GREENPEACE
PROTECT
THE OCEANS

UN-TANGLED

HOW THE GLOBAL OCEAN TREATY CAN HELP REPAIR HIGH SEAS MISMANAGEMENT

Photo © Alex Hofford / Greenpeace, Industrial fishing in the high seas

© Paul Hilton / Greenpeace
Tuna caught by Spanish longliner

CONTENTS

Report authors:
Gabrielle Carmine, Dr. Guillermo Ortuño Crespo, Greenpeace International

LIST OF ACRONYMS

ABNJ	Areas Beyond National Jurisdiction
BBNJ Agreement	Biodiversity Beyond National Jurisdiction Agreement
CBTMT	Capacity building and transfer of marine technology
CMM	Conservation and management measures
CMS	Convention on Migratory Species
COP	Conference of Parties
FAD	Fish aggregating device
EEZ	Exclusive economic zone
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IFBs	Instruments, frameworks and bodies (including RFMOs)
IUCN	International Union for Conservation of Nature
MGR	Marine genetic resources
MSY	Maximum sustainable yield
NPFC	North Pacific Fisheries Commission
OBIS	Ocean Biodiversity Information System
RFMO	Regional fisheries management organisation
SEAFO	South East Atlantic Fisheries Organization
SIOFA	Southern Indian Ocean Fisheries Agreement
SPRFMO	South Pacific Regional Fisheries Management Organisation
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFAO	United Nations Food and Agriculture Organization
UNFSA	United Nations Fish Stocks Agreement
VME	Vulnerable Marine Ecosystem
WCPFC	Western and Central Pacific Fisheries Commission

1. EXECUTIVE SUMMARY

This report explores how Regional Fisheries Management Organisations (RFMOs) have not met their mandate for sustainably managing the impacts of fishing activity on biodiversity in international waters. It then sets out how the recently won Global Ocean Treaty (BBNJ Agreement) can remedy this systematic mismanagement of biodiversity on the high seas.

RFMOs, which exist to sustainably manage fishing and its impacts in international waters (and convention areas within national jurisdiction), first emerged seven decades ago. Since then, RFMOs have overseen a worsening ocean crisis and have not engaged in a precautionary approach to prevent industrial overfishing of multiple target and non-target species, the decimation of various sensitive migratory species and the destruction of vulnerable marine ecosystems.

RFMOs, in general, provide a vivid example of the current system of global ocean governance and mismanagement. While there have been small conservation gains under some RFMOs, in 2016, 75% of an assessed 48 high seas fish populations (stocks) were considered depleted or overfished.[1]

Agreed and adopted in 2023, the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement, also known as the Global Ocean Treaty, can provide an urgently needed means of addressing spatial and taxonomic gaps in RFMOs management of industrial fisheries impacts in international waters.

The Treaty, which exists to conserve marine biodiversity beyond national jurisdictions, crucially provides a legal tool which can deliver biodiversity conservation goals including marine protected areas covering 30% of the world's oceans via a three-quarter majority vote (once ratified). This provision ensures that the Treaty will not mirror the RFMOs, where, in many cases, consensus decision making allows just one actor negotiating to block all progress towards new conservation and management measures.

PRIMARILY, RFMOs ARE UNABLE TO MANAGE FISHERIES IMPACTS UPON BIODIVERSITY ON THE HIGH SEAS BECAUSE OF THEIR:

→ LIMITED SCOPE:

The current single-stock assessment approach which dominates RFMO management does not account for the whole marine ecosystem. Significant geographical gaps remain with many large industrial fleets operating outside of the regulation of any RFMO.

→ CONSENSUS-BASED DECISION MAKING:

Most RFMOