion (French overseas territory). SIOFA came as a response to increasing fishing pressure in the

[96] FAO, Report of the Performance Review of the South West Indian Ocean Fisheries Commission, FAO, 2013.

region and focus on the management of high seas fisheries in particular deep-sea or bottom fisheries involving non-highly migratory species which previously was unregulated in that part of the world. Because the fisheries involved the use of fishing gears that operate close to, or in contact with, the sea floor, posing a threat to certain marine ecosystems, a solution was needed.

SIOFA is a non-tuna RFMO and currently has 9 contracting parties which are both coastal States in the region and DWFN. Unlike the IOTC and the SWIOFC, SIOFA did not automatically establish a commission. Instead, matters of substance are discussed at its Meeting of Parties, which is the Agreement's decision making body. The functions of the Meeting of the Parties include reviewing the state of fishery resources, promoting research and cooperation, adopting generally recommended international minimum standards for fishing, developing rules and procedures for monitoring of compliance by vessels and developing measures to prevent, deter and eliminate illegal, unreported and unregulated fishing.

The objectives of the Agreement are to ensure the long-term conservation and sustainable use of the fishery resources within its area of competence, through cooperation among the State parties, and to promote the sustainable development of fisheries within this area and in doing so, taking into account the needs of the developing States bordering this area, particularly the least-developed States and the small island developing States.[97] SIOFA's area of competence covers the high seas between Eastern Africa and Western Australia excluding all waters under national jurisdiction (Figure 4).[98] Although SIOFA's area of competence overlaps with that of IOTC's, the two agreements are responsible for difference species of marine resources. IOTC being a tuna RFMO has a mandate for tuna and tuna-like species whereas

[97] Article 2, SIOFA

[98]Article 3, SIOFA: SIOFA's area of competence is bounded by a line joining the following points along parallels of latitude and meridians of longitude, excluding waters under national jurisdiction: Commencing at the landfall on the continent of Africa of the parallel of 10° North; from there east along that parallel to its intersection with the meridian of 65° East; from there south along that meridian to its intersection with the equator; from there east along the equator to its intersection with the meridian of 80° East; from there south along that meridian to its intersection with the parallel of 20° South; from there east along that parallel to its landfall on the continent of Australia; from there south and then east along the coast of Australia to its intersection with the meridian of 120° East; from there south along that meridian to its intersection with the parallel of 55° South; from there west along that parallel to its intersection with the meridian of 80° East; from there north along that meridian to its intersection with the parallel of 45° South; from there west along that parallel to its intersection with the meridian of 30° East; from there north along that meridian to its landfall on the continent of Africa.

SIOFA is primarily concerned with other species particularly demersal species such as the orange roughy, alfonsino and sedentary species.

It is also to be highlighted that SIOFA excludes from its scope sedentary species in areas under national jurisdiction. The Agreement has an overall aim of promoting the long-term conservation and sustainable use of fisheries resources in this area by incorporating principles such as the precautionary approach, ecosystem based approaches to fisheries management and encouraging the development of effective monitoring, control and surveillance to ensure compliance.

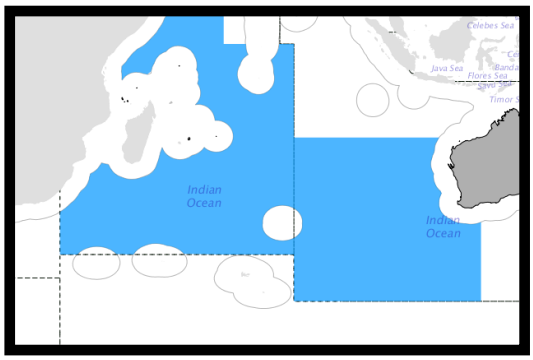

Figure 4: SIOFA's area of competence

Effectiveness of Regional Fisheries Organisations - The Indian Ocean Region

Cooperation amongst States through RFBs is today a fundamental principle underpinning the long-term conservation and management of marine fisheries resources. The importance of RFBs in fisheries governance is highlighted by their ability to implement key provisions of international fisheries instruments and their increasingly harmonised approaches to tackling emerging challenges.[99] In light of this, the international community in various fora has called upon States to fill the gaps in high seas fisheries governance by strengthening and extending RFBs' mandate and jurisdiction.[100]

As mentioned in the previous section, there are about 53 RFBs worldwide with about 17 being RFMOs. RFMOs are an important subset of RFBs and are mandated to adopt binding conservation and management measures based on the best scientific evidence. It has been argued that RFMOs present the only realistic means of governing fish stocks that occur exclusively on the high seas or occur either as straddling or shared stocks between the high seas and zones under national jurisdiction. However, while in theory RFBs and RFMOs provide an effective mechanism to carry out the management goals set out in the various international fisheries instruments, the current status of many fish stocks particularly shared stocks has led to criticism of some of those organisations. With a view to strengthen regional governance, modernise mandates and adopt improved management approaches, FAO has called on RFBs to conduct independent performance reviews against their objectives, obligations and principles in relevant international instruments.[101] In that light, the regional fisheries bodies operating within the Indian Ocean will be examined and their effectiveness against their objectives will be analysed.

Indian Ocean Tuna Commission (IOTC)

[99] Most RFMOs have operationalised the key provisions of various international fisheries instruments including the FAO Compliance Agreement 1993, FAO Code of Conduct for Responsible Fisheries 1995 and United Nations Fish Stocks Agreement 1995.

[100] FAO, Performance Reviews by Regional Fisheries Bodies: Introduction, Summaries, Synthesis and Best Practices, Volume 1, CCAMLR, CCSBT, ICCAT, IOTC, NAFO, NASCO NEAFC, FAO Fisheries and Aquaculture Circular No 1072, FIPI/C1072, UNFAO, 2012, pg 3.

[101] Ibid.

The IOTC was adopted pre-UNFSA and the same year as the FCA, and as a result failed to take into account the various provisions brought about by these two binding instruments which led to several inconsistencies. However, it latter tried to bridge the gaps by bringing out various resolutions to bring conservation and management of fish stock in line with those international standards.

It has been noted that the IOTC Agreement is narrow relying on outdated concepts such as conservation and optimum utilisation of stocks, lacking reference to the UNFSA and modern fisheries management principles and failure to include broader concepts such as protection of the marine biodiversity and marine environment and often acting on limited and inaccurate scientific information, and as such should be amended or replaced.[102] However, it has been argued that in theory the Commission has been trying to keep up to pace by including in its resolutions and recommendations management measures for the long-term sustainability of stocks in its area of competence.[103]

The principal market tuna species under the jurisdiction of the IOTC are bigeye, skipjack, yellowfin and albacore caught by industrial longline and purse seine fleets.[104] Analysis shows that the conservation measures adopted have had little impact on the management of those stocks. For instance yellowfin tuna is considered overfished. As a matter of fact, in 2015 the status of the yellowfin tuna was changed from a green classification to red along with a prediction by the IOTC Scientific Committee of a stock collapse within just a few years if fishing continues at recent high levels. As a result, in 2016 IOTC adopted Resolution 16/01 on an interim plan for rebuilding the Indian Ocean yellowfin tuna stock and States had to take urgent actions, such as reducing the number of fish aggregating devices (FADS) and reducing the number of supply vessels serving fishing vessels with the aim of reducing fishing efforts. Earlier this year, based on the aforementioned, Resolution 17/01 was also adopted, superseding Resolution 16/01, to further the attempt at rebuilding the yellowfin tuna stock and amongst the measures adopted, States were to reduce their yellowfin tuna catch by 20 per

[102] IOTC-PRIOTC02 2016, Report of the 2nd IOTC Performance Review, Seychelles 2-6 February & 14-18 December 2015, IOTC-2016-PRIOTC02-R[E], pg 3.

[103] Report of the IOTC Performance Review Panel, IOTC, January 2009, pg 16, http://www.iotc.org/about-iotc/performance-review, pg 1.

[104]Ibid, pg 21.

cent from the 2014 level. In addition to the alarming status of the yellowfin tuna stock which as mentioned is a main targeted stock, IOTC also classified other species which are not necessarily targeted but are caught and retained as a byproduct in the red zone and thus being overfished and they include the black marlin, striped marlin, longtail tuna and narrow-barred spanish mackerel.

The resolutions adopted are mandated under Article V in accordance with Article IX of the IOTC Agreement which to a certain extent reflects some of the provisions of the UNFSA, notably article 5 of Part II dealing amongst other things with fishing capacity and effort. The most significant fishing effort measures adopted is the creation of records of authorised vessels and measures to limit fishing capacity. For instance, Resolution 14/02[105] attempts at controlling fishing by establishing a quotation system, for better management and at the same time implementing an appropriate data collection system with the aim of improving the quality of data collected for better scientific advice. It also introduced a one month closed seas so as to allow the stock of bigeye to rejuvenate. It has been argued however, whether the one month closing period will have any real impact on such stocks.[106]

In an attempt to better conserve and manage stocks, the long overdue precautionary approach was adopted in 2012, 19 years after its adoption. This has its origin in Article 5(c) of the UNFSA and enumerated in Article 6 and numerous other international fisheries instruments. In practical terms, the precautionary approach deals with the determination of the status of stocks relative to limit and target reference points so as to predict outcomes of management and thus minimise uncertainty. It advocates that the greater the uncertainty of management advice, the more precaution is needed in the stock management. The precautionary approach was formally introduced in Resolution 12/01[107] after several recommendations, notably the IOTC performance review in 2009. It stresses the need for better hands on approach to stock management by using the best available science to minimise the risk of negative impact on the sustainability of stocks. It is to be noted however, that although not expressly adopted prior to Resolution 12/01, some conservation measures were being synced in line with the precautionary approach, such as the minimisation of by-catch mortality. More recently in line

[105] Resolution 14/02 For the Conservation and Management of Tropical Tuna tocks in the IOTC Area of Competence, IOTC.

[106] Ibid.

[107] Resolution 12/01 on the Implementation of the Precautionary Approach, IOTC.

with the precautionary approach, through Resolution 17/04, IOTC also introduced a ban on the discarding of bigeye, skipjack and yellowfin tuna and other non-target species caught by purse seiners in the IOTC area of competence in an attempt to minimise waste and reduce impacts of fishing on associated or dependent species.

In addition to the general conservation and management measures binding on its members, IOTC felt that it was equally important to ensure that cooperating non-contrating parties were also being regulated. This is because the adoption of conservation measures would be futile if third party States were able to fish without due regard to the measures applicable to the member States of the IOTC. This lacuna would undermine the whole approach rendering ineffective the measures adopted.

South West Indian Ocean Fisheries Commission (SWIOFC)

SWIOFC being an advisory RFB according to Article 4 of its Statute has amongst other things, the following key functions and responsibilities:

a) to contribute to improved governance through institutional arrangements that encourage cooperation amongst members;
b) to help fishery managers in the development and implementation of fishery management systems that take due account of environmental, social and economic concerns;
c) to keep under review the state of the fishery resources in the area and the industries based on them;
d) to promote, encourage and coordinate research related to the living marine resources in the area and draw up programmes required for this purpose, and to organize such research as may be necessary;
e) to promote the collection, exchange, dissemination and analysis or study of statistical, biological, environmental and socio-economic data and other marine fishery information;
f) to provide a sound scientific basis to assist Members in taking fisheries management decisions;
g) to provide advice on management measures to member governments and competent fisheries organizations;

SWIOFC compared to other RFBs in the region does not have a mandate to act beyond areas of national jurisdiction i.e it is limited to its member States' EEZ.[108] However, it can be argued that it has the ability to play a pivotal role in fisheries governance in the region. This is because it has the mandate to provide advice on a broad range of marine living resources within its area of competence. Additionally, in line with its objective and functions, despite its relatively short history, member States feel that SWIOFC has played an important role in promoting and facilitating collaboration and cooperation in the region with regards to fisheries research and has served as a platform for the development of several projects such as South West Indian Ocean Fisheries Project and the Ecosystem Approach to Fisheries-Nansen Project.[109] It is important to highlight that compared to IOTC, ecosystem and precautionary approaches to fisheries management are explicitly stated in SWIOFC's statutes as one of its general principles and the Commission has contributed to its promotion, primarily by serving as a platform for the development of specific projects centred around those principles such as the two projects mentioned above. It is however felt that the Commission could go further by promoting the development of a framework for the application of the precautionary approach for the fisheries in the region, which should be then incorporated in the national fisheries management plans.

The Commission has been principally useful as a forum for scientists, managers and policymakers in the region to share information on the management of fisheries than to provide comprehensive advice on the actual management of the exploited stocks. Despite mandated to provide advice to member States based on best scientific evidence, it has been argued that SWIOFC has not done much in terms of data collection, analysis and sharing which is key in fisheries management. Unlike other regional fisheries bodies, SWIOFC has not done any assessment of the stocks covered by its mandate. The practice is during the meetings of the scientific committee, member countries usually present the status of their fisheries resources as well as the research and management actions taken. The information is then presented to the Commission Meeting which can then make recommendations based on the information provided. The reliability of the information provided can be called into question but this deficiency, attributed to the Commission's limited financial and human resources appears to be a major set back.[110]

[108] Article 1, Statutes of the SWIOFC, 2004

[109] Report of the Performance Review of the SWIOFC, pg 18.

[110] Ibid, pg 19.

Although one of the main focus of the Commission is to provide advice to its member States, it is felt that the advice is often ineffective as the Commission does not have a mechanism in place to assess the implementation of SWIOFC management recommendations in addition to no follow-up mechanism to monitor the condition of the fish stocks on a regular basis.[111] Furthermore, it is felt that SWIOFC does not provide species-specific fisheries management advice, since it does not carry out any assessment of the exploited stocks in the area. The advice provided by SWIOFC, therefore, has tend to be general in nature and more focused on the fisheries level than on the fish species. However, the general nature of the advice is partly due the multi-species nature of the stocks occurring in the South West Indian Ocean region which have a rather limited distribution and are in many instances restricted to the jurisdiction of a single State. As a consequence, shared stock assessments will be arguably of little relevance in the region.[112]

With the above said, according to the report of the fourth session of the Scientific Committee, the status of the fisheries under its purview has shown an appreciable deterioration over the past 5 years, a trend which is not dissimilar to the situation in the rest of the world. The number of under or moderately exploited stocks reduced by 14 per cent from 45 to 31 per cent while the fully exploited increased by 7 per cent from 29 per cent to 36 per cent. In addition, the number of stocks overexploited, depleted or recovering also increased by 9 per cent from 25 to 34 per cent. [113]

[111] Ibid, pg 23.

[112] Ibid, pg 24.

[113] Ibid, pg 22.

Southern Indian Ocean Fisheries Agreement (SIOFA)

Unlike the IOTC and SWIOFC, SIOFA is a more recent fisheries agreement coming into force only in 2012 and is still in the process of being set up. Fisheries in that region have primarily been mid-water and demersal trawling focussed on seamounts and ridges. Alfonsino and orange roughy made up 73 per cent of landed catch in the SIOFA Area from 1992 to 2010 according to the Australian Department of Agriculture, Fisheries and Forestry. As such, SIOFA has not undertaken a performance review as of yet.

An analysis of the Agreement compared to the other two in the region indicates that it is up-to-date with most of the modern international fisheries principles and norms. In order to ensure the long-term conservation and sustainable use of the fishery resources, the Agreement included in its general principles amongst other things, the duty to adopt measures on the best scientific evidence available, the duty to apply the precautionary approach in fisheries management, the duty to ensure that fishing practices and measures adopted take account and have minimal impact on the marine environment and the duty to protect the marine environment. As such, it is clear that in addition to the promotion of the precautionary approach, SIOFA also promotes the use of an ecosystem based approach to promote the objective of long-term conservation and sustainable use of the fisheries resources in its area of competence, particularly deep-sea resources which have been severely overexploited in the past.[114] Furthermore, compared to the other regional fisheries bodies in the region, it appears that SIOFA has a wider scope in terms of fisheries management abilities as it is mandated to adopt binding measures over all fisheries resources within its area of competence, both within the water column and on the seafloor, so long as the species are not-regulated by another body.[115] Additionally, the importance of protecting vulnerable marine ecosystems is recognised and has been reflected in SIOFA's conservation and management measure. This is in line with several UNGA's resolutions on sustainable fisheries which calls on States to take action to protect vulnerable marine ecosystems from impacts of bottom fisheries and to ensure the long-term sustainability of deep-sea fish stocks.[116] However, it has been pointed

[114] A D Rogers, M Gianni, The Implementation of UNGA Resolutions 61/105 and 64/72 in the Management of Deep-Sea Fisheries on the High Seas. Report prepared for the Deep-Sea Conservation Coalition. International Programme on the State of the Ocean, London, United Kingdom, 2010, pgs 70-71.

[115] Article 1 (f), SIOFA.

[116] UNGA Resolutions 59/25, 61/105, 64/72.

out that for much of the SIOFA Area, data on seabed biodiversity and benthic community composition is lacking and as such, needs to be improved. Nonetheless, in order to protect vulnerable marine ecosystems and also achieve its overarching objective, SIOFA can conduct environmental impact assessments and based on the outcome of the assessment, designate marine protected areas which could extend beyond fisheries control and provide protection to vulnerable marine areas by closing it to fishing.[117] This would supplement the current unilateral declaration by the Southern Indian Ocean Deepwater Fishers Association (which has been actively exploiting the living resources in that part of the world for numerous years) of 10 Benthic Protected Areas in the Indian Ocean which have been voluntarily closed to bottom and mid-water trawling to its members .[118]

Albeit its short existence, SIOFA has conducted a few Meetings of Parties and Meetings of the Scientific Committee. During its second meeting, the Meeting of Parties proposed conservation measures with regards to deep-water and large-scale pelagic drifnets and gillnets within the area of competence, recognising the negative impacts such fishing practices have on the marine environment and ecosystem. Subsequently, a conservation management measure was adopted banning the use of large scale pelagic driftnets within SIOFA's area of application and it was also recommended that deepwater gillnets should not be used within the area until the Scientific Committee had made its recommendations.[119] An interim management measure for bottom fishing which includes limiting bottom fishing efforts so as to ensure that bottom fishing is consistent with the long-term sustainability of deep sea fish stocks and to protect the marine environment and the prevention of significant impacts on vulnerable marine ecosystems was also adopted but is yet to come into force.[120]
As management and conservation measures should be based on the best available scientific evidence,[121] stock assessments are an important tool. However, stock assessment in the SIOFA jurisdiction is currently challenged by the lack of an analysis and review process for

[117] SIOFA, Report of the Second Meeting of the Scientific Committee of the Southern Indian Ocean Fisheries Agreement, La Reunion, 13-17 March 2017, pgs 7-9.

[118] SIODFA 2016, Southern Indian Ocean Deep Fishers Association Benthic Protected Areas in the Southern Indian Ocean, SIODFA Technical Report XVII 16/02.

[119] CMM 2016/05 Conservation and Management Measure regarding the use of large-scale pelagic driftnets and deepwater gillnets in the Southern Indian Ocean Fisheries Agreement Area (Pelagic Driftnets and Deepwater Gillnets).

[120] CMM 2017/01 Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area (Interim Management of Bottom Fishing).

[121] Article 4(a) SIOFA.

available data held by Parties across certain key fish stocks. The Scientific Committee has recommended that a working group be established under the SIOFA Scientific Committee to progress work related to stock assessments required to address this action focussing initially on the orange roughy and alfonsino, 2 fish species currently being targeted by deep-water trawlers, often over sea-mounts within SIOFA's area of application. It has also been proposed that bottom fishing impact assessment standards be adopted so as to be able to have better foresight of potential impacts the fisheries has on the marine environment.

Effectiveness of the conservation and management measures adopted by SIOFA will be reflected when its first performance review is conducted.

General Challenges to the Conservation and Sustainable Use of High Seas Fisheries

Fishing activities has been argued to be the main threat to marine biodiversity and the marine environment as the current regime is not rooted on sustainability and it fails to take into account the full impacts of fishing activities on the wider marine environment. Notwithstanding the wide range of actions taken by the international community which includes the production of a large body of instruments in an attempt to strengthen international fisheries governance including the promotion of long-term sustainable outcomes in fisheries and the ecosystem of which they are part of, overexploitation, fish stock depletion and marine environment degradation continue to remain a strong point of concern. Some of the main issues affecting the sustainability of fisheries and the wider marine environment are discussed below.

Illegal, Unreported and Unregulated Fishing

Efforts to achieve long-term sustainability in fisheries are affected by the widespread and prevalence of IUU fishing. IUU fishing contributes to overexploitation of fish stocks and hinders the recovery of fish populations and ecosystems, damages the marine environment and distorts competition amongst legitimate fishers. There are no global data on the full extent and cost of IUU fishing due to the nature of this type of activity, however it has been estimated that approximately 30 per cent of total catches of globally important fisheries comes from IUU fishing and in some cases, IUU catches can be up to three times higher than legal catches.[122] Global losses from IUU fishing have also been estimated to range between USD 10 billion and USD 23.5 billion annually.[123]

Despite the large body of international and regional instruments aimed to deter, prevent and eliminate IUU fishing, these activities are still widespread. IUU fishing thrives where weak governance arrangement prevails and further encouraged by States that are unwilling or unable to meet their international obligations with respect to enforcing their flag State

[122] It has been reported by the Chairman f the Board of Trustees of the Unitary Indonesian Traditional Fishermen (KNTI) that 30 per cent of losses from illegal fishing in the world have occurred in Indonesia, Ella Syafputri (July 19, 2014)."Almost Half of Illegal Fishing in the World Occur in Indonesia", tempco.co, accessed 31 August 2017.

[123] Agnew, Pearce, Pramod, Peatman, Watson, Beddington, et al., Estimating the Worldwide Extent of Illegal Fishing. PLoS ONE 4(2): e4570, 2010, https://doi.org/10.1371/journal.pone.0004570, pg 4.

jurisdiction. Such States have open registers and allow fishing vessels to fly its flag without having a genuine link between the vessels and the flag State. A lack of such link makes it difficult for the flag State to effectively monitor and control those fishing vessels and as such prone to conduct and get away with illegal activities both within coastal States' EEZ and on the high seas.[124]

In addition to poor ineffective flag State jurisdiction, IUU fishing exists because it is economically profitable. High market value of the target species are purposely fished because the benefits derived outweighs the chances of being detected and caught. The economics behind it is as the market value of a particular fish increases, so does the chances of IUU fishing for that particular species as there now exist a wider profit margin. In the majority of cases, fish that tend to be targeted have already diminished stocks or are heavily regulated so as to maintain their sustainability.[125] IUU fishing is not only detrimental to target species but also negatively impacts the marine environment and ecosystem. This is due to the fact that IUU fishers rarely follow regulations on gears and have a tendency to use equipment that is either illegal or not up to standard with current regulations. Therefore, most often than not, a large number of under-sized species and non-targeted species such as seabirds, sharks and dolphins are caught which are later discarded as they are worthless to the fishers. Vulnerable marine environments are also threatened in cases where prohibited zones are not respected. The end result is that IUU fishing not only affects the population of sometimes overexploited or endangered species but also impacts and destabilises the functioning of that particular ecosystem.[126]

[124] Judith Swan, Fishing Vessels Operating Under Open Registers and The Exercise of Flag State Responsibilities: Information and Options, FAO Fisheries Circular. No 980, Rome, FAO, 2002, pgs 2-3.

[125] Palma et al; Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing, Vol. 6, Brill, 2010, Leiden, The Netherlands, pg 1-48.

[126] Ibid.

Overfishing and destructive fishing practices

Overfishing, unsustainable fishing and destructive fishing practices together with open-access conditions are some main factors contributing to the continual decline of fish stocks and degradation of the marine environment. The direct and indirect impacts associated with high levels of by-catch, discarding, catching of juvenile and protected species, bottom trawling and dredging on benthic environments are a worldwide cause of concern. A reduction of fishing pressure is therefore an important step to achieve healthier fish stocks as it is a common fact that there is currently too many vessels chasing too few fish.

With 31.4 per cent of fish stocks classed as overfished and 58.1 per cent classed as fully fished,[127] progress needs to be made on making fisheries more sustainable and prevent other fisheries from reaching unsustainable levels. It is largely known that overfishing is linked with fisheries subsidies given by government.[128] Many of these subsidies given to encourage development in the fisheries sector, often indirectly promote IUU fishing, overfishing and destructive fishing practices as it increases fishing capacity making fishing vessels more efficient and thus able to fish longer, harder and farther away. It has been estimated that global fisheries subsidies amount to approximately USD35 billion annually, with USD20 billion being capacity-enhancing subsidies.[129] These large harmful subsidies have promoted an excess fishing fleet by artificially lowering the cost associated with fishing and thus pushing fishing operations beyond what is economically and environmentally sustainable stimulating exploitation of already over-harvested fish stocks.

[127] FAO,The State of World Fisheries and Aquaculture 2016 (SOFIA): Contributing to food security and nutrition for all, Rome: Food and Agriculture Organization, 2016, pgs 5-6.

[128] A/RES/59/25 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2004, pgs 8-9.

[129] Da-Rocha, García-Cutrín, Prellez , Sempere, The social cost of fishery subsidy reforms Marine Policy, Volume 83, 2017.

Social and Political Will

Political will plays a pivotal role in the sustainability of fisheries. Factors such as inadequate policy or legal framework, weak flag state enforcement, shortage of human resources, poor administrative structures, prevalence of open access fisheries and a focus on short-term priorities are a major setback in achieving sustainable fishing practices. Governments are often unable or unwilling to provide the resources and tools required for responsible fisheries management including the ratification and domestication of international fisheries instruments. The long-term value of sustainable fisheries is often not recognised or it is considered a lower priority than other more pressing issues facing the society, since the attitude and priorities of the society shape governments' priorities and policies. Because ecosystem services are also difficult to quantity and because the short-term benefits from fisheries particularly high seas fisheries outweighs the price of the loss of such services, it is sidelined and not given the attention it deserves.

Fragmented and Sector-based Management

Compared to the domestic level, on the international and regional level, a major challenge to the conservation and management of biodiversity in ABNJ including fisheries is due to the fragmented and sector-based management approach to the oceans. The oceans are managed by activity sectors such as fisheries by FAO and RFMOs, shipping and marine pollution by IMO and deep-seabed mining by ISA. Although UNEP and Regional Seas Organisations are currently working on environmentally related issues, at the present, there is currently no designated body specifically mandated to work on biodiversity-related issues in ABNJ from a holistic perspective. In that line, although some RFMOs, take into consideration the marine environment and ecosystem when adopting conservation and management measures, their measures are not comprehensive due to their limited mandate both in area of competence and species covered. Consequently, gaps in the oceans are created due to this geographical, activity and species approach to management which also often leads to a lack of coherence, cooperation and coordination amongst the various institutions, bodies and instruments.

Further to that, RFMOs being the regional bodies mandated to manage fish stocks have been criticised for their failure to manage and conserve fish stocks in their area of competence because of poor implementation of management measures which are often not based on the

best available scientific evidence, lack of compliance and enforcement measures, ineffective decision-making processes and the use of outdated environmental principles which does not reflect the precautionary and ecosystem principles and management tools such as environmental impact assessments. The international community through the FAO as a way to strengthen fisheries governance has urged all RFMOs to undertake performance reviews and to modernise their mandates so as to address these challenges and at the same time prepare them to tackle new and emerging issues, but unfortunately, few RFMOs have done so.

Addressing the Challenges of High Seas Fisheries Governance

The current institutional and legal framework for ocean management provides many challenges for the conservation of high seas biodiversity including fisheries. To have a better understanding of today's challenges it is important to understand one of the underlying source of the problems. Fisheries management has always had as its principal objective the conservation of target fishery resources with little explicit concern and few operational measures for the broader biodiversity conservation. Fisheries management and marine conservation, although they share similar end goals have developed from two different perspectives.[130] Fisheries governance have been primarily concerned with the utilitarian aspect of conservation, focussing on the contribution of fisheries to human livelihood principally food security while marine conservation has focussed mainly on the intrinsic value of conservation and their provision of key ecosystem services. Over decades, these different approaches have led to tensions between these two components. However, over the past 50 years, developments in ocean policy such as the Stockholm Conference in 1972 and the UNCED in 1992 have tried bringing these two components closer together. Largely influenced by the incorporation of the ecosystem and precautionary approaches and the recognition of the overlapping objectives of these two components together with the international community becoming increasingly aware of the growing and expanding threats to the marine environment and ecosystem caused particularly by fishing activities, there has been a shift towards a need for a more coordinated and harmonised approach between fisheries management and biodiversity conservation.

Addressing the issues surrounding the conservation and sustainable use of biodiversity in the ABNJ, in addition to the inclusion of elements of biodiversity protection in international fisheries instruments, several other propositions have been made over the years to advance the conservation and better management of the marine biodiversity in areas beyond national jurisdiction.

Improving and Strengthening existing Regional frameworks

[130] S M Garcia, J Rice and A Charles, Governance of Marine Fisheries and Biodiversity Conservation: Convergence or Coevolution? in Serge M Garcia, Jake Rice and Anthony Charles (eds), Governance of Marine Fisheries and Biodiversity Conservation, Wiley-Blackwell, 2014, pgs 1-13.

A large number of institutions and agreements are currently mandated to regulate sectoral issues in ABNJ which also includes fisheries. The current debate around the framework lies around the question of the creation of new institutions versus the strengthening of existing institutions. Some scholars argue that the mandate of existing international and sectoral bodies, particularly RFMOs should be strengthened and modernised.[131] There should be improvements in their transparency, accountability, compliance and reporting mechanisms so as to ensure that they are functioning effectively. There are also arguments for widening the mandates of existing institutions so as to include broader jurisdiction in ABNJ, extending their mandated species from one to multi-species and also including broader environmental principles so as to encompass biodiversity protection. The precautionary and ecosystem approaches to management are recognised as being fundamental for the effective conservation and management of high seas biodiversity when backed by environmental impact assessments and best available scientific evidence.[132] As such, regional bodies should ensure that these approaches are included in their mandates in addition to ensuring that a holistic approach is adopted with regards to resource management and conservation and that the various sectoral institutions and mechanisms are also more coordinated.

Area based management measures

The conservation and sustainable use of the oceans and their biodiversity depends on the appropriate planning and management of human uses, both within and beyond areas of national jurisdiction. Measures such as marine protected areas (MPAs) and fishing closures have been recognised as important tools to ensure the protection and conservation of sensitive biodiversity and to also restore and rebuild marine environment and depleted stocks. [133]
The impact of fishing activities on the biodiversity of the marine environment can be argued to be one of the main reasons for the creation of MPAs in the high seas. Within the

[131] M Lodge,Managing International Fisheries: Improving Fisheries Governance by Strengthening Regional Fisheries Management Organizations, ENERGY, ENVIRONMENT AND DEVELOPMENT PROGRAMME EEDP BP 07/01, Chatham House, 2007, Pgs 1-3.

[132] Ibid.

[133] FAO, Resolution GFCM/37/2013/1 on area based management of fisheries, including through the establishment of Fisheries Restricted Areas (FRAs) in the GFCM convention area and coordination with the UNEP-MAP initiatives on the establishment of SPAMIs

framework of precautionary and ecosystem-based approaches, MPAs particularly those that are closed to certain fishing activities could constitute valuable means to reduce the impact of fishing on vulnerable marine habitats and species. Such impacts are particularly acute in fisheries of deepwater demersal species, both because of the use of non-selective gears that potentially impact fragile habitats and because they often target marine species with low productivity which cannot sustain high rates of exploitation.

At the present there are many organisations and mechanisms dedicated to the conservation and sustainable use of marine biodiversity which also have the power to apply area based management measures. However, most of these efforts are currently sectoral and geographically limited with no overarching coordination. For instance, under the CBD there are the ecologically or biologically significant areas (EBSA), FAO recognises vulnerable marine ecosystems (VMEs), IMO recognises particularly sensitive sea areas (PSSAs), ISA recognises preservation reference areas and Regional Sea Conventions recognises MPAs.

There are a few MPAs established worldwide with most located within areas under national jurisdiction. However, a few parts of the high seas have been made into MPAs. For instance, in 1999, the Pelagos Sanctuary, a large protected area measuring 87,500 square km trilaterally declared by France, Italy and Monaco was declared for the conservation of Mediterranean marine mammals extending both within and beyond areas of national jurisdiction. The creation of this MPA resulted in the world's first high seas MPA.[134] Although individual MPAs are a great step forward and encouraged, it has been argued that to effectively contribute towards biodiversity protection, regional bodies should aim to establish MPA networks rather than single MPAs. In 2010, the first network of MPAs consisting 6 marine protected areas, covering a total of 286,200 square km, were established in the high seas of the northeast Atlantic Ocean, by regional negotiations of the OSPAR Commission.[135]

[134] Giuseppe Notarbartolo di Sciara, The Pelagos Sanctuary for the conservation of Mediterranean marine mammals: an iconic High Seas MPA in dire straits, 2nd International Conference on Progress in Marine Conservation in Europe 2009 2-6 November 2009 OZEANEUM / DMM, Stralsund, Germany, pgs 1-2.

[135] B.C. O'Leary, R.L. Brown, D.E. Johnson, H. von Nordheim, J. Ardron, T. Packeiser, C.M. Roberts, The first network of marine protected areas (MPAs) in the high seas: The process, the challenges and where next, In Marine Policy, Volume 36, Issue 3, 2012.

Unlike OSPAR's network of MPAs established within its area of competence, it appears that currently establishing similar networks of MPAs in ABNJ is a major challenge to the international community. Although such networks are believed to be a more effective way of conserving biodiversity and habitats in areas beyond national jurisdiction, the establishment of such a network requires strong international and regional cooperation together with strong political will which unfortunately, most often than not, is lacking.

A new Internationally Legally Binding Instrument

Due to the sector-based institutional framework highlighted above, current global and regional instruments do not regulate all activities currently taking place in ABNJ. The current legal and institutional frameworks governing biodiversity in such areas are thus widely perceived to be inadequate for ensuring the long-term health and equitable use of the living marine resources including fisheries of ABNJ. As a result of such weaknesses, together with the increasing stressors of human activities in ABNJ, threatening marine biodiversity and their habitats, it has been argued that a new international instrument is required to close the gaps and strengthen the other weaknesses.[136]

In that light, recognising the need for such an instrument, the international community through the UNGA created an Ad-hoc Open-ended Working Group to discuss ways of addressing the issue of the conservation and sustainable use of marine biodiversity in those areas. The Working Group started its work in 2006 and at the closure of the UNCSD (Rio +20) in 2012, further support was given by States committing to address the issues identified in ABNJ with the utmost urgency by agreeing to launch negotiation for a new UNCLOS implementing agreement by the end of UNGA's 69th session (September 2015). In its resolution 69/292 in June 2015, the UNGA decided to develop an internationally legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological biodiversity of areas beyond national jurisdiction. To achieve that, a Preparatory Committee (BBNJ Prepcom), with the aim of building on the work of the Working Group was established to make substantive recommendations to the UNGA on the elements of a

[136] Kapil Narula, Ocean governance: strengthening the legal framework for conservation of marine biological diversity beyond areas of national jurisdiction, Maritime Affairs: Journal of the National Maritime Foundation of India Vol. 12 , Iss. 1,2016.

draft text of an international legally binding instrument under UNCLOS.[137] After its fourth and final meeting in July 2017, the BBNJ PrepCom agreed to take the next step towards negotiating a new international legally binding instrument to govern marine biodiversity in ABNJ.[138] The UNGA in its coming sessions before the end of 2017 should propose a resolution to convene an intergovernmental conference based on the recommendations of the BBNJ PrepCom. The new instrument should have the aim of addressing the issues identified by the BBNJ PrepCom such as closing the legal gaps in ABNJ and at the same time complement and enhance the effectiveness of the existing frameworks so as to contribute to the advancement of an intergrated and coordinated approach to ocean governance.

[137] A/RES/69/292 - Development of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 2015.

[138] IISD, 4th Session of the Preparatory Committee Established by the UN General Assembly Resolution 69/292: Development of an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, 21 July 2017, New York.

Part 2

Introduction to the new ILBI

The governance of areas beyond national jurisdiction is one of the most pressing issue facing the international community today. Although science is helping us appreciate more fully the rich biodiversity of these marine spaces and its importance in the sustenance of life on earth, these areas and its biodiversity are still not fully understood and are facing increasing threats from both the intensification of existing human activities and also the emergence of new ones as technological advancement make them more accessible. These threats have been iterated frequently and according to the Secretary-General of the United Nations it include fishing activities, IUU fishing, overfishing, destructive fishing practices, deep-seabed mining, pollution, ocean acidification and other impacts of climate change.[139] In addition to traditional uses of these marine areas, emerging uses such as MSR , bio-technology and bio-prospecting, geo-engineering, open ocean fertilisation and sub-seabed carbon-dioxide sequestration also poses a threat to the marine environment of ABNJ.[140] Although the international community through its various sectoral approaches has tried to address some of these issues, undoubtedly a new mechanism, which takes into account the issues from all these sectors from a holistic perspective, is in dire need.[141]

The areas beyond national jurisdiction are those areas of the oceans for which no one nation has the specific or sole responsibility for management. It makes up approximately 40 per cent of the surface of the earth and 62 per cent of the surface of the oceans. It is important to bear in mind that the aforementioned figures are only estimates as many coastal States' maritime boundaries particularly EEZs and Extended Continental Shelves remain undetermined or disputed thus affecting the geographical scope of ABNJ. Regardless of its precise geographical scope, ABNJ is understood as the high seas and the seabed beyond the continental shelf (or extended continental shelf) of coastal States. As mentioned in the previous chapter, the international community has been discussing options to better conserve and sustainably use marine biodiversity in ABNJ for over a decade. The reasoning behind

[139] UN Doc A/59/62/add.1, 57-61

[140] Robin Warner, Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Framework, Martinus Nijhoff Publishers, Leiden, The Netherlands, 2009, pgs 14-15.

[141] Wright, G., Rochette, J., Druel, E., Gjerde, K, The long and winding road continues: Towards a new agreement on high seas governance, Study N01/16, IDDRI, Paris, France, 2015, pgs 7-14.

this is multifold but principally, it is recognised that the current legal and institutional framework to protect the marine environment in ABNJ is inadequate, with efforts focussing in areas within national jurisdiction where coastal States have the jurisdiction to use an array of measures including biodiversity conservation measures such as environmental impact assessments, marine protected areas and strict fisheries management and conservation measures. Compared to areas within national jurisdiction, environmental protection for ABNJ are largely underdeveloped with a reliance on sectoral approach. For instance, although UNCLOS is recognised as the constitution of the oceans establishing the overarching legal framework for most activities in the oceans, it makes no mention of marine biodiversity or marine genetic resources (MGRs), and its articles 116 to 120 on Conservation and Management of the Living Resources of the High Seas are rather vague. Furthermore, although the UN Convention on Biological Diversity (CBD), defined biodiversity and objectives for its conservation and sustainable use, ABNJ are beyond its scope aside from direct activities by Parties to the convention. In that light, with the common property status of the high seas, the uncertainty surrounding living resources of the Area and the inability to bind States not party to global arrangements such as the UNFSA or regional arrangements such as RFMOs, leading to the increasing decline of the health of those marine environment, a new approach is urgently required.[142]

Although intergovernmental and non-governmental environmental organisations such as IUCN had for many years stress on the need for global action to address the risks to the marine environment associated with increasing anthropogenic impacts caused by increasing activities in ABNJ, the political momentum to take such actions did not gain pace until the formation of a new international process, the United Nations Informal Consultative Process on Oceans and the Law of the Sea, to consider the whole spectrum of oceans in an informal forum.[143] The decision by the UN General Assembly to initiate a process to develop a new legally binding agreement on the conservation and sustainable use of marine biodiversity in ABNJ is the result of a long and protracted process that has spanned over a decade. The issue was first raised at the fourth meeting of the UN Open-ended Informal Consultative Process on Oceans and the Law of the Sea in 2003. Concerns about the lack of effective legal and institutional mechanisms for governing ABNJ were also echoed in other international fora

[142] Robin Warner, Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Framework, Mar tinus Nijhoff Publishers, Leiden, The Netherlands, 2009, pg xvi.

[143] Ibid, pgs 208-209 and UN Res A/58/95 para 13-23.

and in response, in 2004, the UNGA in paragraph 73 of its resolution 59/24, recognising the gaps and weaknesses in the current international framework governing biological diversity in ABNJ, decided to establish an ad hoc open-ended informal working group to clarify and examine these issues affecting the effective conservation and sustainable use of marine biodiversity in those areas.[144]

The ad hoc open ended working group on BBNJ conducted its first meeting in 2006 and continued with a series of meetings until 2015. During the various meetings a range of pertinent issues affecting ABNJ were identified including the absence of a comprehensive set of overarching governance principles, fragmented institutional framework, lack of international cooperation and coordination amongst sectors, absence of a global framework to establish MPAs and conduct EIAs and SEAs and uneven and ineffective high seas fisheries governance.[145] With that said it is worthy to note that there was a lack of consensus and even disputes amongst the delegates concerning elements of the various topics. Disputes ranged from whether there were any real deficiencies in the current legal framework with some even arguing to maintain the current status quo to the legal status of MGRs, particularly on accessing such resources and sharing the benefits acquired, due to the interlinkages between MGRs and the seabed. [146]

Regardless of the lack of consensus on certain aspects of the discussions, delegates recognised the need to improve implementation of current global and regional agreements relevant to biodiversity in ABNJ, the fundamental importance of using approaches such as precautionary and ecosystem based approaches and using tools such as best scientific information and environmental impact assessments to inform decisions.[147] The integral role regional and sectoral bodies play in improving the conservation and management of biodiversity in ABNJ was also highlighted. In light of this, delegates acknowledged the need to strengthen the management of such bodies by updating and modernising their mandates

[144] A/RES/59/24, para 73.

[145] Report 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, UN Doc A/61/65, 20 March 2006, paras 9, 25, 33, 34, 35, 54, 55, 57.

[146] Ibid, paras 71, 72.

[147] Robin Warner, Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Framework, Mar tinus Nijhoff Publishers, Leiden, The Netherlands, 2009, pg 211.

and to also develop and strengthen their accountability mechanisms.[148] Delegates also stressed on the need to increase cooperation and coordination between existing mechanisms in the short term, so as to enhance the conservation and sustainable use of biological diversity in ABNJ, since negotiations for a new instrument takes a long time.[149]

In that light, in 2011, at its fourth meeting, in accordance with paragraph 163 of UNGA resolution 65/37, the BBNJ working group amongst other things adopted by consensus a package of issues to be addressed as whole including MGR, benefit sharing, environmental impact assessments, area-based management tools including MPAs, capacity building and marine technology transfer.[150] The package of issues was one year later presented as a set of recommendations to the UNGA as requested in paragraph 168 of resolution 66/231[151] which was also endorsed by heads of States and Governments at the UN Conference on Sustainable Development in Rio that same year.[152]

At the ninth meeting of the working group in 2015, following intense informal negotiations, delegates decided to take the next step and reached consensus on recommendations for a decision to be taken at the 69th session of the UN General Assembly to develop a new legally binding instrument on BBNJ under UNCLOS. Delegates also reached consensus on a negotiating process, by establishing a Preparatory Committee to make recommendations on elements of a draft text of a legally binding instrument to the General Assembly at its 72nd session whether to convene an intergovernmental conference to elaborate the text of the agreement. Based on the recommendations of the ninth meeting of the working group, at its 69th session in 2015, the General Assembly in its resolution 69/292, established a

[148] Ibid.

[149] Report 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, UN Doc A/61/65, 20 March 2006, para 51.

[150] Recommendations of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction and Co-Chairs' summary of discussions, UN Doc A/66/119.

[151] Report 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 and Co-Chairs' summary of discussions, UN Doc A/67/95.

[152] Recommendations of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction to the sixty-ninth session of the General Assembly 23 January 2015.

Preparatory Committee to make substantive recommendations to the General Assembly on the elements of a draft text of an ILBI under UNCLOS based on the package of issues identified by the BBNJ working group in 2011.

The BBNJ PrepCom conducted four meetings between 2016 and 2017 with the last meeting held in July 2017. During this period, in accordance with resolution 69/292, delegates discussed an array of issues both in plenary and in the five established working groups around the identified themes of marine genetic resources including questions on benefit sharing, measures such as area-based management tools including MPAs, environmental impact assessments, capacity-building and the transfer of technology and cross-cutting issues. The delegates also discussed other issues such as the scope of the new international instrument, its relationship with regards to existing instruments and guiding approaches and principles to be used in the new instrument. At the end of the fourth PrepCom, recommendations on the substantive elements of a new international legally binding instrument were to be presented to the UNGA for consideration at an intergovernmental conference to be set up by the UNGA before the end of its 72nd session.

The Discussions about Fish and Fisheries in ABNJ

Growing market demand, advances in the technology to catch, process, store and transport fish together with a large expansion in the size and capacity of fishing fleets has enabled vessels to go farther and deeper thus enhancing our ability to exploit open ocean and deep seabed resources like never before. Because these areas lie beyond coastal States' EEZ, together with the open access nature of these waters, sustainable management of fisheries resources and biodiversity conservation is proving challenging. With that said, although other factors such as shipping, pollution and climate change also threaten marine biodiversity and ecosystems, fisheries currently presents the greatest threat to biodiversity in ABNJ. The ability of humans to exploit resources in those areas has outpaced by far our limited understanding of what is necessary for sustainable use. Propelled by freedom of fishing, enshrined both in UNCLOS and customary international law, many States have done little to regulate fishing activities beyond their national EEZ which in consequence has promoted excessive high seas fishing, illegal, unreported and unregulated activities together with destructive fishing practices causing many fish stock population to dwindle below biologically sustainable levels and some even pushed on the brink of extinction.[153]

In light of the above, together with other concerns, the international community has been discussing options to better conserve and sustainably use marine biodiversity in ABNJ since 2006. In 2015, States took the historic decision to develop a new international legally binding instrument on the conservation and sustainable use of marine biological diversity of ABNJ, under the framework of UNCLOS.[154] Specifically, it was recommended that negotiations address the topics identified in the agreed 2011 package namely the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction, in particular, marine genetic resources, including questions on the sharing of benefits, measures such as area-based management tools, including marine protected areas, environmental impact assessments and capacity building and the transfer of marine technology.

[153] According the FAO's SOFIA Report, 58.1% of global fish stocks are fully fished and 31.4% are fished at biologically unsustainable level.

[154] UN Doc A/Res/69/292, Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

As might be observed, the objective of the new instrument is described in rather general terms with the approved package elements not referring explicitly to fisheries. However, since the beginning of the work on marine biodiversity in areas beyond national jurisdiction under the auspices of the UNGA, there has been significant concerns expressed, notably as to how the new treaty would function and whether and how it could impact regional, sectoral and global bodies that already have mandates to oversee and regulate some activities in ABNJ. Amongst them, the question of whether and how the future UNCLOS implementing agreement would affect the management of fisheries has always been at the forefront since most elements of the package could be seen from a fisheries perspective. In light of this, although most delegations recognise that fish and fisheries are one of the main components in ABNJ, the issue of including fish has been contentious in the various meetings and would appear to remain so until a compromise can be reached.[155]

Discussion of marine living resources in the various meetings has encompassed both pelagic and benthic resources including fish stocks, marine mammals and sedentary species as well as their habitats and the ecosystems of which they form part. However, both in the course of the deliberations of the Working Group and at the meetings of the Preparatory Committee, a number of fishing States and stakeholders argued that there is no place for capture fisheries in the new implementing agreement as this component of marine biodiversity is adequately regulated by both global instruments such as UNCLOS, UNFSA and the FAO instruments and by regional instruments by RFMOs and other RFBs and as such, fisheries management should be excluded from the ambits of the new instrument.[156] In their view, the current legal and institutional arrangements sufficiently protect marine biodiversity from the impacts of fishing activities and that States should take their responsibility and honour their obligations.[157] Some delegates added that fisheries management and fisheries-related issues should be addressed by existing fora as mentioned above, as including fisheries in the new instrument would put restrictions on States that were not parties to these instruments and organisations, thus breaching the principle of general international law which states that an

[155]Letter dated 15 May 2008 from the Co-Chairpersons 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 addressed to the President of the General Assembly, UN Doc A63/79, para 13.

[156] Letter dated 25 July 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 69th session, Item 75 (a), UN Doc A/69/177 (2014), para 19.

[157] Letter dated 15 May 2008 from the Co-Chairpersons 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 addressed to the President of the General Assembly, UN Doc A63/79, para 40.

agreement between States cannot benefit or harm third States without their consent.[158] As a compromise, some delegates suggested that due considerations should be given to studying why existing relevant instruments had not been adequately implemented with a view to developing strategies and modalities to promote their improved implementation together with other ways to combat threats such as IUU fishing.[159] In a similar vein, it was acknowledged that existing instruments and mechanisms should be used to the greatest extent and where possible, strengthened, updated and modernised to achieve optimum conservation and management of marine biological resources.[160]

On the other side of the coin, during the various stages of deliberation States, NGOs and other stakeholders recognised that fish represents a big component of biodiversity in ABNJ and fishing is the activity posing the greatest threat to this biodiversity.[161] It is well documented that fisheries represent a key driver of biodiversity loss and ecological change in areas beyond national boundaries where the regulatory framework is perceived as more challenged. There are much higher levels of overfishing and overfished stocks for straddling and migratory species in ABNJ than in national waters, with twice the rate of overfished stocks or those experiencing overfishing than stocks within national jurisdictions.[162] By-catch, IUU fishing and the indirect impacts of abandoned, lost or discarded fishing gear have also been implicated in the severe decline of biodiversity which includes fish, sea turtle, shark and marine mammal populations. Associated impacts of high seas fisheries, given the current level of overexploited and depleted fish stocks have been shown to reduce pelagic biodiversity and ecosystem resilience; altered trophic relationships in open-ocean communities, generating trophic cascades that can lead to ecosystem-level impacts and regime shifts.[163] Furthermore, certain high seas fishing practices such as bottom trawling targeting deep-sea species has been documented as having severe impacts on certain species,

[158] Report 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, UN Doc A/61/65 para 24.

[159] Ibid, para 45.

[160] Ibid, para 51.

[161] Letter dated 15 May 2008 from the Co-Chairpersons 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 addressed to the President of the General Assembly, UN Doc A63/79, para 13.

[162] G. Ortuño Crespo, D. C. Dunn, Policy Brief: A review of the impacts of fisheries on open-ocean ecosystems, Nereus Scientific and technical briefs on ABNJ series, NipponFoundation-Nereus Program, August 2016, pg 2.

[163] Ibid, pgs 3-4.

habitat and benthic communities. This is because most of these species are long-lived, slow-maturing and slow-reproducing and without cautious management and effective regulation, these stocks are quickly depleted and their associated seabed habitats and ecosystems destroyed.[164]

With that said, some delegations have supported the position that the new implementing agreement should provide a comprehensive global regime that addresses the current stresses on the ocean so as to better address the issues at hand. It has been iterated that the current legal and institutional regime for ABNJ based primarily on flag State jurisdiction is inadequate and as a result a more integrated and cross sectoral governance structure is needed which adequately protects not only the interests of individual users but also of the international community. Furthermore, it has been pointed out that the current sectoral and regional approach to ocean governance does not provide for the assessment of cumulative impacts of activities such as fishing on the ecosystem and area-based management tools used by bodies such as RFMOs and IMO needed a multilateral approach to more effective conserve biodiversity. Furthermore, its has also been acknowledged that in addition to the issues mentioned above, the current international legal framework does not adequately address deepsea species such as discrete fish stocks or other target species such as sharks. In light of this, in order to ensure that the new instrument is truly comprehensive and integrated and sufficiently addresses the current challenges, its has been proposed that it should not exclude fisheries any more than it should exclude any other activity impacting biodiversity in ABNJ.

[164] Weaver, P.P.E., Benn, A., Arana, P.M., Ardron, J.A., Bailey, D.M., Baker, K., Billett, D.S.M., Clark, M.R., Davies, A.J., Durán Muñoz, P., Fuller, S.D., Gianni, M., Grehan, A.J., Guinotte, J., Kenny, A., Koslow, J.A., Morato, T., Penney, A.J., Perez, J.A.A., Priede, I.G., Rogers, A.D., Santos, R.S., Watling, L, The impact of deep-sea fisheries and implementation of the UNGA Resolutions 61/105 and 64/72. Report of an international scientific workshop, National Oceanography Centre, Southampton, 2011, pg 18.

Fish as a Commodity

Reduction in biodiversity, collapse of fish stocks, destruction of marine habitats and the overall decline of the health of marine ecosystems are well recognised and have been widely documented. It is well known that the key pressures on marine ecosystems are fishing activities. Fisheries impact marine ecosystems in multiple ways. Firstly, fishing removes a considerable biomass of fish from the ecosystem, both target species as well as unwanted by-catch such as juvenile species, sea turtles and marine mammals. Secondly, destructive fishing practices such as bottom trawling alters marine habitats by causing extensive physical damage to the sea floor and causes the re-suspension of sediments, which often contain contaminants into the water column.[165] As such, intensive fishing not only results in the decimation of fish species but also affects entire biological communities through habitat destruction, trophodynamic changes and possible genetic composition changes.

As previously mentioned, fisheries management and marine conservation has traditionally operated within two different contexts with different management objectives: achieving sustainable social and economic benefits from fisheries versus marine ecosystem conservation. For many decades fisheries management have been responsible for keeping the impacts of fisheries on the stocks sustainable while providing large catches. The aims of fisheries management in the past principally focussed on maximising catch of a specific target species, whilst ignoring the impacts on predators, prey, habitat and other ecological interactions. The most widely used principle for fisheries management was the concept of maximum sustainable yield (MSY). This approach has however been criticised due to the fact that rather than trying to avoid reaching the limit of MSY, it aims at reaching it therefore putting ecosystems at risk. In that same line, there has been other criticisms of this approach particularly with regards to individual species stock assessments whereby the health of the entire ecosystem is not considered and interactions between target species and the ecosystem is not taken into account. Regardless of that, MSY has been incorporated and accepted as a common approach for fisheries management under many instruments and as a matter of fact was incorporated into UNCLOS in 1982 giving it the status of primary fisheries management goal. Article 61(3) of UNCLOS states:

[165] D, Currie, Synthesis of gaps identified in Co-Chair's BBNJ Workshop, WWF, 2013, pg 1.

"Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global."

To achieve MSY, fisheries management have principally relied on input controls such as restriction on vessel numbers, vessel size and gear type and more recently, in the late 20th century on output controls such as catch quotas such as Total Allowable Catches (TAC) and minimum or maximum size of fish that can be caught. With that said, the principal aim appeared to have remained on managing the harvest of target species with little consideration of output controls to manage the broader ecosystem impacts of fishing activities. Regardless of this, overexploitation of stocks and declines beyond reference points persists.

On the other hand, environment and biodiversity conservation developed independently of fisheries management focussing on terrestrial, freshwater and nearshore systems. Compared to fisheries, biodiversity conservation aims at protecting biodiversity, avoiding extinction and is valued for its intrinsic and functional qualities and for its provision of ecosystem services. With that said, compared to the classic fisheries management approach, the conservation of biodiversity included approaches such as risk of species extinction evaluation, mitigation of associated threats and approaches to protect special ecosystems and habitats.

However, recognising the impacts of fisheries on marine ecosystems, there have been increasing calls of the need to move from the traditional single-species fisheries management approach towards multi-species approach, including assessing the larger ecosystem consequences of fishing with the inclusion of environmental approaches such as the precautionary approach and ecosystem-based approach. As a matter of fact this has been recognised in a number of international instruments. UNCLOS, while predominantly addressing protection of the target species, nevertheless includes references to species that are associated with or dependent upon the harvested target species. The UNFSA which primarily addresses the management of straddling and highly migratory stocks took it a step further and is considerably more explicit about protecting the marine environment in general. For example, parties to the agreement must assess the impacts of fishing, other human activities and environmental factors on target species, species that are part of the same ecosystem and

species that are associated with or dependent upon target species. The agreement also calls for the use of precautionary reference points in achieving these broader conservation objectives, the protection of habitats of special concern, and the use of selective fishing gear to minimise by-catch. Additionally, the FAO's Code of Conduct for Responsible Fisheries explicitly calls for conservation of marine ecosystems and the protection of living marine resources and their environments.

While convergence towards common goals and perspectives has begun, the details remain problematic. This is often due to the fact that the objective of maintaining or restoring marine biodiversity often conflicts with the objective of maintaining or increasing food supplies from the sea, because the level of fishing required to achieve the latter typically compromises the former. Furthermore, although fisheries management have evolved to include conservation objectives, in practice, priority is frequently given to social and economic objectives over conservation objectives.

Although it is recognised that new approaches to fisheries management should not be introduced as it will interfere with the existing frameworks and instruments, it is however recognised that there is a need for the inclusion of fisheries in the new implementing agreement so as to ensure that fisheries and biodiversity conservation progresses in a similar direction. It is known that the sectoral approach to ocean governance is one of the reasons for the current state of affairs. The lack of coordination and cooperation amongst the various bodies is impeding the long term conservation and sustainable use of living resources in ABNJ and omitting such an important element, could significantly weaken the potential impact of the new instrument.

UNCLOS recognised that the problems of ocean space are closely interrelated and need to be considered as a whole, with that in mind, a truly holistic perspective needs to include all the sectors impacting biodiversity, taking into account cumulative impacts, so that there is uniform application of principles, targets and a shared purpose which would facilitate cooperation, coordination and integration in ABNJ. It has been recognised that fisheries bodies have exhibited considerable diversity and varying rates of progress in their approach to incorporating environmental protection principles and biodiversity conservation objectives into their management regimes. The main reasons for this have been the absence of environmental protection principles such as the precautionary approach and ecosystem based management approach in RFBs conventions. Ineffective decision making frameworks which

often allows objecting member States to dilute conservation and management, although is a common phenomenon in international instruments, has also been attributed to the current status of fisheries.

The new agreement aims to be an overarching framework, unifying global vision, objectives, principles and approaches and to be able to truly achieve this, it needs to take a holistic perspective of all activities taking place and impacting biodiversity in ABNJ. Including fisheries in a new overarching mechanism will help tackle the problems associated with fisheries and ensure that there is a global coordinating mechanism that oversees the conservation and management activities of RFBs including RFMOs in ABNJ. Such a mechanism could also help monitor the performance of those bodies against best practice standards, implement robust compliance mechanisms and ensure cross sectoral exchange of information so as to effectively address issues. At the regional level, there already appears to be several regions in the world where different arrangements pertaining to ABNJ issues overlap and interact, particularly with fisheries. With a formal mechanism in place, those interactions would be guided in a way to ensure that it is based on a common purpose and set of common principles.

In that same light, it would also be an opportune time for the new instrument to strengthen existing frameworks, institutions and processes so as to ensure that all sectors are working as effectively as possible. For instance, amongst other things, FAO through COFI has been promoting a series of intergovernmental fora where major international fisheries issues are examined including performance reviews of RFBs and RFMOs established under Articles VI and XIV of its Constitution with the hope of ensuring that those bodies are implementing best practices with regards to the execution of their mandates. With that said, with regards to fisheries bodies, it has been put forward that not all RFBs having been participating, due to the fact that there are RFBs constituted independently of the FAO constitution and furthermore, not all recommendations have been taken into consideration and implemented. This would be a good opportunity to build on those challenges, and ensure that all bodies are cooperating and coordinating. Furthermore, tuna RFMOs have been participating in the Kobe Process since 2007 with the aim of harmonizing the activities of the 5 existing tuna RFMOs. The new instrument could build on such processes and promote the establishment of a similar mechanism involving all RFBs with the formal participation of other concerned bodies with the aim of harmonising the acitivities of all bodies operating in ABNJ. Amongst other things, this will help facilitate addressing global issues such as IUU fishing whereby vessels

engaging in such activities often move between regions concentrating their fishing efforts in regions where conservation and management measures are less stringent or even non-existent. With regards to IUU, it would also a good opportunity for the new instrument to take into account the advisory opinion of ITLOS in its case number 21 concerning the extent of flag state due diligence obligation and responsibility on the high seas regarding vessels carrying out IUU fishing. In that case, the Tribunal concluded that as far as fisheries is concerned, article 94 of UNCLOS should be interpreted to mean that a flag state must adopt the necessary administrative measures to ensure that fishing vessels flying its flag are not involved in activities which will undermine the flag state's responsibilities under UNCLOS regarding the conservation and management of marine living resources. The Tribunal also highlighted that the conservation of living resources is an integral element of the general obligation to protect and preserve the marine environment, set out in Art. 192 of UNCLOS. Given that these provisions (Art. 192 and 94 of UNCLOS) apply to all maritime areas, there is a possibility that a flag state might be under a more general obligation to ensure compliance with conservation and management measures of marine living resources, including those adopted by RFMOs, on the high seas. In light of this, because such responsibilities are less clear-cut on the high seas, which in a way has contributed to the current state of affairs, the new instrument guided by FAO's Port State Measure Agreement and this advisory opinion, could expand on this obligation so as to ensure that flag states are held accountable for the activities of their vessels both in areas within national jurisdiction and in ABNJ.[166]

[166] Tim Stephens, ITLOS Advisory Opinion: Coastal and Flag State Duties to Ensure Sustainable Fisheries Management, American Society of International Law, Volume 19, Issue 8, 16 April 2015.

Fish as MGR

Deep seabed ecosystems and associated genetic resources offer great opportunities in terms of bioprospecting and scientific interest. Seamounts are host to an extremely rich macrofauna, hydrothermal vents provide valuable information with regard to the adaptation of life to extreme conditions and the watercolumn is similar rich in biodiversity. However, the applicable international legal framework for the governance of marine genetic resources in areas beyond national jurisdiction is currently a challenge as there appears to be a lacuna with regards to the status of commercially-oriented activities targeting the biodiversity of these areas in the ABNJ. Despite this ambiguity, MSR and bioprospecting of these resources is taking place and is gathering increasing interest especially for commercial purposes. MGR located in the ABNJ are currently the focus of great interest by the international community particularly due to the discussions that happened in the BBNJ ad hoc working group and the PrepCom meetings that later followed.

Biological diversity, or biodiversity, describes the variety of life on earth, and this diversity operates at various scales, from genes, species to entire ecosystems. Although the term is not used in UNCLOS, article 2 of the CBD defines biodiversity as the variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. Biological resources on the other hand, is understood as genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.[167] Fish are a vital component of marine ecosystems and constitute a major component of marine biodiversity. In that light, since fish are living resources with genes, thus biological resources, they have the potential to be targeted as sources of MGRs for applications in the medical, cosmetic and pharmaceutical industries, especially deep sea species due to their highly developed defense system and special ability to survive and thrive under hostile conditions such as extreme temperatures, varied pressures, low energy and lack of sunlight.[168]

[167] Article 2, Convention on Biological Diversity, adopted 5 June 1992, Rio de Janeiro, Brazil, entered into force 29 December 1993, hereinafter referred to as CBD.

[168] Pooja Bhatia, Archana Chugh, Role of marine bioprospecting contracts in developing access and benefit sharing mechanism for marine traditional knowledge holders in the pharmaceutical industry, In Global Ecology and Conservation, Volume 3, 2015, Page 177.

For instance, deepsea sharks such as the Greenland shark (Somniosus microcephalus) which live in very cold waters in the north Atlantic to depths up to 1800 metres, although not targeted for its genetic properties are often targeted for its liver oil which is used in omega-3 dietary supplements.[169] The hormone calcitonin, extracted from salmon, although not a deepsea species, has been found effective in preventing osteoporosis. Protamine sulfate, also derived from salmon, provides an antidote to the anticoagulant heparin. With that said, increasing interest in these resources is also because of the belief that the abundant biodiversity of the deep sea, although sparsely studied, may rival rainforests in species diversity and that this unique genetic pool may have useful application in treating several diseases including rare diseases that are still considered incurable.

As previously mentioned, the discussions around the inclusion of fish in the instrument has been divergent, partly due to the apparent multiple uses fish has, notably fish targeted as a commodity and fish targeted as a source of MGR. Further complications also appear to surface depending what definition fish is given and depending where the fish is taken, that is to say the seabed versus the watercolumn. During the various stages of discussions, opposing arguments were made, with some arguing for the inclusion of fish in the new instrument with a focus on fish as a source of MGR, while other parties argue that fish are sufficiently regulated by both global instruments such as the UNFSA and FAO instruments and by sectoral bodies such as RFMOs and thus should be left out.[170] However, it is important to make the distinction between harvesting fish for consumption and using fish for its value as a source of MGR, with the interest being in their genetic properties focussing on accessing its biological material. Regardless of the way fish is targeted, it is important to reiterate that at the global level, the abundance of fish species has declined significantly compared to pre-fishery levels and continue to decline. Because the world's oceans remain a source of livelihood for hundreds of millions of people, their sustainable and equitable use must continue to be promoted.

As mentioned above, the framework for the governance and use of MGR in the ABNJ is currently ambiguous. This is partly because the current international legal framework is both

[169] Julius Nielsen, Rasmus B Hedeholm, Jan Heinemeier, Peter G. Bushnell, Jorgen S et al, Eye lens radiocarbon reveals centuries of longevity in the Greenland shark (Somniosus microcephalus), Science, Vol. 353, Issue 6300 12 August 2016, pgs, 702-704.

[170] Letter dated 25 July 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 69th session, Item 75 (a), UN Doc A/69/177 (2014), para 19.

fragmented and not comprehensive failing to address issues such as the conservation of, access to, and benefit-sharing related to such resources. UNCLOS, which is considered the constitution of the ocean failed to address biological resources in the Area focussing mainly on mineral resources. Because of this, the legal regime applying to marine genetic resources on the seabed is unclear, with some arguing that it is analogous to mineral resources and thus part of the common heritage of mankind whereas there are claims stating that such resources should fall under the regime of the high seas, free to be collected and sampled by all.[171] This shows that the international legal regime that applies to these resources is unclear and includes several international instruments such as UNCLOS and CBD, but which however does not specifically address MGRs, MSR and bioprospecting in the ABNJ comprehensively. Reasoning behind this could be the provisions of UNCLOS for example are based on the characteristics of the resources and activities known to the negotiators at the time of negotiations and therefore, novelty uses of the ocean's resources were unable to be factored in the provisions. However, regardless of this UNCLOS is generally accepted as the starting point for handling legal question concerning biodiversity in the ABNJ.

Genetic Resources

Some of the current ambiguities stem from the lack of clear definitions of certain key terms such as marine genetic resources, marine scientific research and bioprospecting. UNCLOS does not specifically refer to biodiversity, biological resources or utilisation of marine genetic resources. However, considering the object and purpose of UNCLOS set out in its preamble, it is arguable that such resources are covered by the provisions of UNCLOS relating to the conservation and management of living resources although not expressly mentioned. Currently, the CBD is the international instrument mandated to regulate to a certain extent genetic resources. The main objectives of the CBD are the conservation of biological biodiversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising of the utilisation of genetic resources.[172] The Bonn Guidelines on Access to Genetic Resources and Fair Equitable Sharing of the Benefits Arising out of their Utilisation and the Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation were later adopted to achieve the objective of the CBD with the latter providing a legal framework for the effective implementation of the third

[171] Ibid, para 29.

[172] Article 1, CBD.

objective of the CBD, namely fair and equitable sharing of benefits. However, under article 4 of the CBD, the jurisdictional scope of the convention is limited to components of biodiversity found in areas within the limits of national jurisdiction and has limited application in ABNJ. In ABNJ, CBD only provides that States must cooperate directly with each other or through competent international organisations for the conservation and sustainable use of biodiversity living much of the MGR in the ABNJ unregulated.

Marine Scientific Research

UNCLOS similarly does not define marine scientific research although it is used throughout the convention. According to Articles 87 and 89 of UNCLOS, MSR is an established freedom of the high seas together with other freedoms such as fishing, navigation and overflight, open to all States but which however needs to be exercised with due regard for other State's interests in their exercise of these same freedoms with it principles outlined in Part XIII of the convention. UNCLOS prescribes that MSR shall only be conducted for peaceful purposes and in line with relevant regulations adopted for the protection and preservation of the marine environment.[173] Furthermore, UNCLOS states that all MSR shall not constitute the legal basis for any claim to any part of the marine environment or its resources.[174] Although UNCLOS contains no clear provisions distinguishing MSR for commercial purposes and those research that does not have direct commercial potential, according to established principles, MSR can be either pure or applied based on the purpose for which the research is undertaken. The objective of pure MSR is to advance human knowledge about the marine environment and it is characterised by the principles of openness, transparency and attracts the obligation to disseminate the information or data collected. On the other hand, applied MSR aims at achieving specific practical purposes which includes commercial ends. However, in practice, the two types often overlap with pure MSR later being used for practical applications and commercially-oriented ventures.

Bioprospecting

Biodiversity prospecting or bioprospecting in the marine environment, which some argues to be a form of applied MSR, although no internationally-agreed definition exists, is understood

[173] Article 240 (a), (d)

[174] Article 241.

as the exploration of biodiversity for commercially valuable genetic and biochemical resources and further as the process of gathering information from the biosphere on the molecular composition of genetic resources for the development of new commercial products.[175] Due to the commercial potential of the research undertaken, the information and data collected during bioprospecting activities are not usually freely available to the public which goes against MSR principles, as such information and data are often confidential and copyrighted. While distinctions can be drawn between pure MSR, applied MSR and bioprospecting, there are inevitable overlaps between the categories, as a research expedition that is organised with the intent to increase human knowledge may result in the discovery of commercially valuable information.

As mentioned above, there appears to be a fine line between marine scientific research and bioprospecting. With that said, regardless of the end result, when fish as a commodity is taken from the marine environment for the purpose of exploiting its tangible parts for consumption, large quantities of those living resources are often taken. However, fish to be used for their genetic properties, when taken from the marine environment, it has been argued that much less is extracted. Despite the relatively smaller extracted quantities and although at present, the exploitation of marine genetic resources is not thought to cause significant environmental impacts, it is difficult to deny that MSR and bioprospecting may have adverse impacts on the marine environment and resources of the ABNJ particularly due to the lack of legal framework governing such activities. Sourcing these resources for their genes, although might bring positive impacts such as broadening our knowledge and understanding of the deep seabed and also the development of life-saving treatments against diseases such as HIV/AIDS and cancer, such practices may also have negative impacts on the marine environment which often includes vulnerable ecosystems. This is because sourcing certain fish species and other forms of biodiversity from areas such as the deep seabed and seamounts may entail physical disturbance or disruption to those delicate ecosystems and organisms living in those areas. Furthermore, in addition to a lack of data and stock status of many of these species, due to the extreme conditions in the deep sea (lack of sunlight, cold depths, scarce food) these fish species are slow growing, slow maturing and long living making them vulnerable to depletion should there be an increased interest in their genetic properties. For example, the Greenland shark considered the world's longest lived vertebrate

[175] Progress Report on the Implementation of the Programmes of Work on the Biological Diversity of Inland Water Ecosystems, Marine and Coastal Biological Diversity, and Forest Biological Diversity - Information on Marine and Coastal Genetic Resources, Including Bioprospecting" (UNEP/CBD/COP/5/INF/7).

and targeted for its liver oil, if not carefully managed risks becoming extinct due to its later maturing nature (around 150 years old).

Taking this into account, as the next phase of negotiations approach, the different issues surrounding this topic needs to be clarified as they will have serious implications on these activities conducted in the ABNJ. The lack of internationally-agreed definitions for these terms appears to be to a certain extent the source of the ambiguities. Defining these terms and their scope is crucial in order to be able to determine the legal regime applicable to genetic resources of ABNJ and should go further to distinguish between them, particularly biological resources, MSR and bioprospecting. Should deep seabed genetic resources fall under the category of common heritage of mankind, products derived from these living resources should also be common heritage of mankind and therefore a regime to share the benefits should also be devised. On the other hand, should MGRs be considered part of the high seas governed by freedom of the high seas, there will be no obligation to share the benefits gained from these marine resources. Another issue that also needs to be tackled is the possibility of targeting fish for other uses, such as for their liver and skin. Certain shark species are often targeted for their liver for the Omega-3 industry. Fish skin has recently been found to be effective in the treatment of skin burns in human. As such, the new instrument should also Regardless of the applicable legal regime, the conservation and sustainable use of these resources should also be the priority for the new regime.

BBNJ and Existing Instruments

It is widely known that the challenges currently faced by the oceans including the ABNJ are closely interrelated. Although there are many sectoral and regional instruments tackling different elements of the ocean, many argue that there is an urgent need for a new global instrument that will be able to guide and adopt comprehensive and cross-sectoral measures based on an ecosystem approach. This is because our oceans are threatened by a variety of anthropogenic threats such as environmental degradation, depletion of fish stocks and loss of biodiversity which is to a large extent affiliated to a lack of an overarching framework for conserving and managing these vast areas. To ensure that an integrated ocean management is achieved, a holistic approach to tackle these threats which includes the protection and conservation of marine ecosystems, implementing ecosystem-based and precautionary approaches to the management of human activities so as to achieve sustainable fisheries and standards and principles guiding new and unregulated activities in these areas is required. A new comprehensive global instrument will ensure that there is consistency in the application of measures, coordination between the various sectors and the representation of national leaders and experts through a multilateral organisation will ensure that there is adequate political support. However, because of the already large number of international instruments dealing with various issues in whole or in part in ABNJ, it is imperative that the new instrument addresses the existing gaps and challenges whilst at the same time striking a balance with the existing instruments and frameworks so as not to reduce their effectiveness and affect the careful balance of rights and obligations.

In light of the above mentioned, although the delegations to the BBNJ working group and PrepComs often demonstrated divergent levels of interest and views regarding the different elements of the BBNJ package, one thing that there was consensus on; the new instrument should engage rather than undermine existing instruments and bodies.[176] This has in fact been guided by paragraph 3 of the UNGA Resolution 69/292 which expressly stated that the new instrument should not undermine existing relevant legal instruments and frameworks and

[176] Preparatory Committee established by General Assembly resolution 69/292: Development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction Chair's overview of the third session of the Preparatory Committee, pg 4.

relevant global, regional and sectoral bodies.[177] Furthermore, there was also agreement that the new instrument should establish general rules to serve as the legal framework for specific global or regional agreements while respecting the careful balance of rights, freedoms and obligations established by UNCLOS.

On the other side of the coin, whilst maintaining the balance between existing instruments, to ensure that the challenges of the existing frameworks are tackled by this new instrument, it is crucial this time around that all activities that take place in the ABNJ and have or may have an impact on the marine biodiversity and the marine environment as a whole should be included. The new instrument should be an overarching instrument aiming to not only cover new activities in the ABNJ but should also expand on existing activities not adequately addressed by existing frameworks. For instance, UNFSA which complements UNCLOS focusses on straddling stocks and highly migratory species leaving out other species which are not straddling or migratory such as discrete fish stocks. Although, FAO over a decade later introduced the International Guidelines for the Management of Deepsea Fisheries in the High Seas, this instrument is merely a framework with no formal legal status. As such, a holistic, ecosystem based and cross sectoral approach to biodiversity management through common guidelines and strengthened coordination and cooperation together with a good performance review mechanism is in dire need which will ensure that all elements of biodiversity together with their impacts are taken into account and appropriate mechanisms are established. To be able to achieve this, NGOs such as WWF have suggested that in addition to common principles such as ecosystem -based approach, precautionary principle, polluter pays principle reflected in international instruments such as UNFA and the Rio Declaration, other principles like common concern of humankind and international cooperation should also be included.[178] An example of the former approaches can be seen in Annex V of the OSPAR Convention where articles 3 and 4 requires Parties to adopt necessary measures to protect and conserve marine ecosystems and biodiversity and at the same time requiring them to cooperate to control the effects of human activities within the area of competence. Such a collaborative approach has the potential to promote coherence

[177] A/RES/69/292 - Development of an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 6 June 2015, paragraph 3.

[178] WWF, Proposed framework and key elements of a third UNCLOS Implementing Agreement WWF submission to the BBNJ PrepCom Chair and to DOALOS for PrepCom3, 5 December 2016, pgs 2-4.

and consistency between the various bodies and at the same time bring about greater understanding and ability to address cumulative impacts.

It is well recognised that marine conservation and management are best delivered at a regional scale guided by global principles and standards. Because of the already established network of bodies addressing a range of issues which also share similar challenges, establishing new bodies are not always favourable. Where such activities are already managed or governed by an existing framework, then the new instrument should aim to support and enhance those frameworks by applying relevant provisions of the existing agreement mutatis mutandis to the new instrument. The instrument should also create incentive for existing bodies to improve their performance and where necessary, expand their mandates to include the established standards and guidelines reflected in the new instrument. In a similar light, in order to appropriately and more effectively designate and operate the various tools under the new instrument, such as MPAs and EIAs, it will be crucial that the instrument cooperate and coordinate with the existing frameworks without weakening the mandates of existing bodies such as RFBs and Regional Seas Conventions. As a matter of fact, regional and sectoral bodies should play an important role in operationalising the new global instrument. This is because these regional bodies are experts in their areas of competence and can carry out initiatives at an appropriate scale taking the characteristics of the particular marine ecosystem into account and have the ability to apply appropriate tools for the context of the new instrument.

Additionally, rather than establishing new bodies to duplicate existing work and further fragment the ABNJ governance, the new instrument should use and improve established mechanisms such as verification measures to verify the compliance to conservation and management measures established by the new instrument. For example, empowered by UNFSA, RFMOs verify the compliance of catch limits agreed by member States. To fulfill this, they monitor the positions of fishing vessels of Member States through such means as fishing vessel satellite monitoring systems. They also verify the compliance of members by requiring that other relevant information such as authorised vessel list, bycatch and infringements are submitted. Given that existing bodies such as RFMO already have a monitoring mechanism, the new instrument could use that as a base to implement and monitor its own measures.

In that same vein, to ensure effective coordination and cooperation with existing mechanisms like the UNFSA and the Part XI agreement, it has been argued that explicit clauses stating what role or function the new instrument should not have in relation to activities in ABNJ should be included. This would be in addition to a clarifying provision, similar to article 4 of UNFSA which states the relationship of the UNFSA with other instruments. With regards to the former proposal, some delegates have expressly stated that the instrument should not deal with the management of fisheries and shipping. This is because there is already a number of instruments both binding and non-binding addressing to various extents such issues in ABNJ. Fisheries for instance, most instruments have been negotiated or developed under the auspices of FAO to support the sustainable management of living marine resources in those areas and are based on relevant rules of international law which also include principles and standards reflected in UNCLOS and the UNFSA. As such, it is felt that if the new instrument takes on board fisheries management, the competence of mechanisms managing such activities in their areas of application will be affected. With that said, it is widely known that the state of the world fisheries is in poor state. As such, a compromised position needs to be established which balances both interests, on the one hand preserving and restoring the state of fisheries and the biodiversity as a whole and on the other hand, does not undermine existing fisheries instruments and frameworks. Article 4 of the OSPAR Convention, addressed this issue of competence by stating that the convention will not adopt measures relating to the management of fisheries but however also included a provision which allowed the Commission to bring to the attention of the respective organisation if there are related concerns, when the need arises. It also goes further to allow the Commission to cooperate and support the actions of the competent authorities so as to achieve the desired outcome of both bodies. A similar position could be adopted to reflect the balance between the need to respect established instruments and frameworks and at the same time leaving space for cooperation and dialogue to improve the current status of the living marine resources.

As the new instrument will be the third implementing agreement under UNCLOS, to ensure consistency and coherence it is essential that the terms used in the agreement such as definitions and words of art, in so far as possible, are consistent with those used in UNCLOS. Furthermore, other definitions not contained in UNCLOS, but found in other international instruments such as UNFSA, CBD and other relevant international instruments, should also be considered and adjusted for the marine biodiversity of areas of beyond national jurisdiction context. However, as expected, views on defining such terms have been divergent

with some expressing their wish for certain specific terms to remain undefined such as MSR and bioprospecting and left to States for interpretation.

Advantages and Disadvantages of including Fisheries in the ILBI

Although traditionally treated as a separate legal object, fish constitute an essential component of marine biodiversity and one most heavily exploited. It has been well documented that the marine environment is a complex ecosystem with many marine species ecologically interdependent on each other. As a result, reduction or depletion of a species could produce a domino effect on other species within the same marine environment. Widespread degradation of marine ecosystems and the apparent failure of existing governance structures to effectively deal with some of the ocean resources particularly fisheries have led to escalating calls for revisiting the current approaches to management of these resources. Traditional fisheries management based on single-species approach has not been able to avoid fish stock depletion. Many argue that the ecosystem-based approach which takes into consideration the interdependence amongst species, as well as amongst species and their habitats, is the most appropriate way to manage fishing activities.[179]

Unsustainable fishing, destructive fishing practices, IUU fishing, underestimation of catches have been iterated in numerous documents as the main threat to marine biodiversity and the marine environment.[180] Regardless of the wide range of actions taken by the international community to strengthen the legal regime of international fisheries, particularly in ABNJ, overexploitation, stock depletion and habitat destruction remain a persistent cause of concern. Furthermore, although various international fisheries instruments are pressing for the implementation of ecosystem-based fisheries management in the ABNJ, the fragmentation of the international fisheries regime hinders the effective implementation of this approach. With the lack of legally binding instruments for discrete high seas stocks and the lack of a comprehensive marine habitat protection framework, sustainable fisheries and the marine ecosystem at large are under increasing threats.

Many argue that the regime of international fisheries law is currently not rooted on sustainability as it does not adequately take into consideration the impact of fishing activities

[179]Joji Morishita, What is the ecosystem approach for fisheries management?, In Marine Policy, Volume 32, Issue 1, 2008, Pages 19-26, ISSN 0308-597X, https://doi.org/10.1016/j.marpol.2007.04.004.(http://www.sciencedirect.com/science/article/pii/S0308597X07000450)

[180] FAO; UNEP.Report of the FAO/UNEP Expert Meeting on Impacts of Destructive Fishing Practices, Unsustainable Fishing, and Illegal, Unreported and Unregulated (IUU) Fishing on Marine Biodiversity and Habitats. Rome, 23–25 September 2009. FAO Fisheries and Aquaculture Report. No. 932. Rome, FAO. 2010.

on the wider marine environment.[181] Reasons for this appears to be multifold and amongst the most debated are inconsistency in the implementation of existing instruments, fragmentation of international fisheries law, gaps in effective coherent structures for fisheries management and the lack of coordination and cooperation between the various instruments and institutions operating in ABNJ. Including fisheries in the new instrument, which is meant to tackle the conservation and management of biodiversity in areas beyond national jurisdiction would ensure that fisheries, one of the main components of biodiversity in the ABNJ is no longer handled in isolation but in a holistic manner together with other biodiversity components.

With paragraph 3 of UN general assembly resolution 69/292 in mind, the new instrument would be a good opportunity to build on the challenges of the current mechanisms dealing with international fisheries governance without undermining those mechanisms. Fisheries have the potential of being integrated in the new instrument both through multiple elements of the package deal such as ABMTs and EIAs as well as through overarching provisions. Including fisheries in the new instrument would help complement the existing fisheries instruments particularly the UNFSA and the FAO instruments and also provide much needed support to sectoral and regional bodies particularly fisheries bodies. The new instrument could place specific obligations on States to take action in relation to fisheries management that complement existing instruments such as requirement for cooperation.[182]

Because of the lack of a formal global coordinating mechanism which takes into account cumulative impacts on biodiversity in ABNJ and the lack of an overarching mechanism coordinating and overseeing conservation and management measures of bodies in the ABNJ, these regional bodies often operate in isolation with each other. This occasionally leads to considerable diversity and varying rates of progress in their management and conservation objectives making it hard to monitor their performance against best practice standards. Operating in isolation makes data exchange and information dissemination difficult and such a lack of cross sectoral exchange of information makes it challenging to address global issues such as the conservation of species, protection of habitats and controlling IUU fishing.
Including fisheries in the new instrument would also be a good opportunity to bridge the gap between fisheries management and biodiversity conservation by serving as a platform to align

[181] FAO Fisheries Department, The ecosystem approach to fisheries.FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 2003. pgs 11-12.

[182] Wright, Rochette, , Blom, Currie, Durussel, Gjerde, K, Unger, High seas fisheries: What role for a new international instrument?, *Study* n03/2016, IDDRI, Paris, France, 2016, pg 17.

and integrate both objectives and ensure that fisheries management and biodiversity considerations are being guided towards a similar path. It is well known that ecosystem management and fisheries management have developed in opposing directions with the former aimed towards meeting conservation goals and ensuring that ecosystems are functioning properly and the latter aimed at satisfying societal and human needs for food and economic benefits. Converging these two paradigms will ensuring that modern environmental principles and standards such as the precautionary approach and ecosystem-based approaches are recognised and incorporated in a more holistic manner which as a consequence balances both human well-being and ecological well-being.

Critical marine habitats are constantly neglected by single-species management which normally does not consider the interactions between species and their habitats and the inclusion of fisheries will ensure that the impacts of fisheries on marine biodiversity in ABNJ is taken in consideration. A comprehensive implementation of ecosystem based management measures in the ABNJ could avoid the depletion of stocks and destructions of vulnerable habitats and ensure a generally more healthy marine environment. Including fisheries in the new instrument would also play an important role in ensuring that there is a more proactive exchange of information between the different sectors operating in the ABNJ. Constant exchange of information would lead to more consultation and strengthened cooperation between the different sectors and bodies which would also promote a deeper and broader sense of stewardship in response to increased awareness of the resources. Increased awareness would improve the quality of measures which could include the adoption of adaptive measures which would ensure that the conservation and management measures are more effective. This would also broaden the scope for partnership and collaborative processes between the sectoral players especially between those sharing common objectives and challenges such as between RFMOs and RSAs. Stakeholders such as NGOs and IGOs would have a broader forum to share their input which would help improve transparency, accountability and the general performance of such bodies.

With the above said, the progress achieved in the regulation of fishing activities and the protection of the marine environment in ABNJ needs to be recognised. UNCLOS, largely accepted as the constitution for the ocean provides the general framework for establishment of conservation and management measures in the high seas, but is not exhaustive in terms of elaborating the mechanisms or tools for conservation. UNCLOS provides that coastal States and States conducting fishing activities in the high seas must seek to agree on the measures

necessary to coordinate and ensure the conservation and development of such stocks.[183] Moreover, its Part XII provides for the protection of marine environment and stresses on the protection of rare or fragile ecosystems, and where living marine resources are depleted, threatened or endangered, their habitats are to be protected.[184] The FAO Compliance Agreement builds on UNCLOS and emphasises the primary responsibility of flag States to exercise control over vessels entitled to fly its and the UNFSA complements and build on Articles 116 to 120 of UNCLOS by promoting the duty of States to cooperate in the conservation and management of straddling and highly migratory fish stocks.

Furthermore, the United Nations through its General Assembly Resolutions has also recognised various fishing-related issues such as sustainable fisheries, deep sea fish stocks, by-catch and discards, and large-scale pelagic drift-net fishing and consequently has adopted multiple resolutions to that effect. In the ABNJ, concrete measures have been set in place to reduce overfishing, by introducing gear restrictions, catch limits, closure of fishing areas, and the fight against IUU fishing has become a priority. Fisheries management has also evolved to become a more holistic management framework with the inclusion of both the precautionary approach and the ecosystem-based approach in numerous international fisheries instruments. Even more recently, world leaders at the World Summit on Sustainable Development in Johannesburg adopted a political declaration and a plan of action in relation to capture fisheries, amongst other things, agreeing to develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive practices, the establishment of marine protected areas.

Discrete stocks, although not managed exclusively under a binding international instrument is catered for by the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas. The FAO Deepsea Fisheries Guidelines addresses and provides policy directions on issues raised in the UNGA resolutions with regards to deepsea fisheries seeks to provide tools to RFMOs to manage deep sea fisheries and for the protection of vulnerable marine ecosystems from fishing activities.

Those large body of instruments and mechanisms, both binding and voluntary recognises the sustainable use and conservation of marine living resources and have been introduced to

[183] Article 63, UNCLOS.

[184] Article 194, UNCLOS.

facilitate and promote the formulation and use of tools different, provide technical advice and disseminate and share good practices with regards to sustainable use and conservation of marine living resources. A closer look at the various instruments, particularly the FAO instruments, it is undeniable that a lot has been done to close gaps in ABNJ so as to attain more sustainable fisheries and healthier marine ecosystems. Area-based management tools such as MPAs, included in the 2011 BBNJ package are tools readily available to RFBs for managing fisheries to protect target and non-target species as well as specific habitats and vulnerable marine ecosystems from undesired impacts from fishing activities. This stems from FAO's voluntary Code for Responsible Fisheries which promotes sustainable and responsible fishing practices including the use of management measures that takes wider ecosystem considerations into account while recommending the use of management measures such as spatial closures and reserved zones. In that respect, numerous RFBs, particularly RFMOs within their area of competence have utilised area-based measures in the context of protecting VMEs and controlling mortality on certain fish stocks. For instance, RFMOs that regulate deep-sea fisheries have begun protecting benthic marine environments in the high seas by introducing closures in which the use of certain gears, particularly bottom-contact ones, is banned. For example, SEAFO has identified a number of vulnerable marine areas and temporarily closed some of these areas to bottom-fishing pending further research. NAFO has closed five seamount areas and 12 additional areas containing high concentrations of corals and sponges to bottom-contact gears. GFCM has prohibited trawling in areas deeper than 1 000 m and has declared three closed areas to protect sensitive habitat. NEAFC also closed five areas on the mid- Atlantic ridge in 2009, added to the five already closed in the Rockall-Hatton Bank area in 2007. [185]

With regards to EIAs, awareness within the fisheries sector has been increasing on the need to assess environmental impacts of fishing activities in marine environment. In that light, FAO has developed a technical framework for fisheries management focussing on the ecosystem approach to fisheries. Although merely a set of guidelines with no formal legal status, the framework includes a risk-based framework to address impacts of fishing including environmental impacts. Furthermore, FAO's International Guidelines for the Management of Deepsea Fisheries in the High Seas amongst other things places importance

[185] FAO, Fisheries management, 4, Marine protected areas and fisheries, FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 4. Rome, FAO, 2011, Pg 161.

on EIAs by encouraging flag States and RFMOs to conduct assessments to establish if deepsea fishing activities are likely to produce significant adverse impacts in a given area.

The above shows that it is there is a plethora of instruments available to effectively manage fisheries in ABNJ. The broad principles and approach for effective and responsible fisheries management mentioned above are not new. As such, do we need to include fisheries as a whole or in part in the new instrument to include to the already long list of fisheries instrument? Is there a legal gap to fill or should States and regional bodies simply take their responsibility in fulfilling their obligations under those existing international instruments with the latter revising its mandate and mode of operation to reflect those modern principles and approaches?

The Importance of the new ILBI to SIDS

Small Island Developing States (SIDS) are a distinct group of developing countries that face common social, economic and environmental challenges. These include small populations, high dependency on development assistance and international trade, susceptibility to external shocks, and high vulnerability to the impacts of climate change. For most SIDS, the ocean constitute a much larger geographic area than their land territory, especially when their EEZ is taken into account. The Seychelles, for example, have a land area of approximately 455 square kilometres and an EEZ of approximately 1.4 million square kilometres.

While oceans play an important role in everyone's lives, no one is more dependent on them than small, vulnerable and isolated island developing states surrounded by the sea who attaches great economic, social, cultural and environmental importance to it. The importance of the oceans to SIDS has been widely acknowledged by the international community and was first recognised in UNCED's Agenda 21 in 1992 which highlighted the unique relationship that SIDS have with the ocean. In light of this, SIDS have taken an active role in the development of ocean affairs and continue to be active participants on such matters at the global, regional and national levels. This commitment to matters concerning oceans is underscored by the fact that most SIDS who are able to do so have ratified UNCLOS and other important ocean-related instruments particularly fisheries instruments.

Fisheries

Fishing, arguably one of the most valuable ecosystem provisioning services to people, takes place both in coastal areas and in areas beyond national jurisdiction notably the high seas. Over the past decades, fishing has expanded into the high seas because of overexploitation of living marine resources within areas of national jurisdiction, increasing demand for fish driven by increasing world population and rising incomes and technological advancement allowing vessels to go farther from the coast. Furthermore, inadequate management of those areas has led to overfishing of many economically important fish stocks and the fisheries exploiting these resources have been associated with high levels of by-catch of threatened or vulnerable species and habitat destruction.

Fisheries are particularly important to SIDS as a source of food, income and for the livelihoods of many communities. Fish exports of SIDS in 2012 represented about 1.7 per

cent of their total gross domestic product (GDP). In some SIDS, fisheries can contribute 10 per cent or more of GDP and furthermore, may account for up to 90 per cent of animal protein in their populations' diet, with national fish consumption as much as four times higher than the global average per capita.[186] Because it is hard for these economies to diversify in the short term, fishing activities will continue to represent a large part of economic and food output for many SIDS for many years. However, as their population continues to grow, SIDS need to explore options to keep benefiting from this activity and resource while ensuring sustainable management of fish stocks.

In that light, with the alarming status of many of the world's fish stocks, efforts are urgently required to ensure that fishing activities are fully and effectively regulated and monitored in order to reduce overexploitation of fish stocks and at the same time help restore marine ecosystems. The status of a number of highly migratory, pelagic species such as tunas and billfishes is particularly worrying with stocks of such species being estimated to have declined on average by 60% during the last half century with majority of these stocks currently fully or overexploited.[187] The depletion of stocks in the high seas can influence the availability of fish in adjacent coastal State's EEZ and thus directly impact on the economy and livelihood of many SIDS. This is because many large fish species such as tunas and billfishes forage in both EEZs and the high seas in the course of a year, exploiting different regions of high prey availability. Because of the straddling nature of those species, mismanaging the high seas would also have direct spill-over effects on neighbouring States such as SIDS.

While it is recognised that effective implementation of the various key fisheries instruments would play a pivotal role in the improvement of the world's fish stocks and marine habitat, the current opportunity to include such elements in an overarching framework should be considered as it would offer the opportunity to serve as a platform to ensure that key fisheries principles and approaches, reflected in key instruments are incorporated and harmonised. The current species by species management approach could be improved and the broader marine ecosystem taken into consideration. This would essentially support the existing frameworks,

[186] UNCTAD, The Oceans Economy: Opportunities and Challenges for Small Island Developing States, UNCTAD/DITC/TED/2014/5 UNITED NATIONS PUBLICATION, 2014, pg 7.

[187] Juan-Jordá MJ, Mosqueira I, Cooper AB, Freire J, Dulvy NK. Global population trajectories of tunas and their relatives. Proceedings of the National Academy of Sciences of the United States of America. 2011;108(51):20650-20655. doi:10.1073/pnas.1107743108.

by complementing, uniting and strengthening those instruments so as to bring much needed uniformity in the application of approaches, incorporation of reviewing mechanisms for regional bodies which implement those principles and approaches, enhanced cooperation and coordination amongst those various bodies and more transparent and effective living resource management systems, whilst at the same time ensuring that existing instruments such as UNFSA are not undermined or watered down. Furthermore, the new instrument will also facilitate the setting up and use of area-based management tools such as MPAs in the high seas which can further help protect and restore biodiversity.

Capacity Building and Transfer of Marine Technology

UNCLOS contains provisions on MSR and transfer of marine technology. Part XIII and XIV of UNCLOS highlight the importance of technology transfer, particularly in and to developing countries which also includes SIDS. It calls for all States to cooperate in accordance with their capabilities to promote the development and transfer of marine science and marine technology on fair and reasonable terms and conditions in order to help developing countries to access the benefits of oceans and seas. Technology and innovation are needed to take advantage of benefits that can be derived from the ocean in a sustainable manner. Capacity building and the transfer of marine technology play a key role in the development of less developed countries particularly through the exploitation and exploration of marine resources.

As such, the new instrument can provide an effective platform for enhancing collaboration and coordination for capacity building and transfer of marine technology to developing States currently disadvantaged from participating and benefiting from activities conducted in ABNJ. This could include a mechanism to identify the capacity building and technology transfer requirements of SIDS to better address their challenges. In order to make maximum use of resources, particularly for capacity building, in addition to creating a trust fund, this mechanism could go further to promote cooperation and coordination on the regional level as most often than not, SIDS within a particular region suffer from the same challenges. Such an approach would not only help these States gain from these resources which are usually associated with high costs and high level of expertise but also enable these States to actively contribute towards the conservation and sustainable use of marine biological biodiversity of ABNJ. In that light, many delegates have expressed their views on the need to improve and expand capacity building and technology transfer, as those efforts can be used to help achieve global conservation objectives through the effective participation of all States. The capacity

building mechanism could be created to assist SIDS and other developing states in drafting legislation and associated regulatory, scientific and technical requirements on both national and regional level and to also assist with designing institutions to enable them to effectively implement the various components of the new instrument. Additionally, it could also include other forms of assistance such as how to effectively conduct environmental impact assessments or participate in a strategic environmental assessment. Other forms of capacity building opportunities could also be offered such as through specialised fellowships to help build capacity in those countries. A good model is the United Nations Nippon fellowship which targets government officials from developing countries working in ocean affairs.

In addition to capacity building, the transfer of marine technology is equally important and this is recognised in Part XIV of UNCLOS. As mentioned above, less developed countries such as SIDS are disadvantaged from participating in activities in ABNJ due to the high costs and expertise associated with such activities. With that said, these areas are the source of a huge variety of life forms including macro and microorganisms. Although sparsely studied, living marine resources of ABNJ have huge potential in food, biochemical, pharmaceutical, cosmetics and bioenergy industries. Applied MSR and bioprospecting offers opportunities for benefit sharing, transfer of marine technology and the creation of scientific capacities which are important issues to many States. The new instrument could establish a mechanism to ensure equitable distribution of benefits from these resources through innovative ways such as transfer and access to instruments, vessels and methodologies, access to samples, data and information and international collaboration and cooperation on scientific research projects.

Climate Change Considerations

The ocean plays an important role in moderating the Earth's climate. About 93 per cent of heat generated by carbon-dioxide emissions and about 26 per cent of the carbon-dioxide itself are absorbed by the ocean. The ocean's service in reducing the dangerous effects of climate change take place largely in the areas of the ocean beyond national boundaries which account for about 64 per cent of the ocean's surface and 95 per cent of its volume.[188] Carbon dioxide absorption does not only cause an increase in ocean temperatures leading to melting ice caps causing rising sea level, affect weather patterns causing more powerful tropical storms but

[188] Carlos Espósito, James Kraska, Harry N. Scheiber, Moon-Sang Kwon, Ocean Law and Policy: Twenty Years of Development Under the UNCLOS Regime, edited by Carlos Espósito, James Kraska, Harry N. Scheiber, Moon-Sang Kwon, Leiden; Boston: Brill/Nijhoff, 2016, pgs 388-389.

also causes deoxygenation and acidification which alters open and deep ocean environments causing physical, chemical and biological changes. The projected impacts of these changes in ABNJ which contain a large percentage of the ocean's biodiversity include loss of breeding grounds, impacts on breeding success, changes in foraging habits due to changes in plankton availability, changes in species growth rates, maturity age and natural mortality, changes in migration patterns, poleward movement of species to colder waters leading to a decrease of primary productivity in the tropics, the shifting of whole marine ecosystem as species respond to shifting boundaries in ocean temperature amongst others.[189] Whatever the complexity of interactions and feedbacks between these different mechanisms, there is the possibility that it will result in the spatial redistribution and changing sustainable yield of fisheries, with the potential to impact both the exploitation and management of fisheries affecting fishers, communities and economies reliant on those resources, particularly less developed countries such as SIDS.[190] With that in mind, given the impacts of climate change are currently estimated to be on a time scale of decades, it would be an opportune time, through the new instrument to ensure that the cumulative impacts of climate change are taken into account and a multi-disciplinary approach is taken to provide adaptation and mitigation alternatives. This could be through the use of environmental impact assessments and strategic environmental assessments to assess the impacts associated with anthropogenic stressors on marine ecosystems and on the provision of ecosystem services. Additionally, tools such as area based management mechanisms could be designed and planned in a way to take into account the effects of climate change and find ways to reduce the anthropogenic stresses on the ecosystem so as to minimise the abovementioned effects.

Avoiding disproportionate transfer of burden of conservation to SIDS

It is well known that SIDS have limited capacity and experiences financial constraints, as has been recognised in various international instruments such as the SAMOA Pathway. In light of this, the new instrument should take into account their special case and avoid a disproportionate transfer of burden to SIDS. Provisions similar to articles 24 and 25 of

[189] Submission by IUCN following the Second Session of the Preparatory Committee on the Development of an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, 5 December 2016, pg 10.

[190] Cheung, Lam, Sarmiento, Kearney, Watson, et al, Large-scale redistribution of maximum fisheries catch potential in the global ocean under climate change. Global Change Biology, 2010, pgs 24-55.

UNFSA could be incorporated to ensure that SIDS are not burdened disproportionately and at the same time ensure that SIDs can effectively participate and contribute in the conservation and management of biodiversity in ABNJ.

Extended Continental Shelves

States have acknowledged that the new instrument for the conservation and sustainable use of marine biodiversity in ABNJ should take into account the interests of coastal States with continental shelves extending beyond 200nm. While coastal States have sovereign rights for the purpose of exploring and exploiting the natural resources of the extended continental shelf, the water column above is considered high seas and open to all States.[191] Any consideration of protecting biodiversity such as through the creation of MPAs or other activities conducted in the high seas, such as fishing will need to take into account that some of these activities could affect the rights of coastal States and/or have effects on their extended continental shelves.[192] Similarly, coastal States when exercising their rights over the resources of their extended continental shelves need to ensure that their activities does not affect biodiversity of ABNJ as reflected in article 194 of UNCLOS. However, it should be highlighted that parties to CBD are under an obligation to take steps to protect biodiversity in situ falling under their jurisdiction. Such steps might include establishing marine protected areas, rehabilitating degraded ecosystems, and managing biological resources to ensure conservation and sustainable use.[193] In such instances, the new instrument and the CBD can complement each other to achieve that end goal. In light of the above, it is important that the new instrument does not interfere with the rights and obligations of coastal States and the international community established by UNCLOS. Coastal States will want to ensure that any measures implemented under the new instrument such as through ABMT does not interfere with its right over sedentary species or in its exploration and exploitation of the continental shelf for mineral resources. There is a need to strike a careful balance between the competing interests; protection of biodiversity and coastal States' rights so as to avoid future conflicts that undermines the new instrument.

[191] Articles 76, 77, 78 and 87, UNCLOS.
[192] Joanna Mossop, The relationship between the continental shelf regime and a new international instrument for protecting marine biodiversity in areas beyond national jurisdiction, ICES Journal of Marine Science, July 2017, pg 2.
[193] Article 8, CBD.

Conclusion

This paper examined the inclusion of fish and fisheries in a new internationally legally binding instrument for the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction under the UN Convention on the Law of the Sea. The ocean is one of the main repositories of the world's biodiversity and evidence continues to emerge demonstrating the essential role of marine biodiversity in maintaining a healthy planet and social well-being. Marine ecosystems provide a series of essential goods and services which contribute directly and indirectly to poverty eradication, sustained economic growth, food security and sustainable livelihood inclusive of work, while hosting large biodiversity richness and mitigating the impacts of climate change.

Identified as a serious cause of concern by the international community, marine biodiversity loss has been attributed to a series of factors mainly the continuous intensification of human activities in and on the oceans, non-compliance by States to regional and international instruments and non-participation by States in those instruments. Furthermore, it is recognised that the problems faced today in respect with high seas fisheries are in part inherent in the traditional high-seas regime that existed before the development of the EEZ regime which reflect the tension between the community interest in the conservation of the resources of the high seas and the preservation of the marine environment and the interest of individual States in the use and exploitation of these resources through the exercise of their freedom to fish on the high seas.

It is recognised that legal obligations towards biodiversity protection can only be achieved through the conservation and sustainable use of all its components which encompasses fish and fisheries. In that light, fishing activities have been highlighted as being one of the main threats in ABNJ due to the direct and indirect impacts of such activities on marine biodiversity and the wider marine environment. Notwithstanding the wide range of actions taken by the international community which includes the production of a large body of instruments in an attempt to strengthen international fisheries governance including the promotion of long-term sustainable outcomes in fisheries and the ecosystem of which they are part of, overexploitation, fish stock depletion, IUU fishing and marine environment degradation continue to remain a strong point of concern.

With that said, it is important to highlight that commercial exploitation of marine living resources in areas beyond national jurisdiction is increasing in scale and in intensity due factors such as overexploitation of inshore fisheries, technological advancement allowing vessels to go farther out at sea and the extension of coastal State resource jurisdiction up to 200 nautical miles. It is estimated that 10 to 20 per cent of the world's commercial fish catch is now derived from ABNJ. Despite this, high seas fisheries are not managed according to best scientific advice and best practices, a reality that is taking a toll on fish stocks and the marine environment. According to FAO, nearly 90 per cent of the world's fish stocks are fully exploited, overexploited or depleted.[194] Furthermore, deepsea fisheries which is gaining momentum still lacks a global instrument regulating its exploitation. According to FAO, nearly 90 per cent of the world's fish stocks are fully exploited, overexploited or depleted.[195]

As a way to tackle the problems associated with high seas fisheries and the degradation of the marine environment, it is recommended that fisheries, being the activity with the most impact on biodiversity in ABNJ is included in the new overarching instrument. The argument that fisheries is already adequately regulated although has some degree of merit, does not positively reflect on the status of the world's fisheries and the status of biodiversity in general. The new instrument offers fresh opportunities to address the current challenges by making fishing more sustainable, catering for synergies including more coherence and integration within fisheries bodies. Fisheries bodies particularly RFMOs have an important role to play in the conservation and management of biodiversity in ABNJ. Although they mainly focus on fisheries management, there is the opportunity to ensure that both components of biodiversity, being the conservation and management of biological resources and ecosystems, and the protection of the marine environment are fully integrated. In that spirit, since most elements of the BBNJ package can be seen from a fisheries perspective, RFMOs should play an instrumental role in operationalising the various elements of the new global instrument such as EIAs and ABMTs.

However, given their current non-comprehensive and non-unified legal and institutional mechanisms in place, they are not as effective as they could be. In light of this, fisheries bodies particularly RFMOs have exhibited considerable diversity and varying rates of progress in their management regimes. The main reasons for this have been due to a focus on

[194] FAO, The State of World Fisheries and Aquaculture 2016, Rome, 2016, Pages 3-4

[195] Ibid.

single species and the absence of environmental protection principles such as the precautionary approach and ecosystem based management approach which are key approaches to integrating fisheries and biodiversity. The new agreement promises to be an overarching framework, unifying global best practices, standards, objectives, principles and approaches by taking a holistic perspective of all activities taking place and impacting biodiversity in ABNJ. In light of this, fisheries bodies need to be reformed to reflect the changes in mandates and objectives.

It is acknowledged that there exist both a regulatory gap and an implementation gap with regards to biodiversity conservation and fisheries management. It is arguable that the status of the world's fish stocks and the marine environment at large would improve if key instruments were ratified and implemented. As such, the new instrument should produce a robust, adaptive and regulatory framework which strengthens institutions and increases adherence and participation in specific fisheries instruments such as UNFSA and FAO instruments, bearing in mind the need to not undermine existing instruments and bodies. It should include a framework which monitors the performance of fisheries bodies against best practices and standards strengthen compliance mechanisms and promote active cross sectoral exchange of information which is currently lacking. It is acknowledged that a multidisciplinary and complementary approach to management is necessary. With that in mind, the new instrument should address both regulatory and governance gaps under the existing framework, i.e cover all stocks including discrete high seas fish stocks, and resolve the other problems associated with fisheries, which also includes bridging the gap between fisheries management and general biodiversity conservation. With regards to coherence and integration, it is acknowledged that the current sectoral approach to ocean governance is one of the reasons for the declining status of the ocean's health. The lack of coordination, integration and cooperation among the various bodies is impeding the long term conservation and sustainable use of living resources in ABNJ. UNCLOS recognised that the problems of ocean space are closely interrelated and need to be considered as a whole. Furthermore, under Part XII of UNCLOS States are under a general obligation to protect and preserve the marine environment.[196] Article 197 of UNCLOS states that States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features.

[196] Article 192, UNCLOS.

In that spirit, the new instrument should promote cross-sectoral and inter-institution cooperation so as to ensure uniform application of principles, approaches whilst facilitating cooperation, coordination and integration in ABNJ.

On the other side of the coin, the issue of whether to include or exclude fish in the definition of MGRs should be resolved. While MGR is not defined in UNCLOS it is generally understood by reference to the definition contained in CBD. Similarly to fisheries management, there have been divergent views on whether to include or exclude fish from the scope of the definition in the new instrument. Fish is a vital component of marine ecosystems and constitute a major component of marine biodiversity. Being marine living resources with functional units of heredity, thus biological resources, they have the potential to be targeted as sources of MGRs for applications in the medical, cosmetic and pharmaceutical industries. As such, it is acknowledged that although fish should be included as a source of MGR, it should not be explicitly included or excluded. Reasoning behind this is that firstly, explicitly including fish might cause confusion with its end uses, i.e consumption or MSR/bioprospecting. Secondly, definition-wise explicitly including fish as a source of MGR and leaving out other living marine resources which can be used as sources of MGR such as marine mammals might cause confusion. Thirdly, explicitly excluding fish altogether might cause further complications by being seen as opposition to categorising MGRs as common heritage to mankind. As such, it is advisable that fish is included as a form of MGR but not explicitly included in the definition.

To conclude, in order to ensure that the new instrument is truly comprehensive and integrated and sufficiently addresses the current challenges faced by ABNJ, it is imperative that it considers and include all activities impacting biodiversity and at the same time addresses all gaps in the current framework. With that said, the new instrument should not exclude fish and fisheries any more than it should exclude any other living marine resource or activity impacting and forming part of biodiversity in ABNJ

Bibliography

Documents, Reports, Articles and Journals

1. A D Rogers, M Gianni, The Implementation of UNGA Resolutions 61/105 and 64/72 in the Management of Deep-Sea Fisheries on the High Seas. Report prepared for the Deep-Sea Conservation Coalition. International Programme on the State of the Ocean, London, United Kingdom, 2010

2. Agnew, Pearce, Pramod, Peatman, Watson, Beddington, et al., Estimating the Worldwide Extent of Illegal Fishing. PLoS ONE 4(2): e4570, 2010, https://doi.org/10.1371/journal.pone.0004570

3. B.C. O'Leary, R.L. Brown, D.E. Johnson, H. von Nordheim, J. Ardron, T. Packeiser, C.M. Roberts, The first network of marine protected areas (MPAs) in the high seas: The process, the challenges and where next, In Marine Policy, Volume 36, Issue 3, 2012.

4. Cheung, Lam, Sarmiento, Kearney, Watson, et al, Large-scale redistribution of maximum fisheries catch potential in the global ocean under climate change. Global Change Biology, 2010, pgs 24-55.

5. Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, Destructive Fishing Practices in the High Seas and Vulnerable Deepsea Ecosystems, Brussels, 2007.

6. Da-Rocha, García-Cutrín, Prellez , Sempere, The social cost of fishery subsidy reforms Marine Policy, Volume 83, 2017.

7. D, Currie, Synthesis of gaps identified in Co-Chair's BBNJ Workshop, WWF, 2013.

8. FAO Fisheries Department, The ecosystem approach to fisheries.FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 2003.

9. FAO, The State of World Fisheries and Aquaculture 2016, Rome, 2016.

10. FAO, FAO Fisheries and Aquaculture Report, FAO/UNEP Expert Meeting on impacts of destructive fishing practices, unsustainable fishing, and illegal, unreported and unregulated (IUU) fishing on Marine Biodiversity and Habitats, Report No. 932, Rome, 25 September, 2009.

11. FAO, Implementation of the 1995 FAO Code of Conduct for Responsible Fisheries - Web site. International Plans of Action, FAO Fisheries and Aquaculture Department, Rome. Updated 18 April 2016.

12. FAO, Report of the Performance Review of the South West Indian Ocean Fisheries Commission, FAO, 2013.

13. FAO, Performance Reviews by Regional Fisheries Bodies: Introduction, Summaries, Synthesis and Best Practices, Volume 1, CCAMLR, CCSBT, ICCAT, IOTC, NAFO, NASCO NEAFC, FAO Fisheries and Aquaculture Circular No 1072, FIPI/C1072, UNFAO, 2012.

14. FAO; UNEP.Report of the FAO/UNEP Expert Meeting on Impacts of Destructive Fishing Practices, Unsustainable Fishing, and Illegal, Unreported and Unregulated (IUU) Fishing on Marine Biodiversity and Habitats. Rome, 23–25 September 2009. FAO Fisheries and Aquaculture Report. No. 932. Rome, FAO. 2010.

15. Giuseppe Notarbartolo di Sciara, The Pelagos Sanctuary for the conservation of Mediterranean marine mammals: an iconic High Seas MPA in dire straits, 2nd International Conference on Progress in Marine Conservation in Europe 2009 2-6 November 2009 OZEANEUM / DMM, Stralsund, Germany.

16. Global Ocean Commission, Improving accountability and performance in international fisheries management, Global Ocean Commission, November 2013, pg 1, accessed on http://www.globaloceancommission.org/wp-content/uploads/POP-9_Reform-of-Fisheries-Management_FINAL-1.pdf.

17. G. Ortuño Crespo, D. C. Dunn, Policy Brief: A review of the impacts of fisheries on open-ocean ecosystems, Nereus Scientific and technical briefs on ABNJ series, NipponFoundation-Nereus Program, August 2016.

18. IISD, Report of the 4th Session of the Preparatory Committee Established by the UN General Assembly Resolution 69/292: Development of an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, 21 July 2017, New York.

19. IOTC-PRIOTC02 2016, Report of the 2nd IOTC Performance Review, Seychelles 2-6 February & 14-18 December 2015, IOTC-2016-PRIOTC02-R[E].

20. IOTC-PRIOTC02 2016, Report of the 2nd IOTC Performance Review, Seychelles 2-6 February & 14-18 December 2015, IOTC-2016-PRIOTC02-R[E].

21. Joanna Mossop, The relationship between the continental shelf regime and a new international instrument for protecting marine biodiversity in areas beyond national jurisdiction, ICES Journal of Marine Science, July 2017.

22. Joji Morishita, What is the ecosystem approach for fisheries management?, In Marine Policy, Volume 32, Issue 1, 2008.

23. Juan-Jordá, Mosqueira, Cooper, Freire, Dulvy, Global population trajectories of tunas and their relatives. Proceedings of the National Academy of Sciences of the United States of America. 2011;108(51):20650-20655. doi:10.1073/pnas.1107743108.

24. Juan Manue Gómez-Robledo and Philip D. Burgess, Transmittal Letter dated 6 March 2006 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, A/61/65, United Nations General Assembly, 61st session

25. Judith Swan, Fishing Vessels Operating Under Open Registers and The Exercise of Flag State Responsibilities: Information and Options, FAO Fisheries Circular. No 980, Rome, FAO, 2002.

26. Julius Nielsen, Rasmus B Hedeholm, Jan Heinemeier, Peter G. Bushnell, Jorgen S et al, Eye lens radiocarbon reveals centuries of longevity in the Greenland shark (Somniosus microcephalus), Science, Vol. 353, Issue 6300 12 August 2016.

27. Kapil Narula, Ocean governance: strengthening the legal framework for conservation of marine biological diversity beyond areas of national jurisdiction, Maritime Affairs: Journal of the National Maritime Foundation of India Vol. 12, Iss. 1,2016.

28. KL Cochrane, DJ Doulman, The rising tide of fisheries instruments and the struggle to keep afloat: Philosophical Transactions of the Royal Society B: Biological Sciences, 2005.

29. Letter dated 15 May 2008 from the Co-Chairpersons 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 addressed to the President of the General Assembly, UN Doc A63/79, para 13.

30. Letter dated 25 July 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, 69th session, Item 75 (a), UN Doc A/69/177 (2014), para 19.

31. Letter dated 15 May 2008 from the Co-Chairpersons 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 addressed to the President of the General Assembly, UN Doc A63/79, para 40.

32. Morato, Penney, Perez, Priede, Rogers et al, The impact of deep-sea fisheries and implementation of the UNGA Resolutions 61/105 and 64/72. Report of an international scientific workshop, National Oceanography Centre, Southampton, 2011.

33. OECD, Strengthening Regional Fisheries Management Organisations, OECD, 2009, pg 11, http://browse.oecdbookshop.org/oecd/pdfs/product/5309031e.pdf.

34. Palitha T. B Kohana and Liesbeth Lijnzaad, Letter dated 5 May 2014 from the Co-Chairs of the Ad Hoc Open-ended Informal Working Group to the President of the General Assembly, A/69/82, United Nations General Assembly, 69st session.

35. Progress Report on the Implementation of the Programmes of Work on the Biological Diversity of Inland Water Ecosystems, Marine and Coastal Biological Diversity, and Forest Biological Diversity - Information on Marine and Coastal Genetic Resources, Including Bioprospecting" (UNEP/CBD/COP/5/INF/7).

36. Recommendations of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction to the sixty-ninth session of the General Assembly 23 January 2015.

37. Report 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, UN Doc A/61/65, 20 March 2006.

38. Report of the IOTC Performance Review Panel, IOTC, January 2009.

39. Rolf Willmann, International Instruments for Managing Fisheries in the Indian Ocean, FAO, 2001.

40. SIOFA, Report of the Second Meeting of the Scientific Committee of the Southern Indian Ocean Fisheries Agreement, La Reunion, 13-17 March 2017.

41. SIODFA 2016, Southern Indian Ocean Deep Fishers Association Benthic Protected Areas in the Southern Indian Ocean, SIODFA Technical Report XVII 16/02.

42. Summary of the Eighth Round of Informal Consultations of State Parties to the UN Fish Stocks Agreement, Earth Negotiations Bulletin, 2009.

43. T Pitcher, M Lam; Fish commoditization and the historical origins of catching fish for profit, Maritime Studies, Springer Berlin Heidelberg, February 2015, accessed on http://link.springer.com/article/10.1186%2Fs40152-014-0014-5#

44. UN General Assembly, The Impacts of Fishing on Vulnerable Marine Ecosystems: Actions taken by States and Regional Fisheries Management Organizations and Arrangements to give effect to paragraphs 66 to 69

of General Assembly Resolution 59/25 on sustainable fisheries, regarding the impacts of fishing on vulnerable marine ecosystems, United Nations General Assembly, 61st Session.

45. United Nations, Report of the United Nations Conference on Environment and Development, Conference on Environment and Development, 13 August 1992, Rio de Janeiro.

46. W Edeson, Fisheries and Aquaculture topics: FAO Compliance Agreement-Topics Fact Sheets In, FAO Fisheries and Aquaculture Department, FAO, Rome, 27 May 2005.

47. Weaver, P.P.E., Benn, A., Arana, P.M., Ardron, J.A., Bailey, D.M., Baker, K., Billett, D.S.M., Clark, M.R., Davies, A.J., Durán Muñoz, P., Fuller, S.D., Gianni, M., Grehan, A.J., Guinotte, J., Kenny, A., Koslow, J.A., Pooja Bhatia, Archana Chugh, Role of marine bioprospecting contracts in developing access and benefit sharing mechanism for marine traditional knowledge holders in the pharmaceutical industry, In Global Ecology and Conservation, Volume 3, 2015.

48. Wright, Rochette, , Blom, Currie, Durussel, Gjerde, K, Unger, High seas fisheries: What role for a new international instrument?, Study n03/2016, IDDRI, Paris, France, 2016.

Books

1. Alex G O Elferink, The Indian Ocean and the Law of the Sea: A work in Progress, in The Oxford Handbook of Law of the Sea, Edited by Donald Rothwell, Alex Oude Elferink, Karen Scott, and Tim Stephens, Oxford, 2015.

2. Carlos Espósito, James Kraska, Harry N. Scheiber, Moon-Sang Kwon, Ocean Law and Policy: Twenty Years of Development Under the UNCLOS Regime, edited by Carlos Espósito, James Kraska, Harry N. Scheiber, Moon-Sang Kwon, Leiden; Boston: Brill/Nijhoff, 2016.

3. Grotius Hugo; Edited by Scott, James; Brown; The Freedom of the Seas, or the Right Which Belongs to the Dutch to take part in the East Indian Trade, Oxford University Press, 1916.

4. Hey, Ellen (Ed); Developments in International Fisheries Law, Kluwer Law International, Netherlands, 1999.

5. M. A. Palma, M. Tsmenyi and W. Edeson, Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing, Martinus Nijhoff Publishers, Leiden, 2010.

6. M Dahmani; The Fisheries Regime of the Exclusive Economic Zone, Martinus Nijhoff Publishers, The Netherlands, 1987.

7. M D Vattel, The Law of Nations– Book I Ch. XXIII Sec. 281, accessed on http://www.constitution.org/vattel/vattel_01.htm

8. M Lodge,Managing International Fisheries: Improving Fisheries Governance by Strengthening Regional Fisheries Management Organizations, ENERGY, ENVIRONMENT AND DEVELOPMENT PROGRAMME EEDP BP 07/01, Chatham House, 2007.
9. Palma et al; Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing, Vol. 6, Brill, Leiden, The Netherlands, 2010.

10. Robin Warner, Protecting the Oceans Beyond National Jurisdiction: Strengthening the International Framework, Martinus Nijhoff Publishers, Leiden, The Netherlands, 2009.

11. S Borg, The Conservation of Marine Living Resources under International Law, in IMLI Manual on International Law, Edited by Attard, Fitzmaurice Martinez, Volume 1, Oxford University Press, UK, 2014.

12. S K Verma; An Introduction to Public International Law, Prentice Hall of India, India, 1998.

13. S M Garcia, J Rice and A Charles, Governance of Marine Fisheries and Biodiversity Conservation: Convergence or Coevolution? in Serge M Garcia, Jake Rice and Anthony Charles (eds), Governance of Marine Fisheries and Biodiversity Conservation, Wiley-Blackwell, 2014.

14. Wright, G., Rochette, J., Druel, E., Gjerde, K, The long and winding road continues: Towards a new agreement on high seas governance, Study N01/16, IDDRI, Paris, France, 2015.

15. Yoshinobu Takei, Filling Regulatory Gaps in High-Seas Fisheries: Discrete High Seas Fish Stocks, Deep-Sea Fisheries and Vulnerable Marine Ecosystems, Martinus Nijhoff Publishers, 2013.

Conventions, Resolutions and other Instruments

1. 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, adopted 4 December 1995, New York, entered into force 11 December 2001.

2. Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High seas, adopted on the 24 November 1993, Rome, Came into force 24 April 2003.

3. A/RES/69/292 - Development of an international legally-binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, 2015.

4. A/RES/69/109 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2014.

5. A/RES/59/25- Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2004.

6. A/RES/58/14 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2003.
7. A/RES/61/105 - Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments, 2006.

8. A/RES/46/215 - Large-scale pelagic drift-net fishing and its impact on the living marine resources of the world's oceans and seas, 1991.

9. Convention on the Continental Shelf, adopted 29 April 1958, Geneva, entered into force 10 June 1964.

10. Convention on the High Seas adopted 29 April 1958, Geneva, entered into force 30 September 1962.

11. Convention on Fishing and the Conservation of the Living Resources of the High Seas, adopted 29 April 1958, Geneva, entered into force 20 March 1966.

12. Convention on the Territorial Sea and Contiguous Zone, adopted 29 April 1958, Geneva, entered into force 10 September 1964.

13. Convention on Biological Diversity, adopted 5 June 1992, Rio de Janeiro, Brazil, entered into force 29 December 1993.

14. CMM 2016/05, SIOFA, Conservation and Management Measure regarding the use of large-scale pelagic driftnets and deepwater gillnets in the Southern Indian Ocean Fisheries Agreement Area (Pelagic Driftnets and Deepwater Gillnets).

15. CMM 2017/01, SIOFA, Conservation and Management Measure for the Interim Management of Bottom Fishing in the SIOFA Agreement Area (Interim Management of Bottom Fishing).

16. FAO, Resolution GFCM/37/2013/1 on area based management of fisheries, including through the establishment of Fisheries Restricted Areas (FRAs) in the GFCM convention area and coordination with the UNEP-MAP initiatives on the establishment of SPAMIs.

17. Resolution 14/02 For the Conservation and Management of Tropical Tuna tocks in the IOTC Area of Competence, IOTC.

18. Resolution 12/01 on the Implementation of the Precautionary Approach, IOTC.

19. The Code of Conduct for Responsible Fisheries, Food and Agriculture Organisation of the UN, adopted in 1995, Rome.

20. UNGA Resolutions 59/25, 61/105, 64/72.

21. United Nations Convention on the Law of the Sea, adopted December 10, 1982 in Montego Bay, Jamaica, coming into effect 16 November, 1994.

Cases

1. Bering Sea (Fur Seal) Arbitration (United States v. United Kingdom), 1893, International Environmental Law Reports, Vol.1, 1999.

2. United Kingdom v Norway (Fisheries Case), Merits, Judgment, [1951] ICJ Rep 116, ICGJ 196 (ICJ 1951), 18th December 1951, International Court of Justice.

3. Case No 21, Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC), 2 April 2015, ITLOS.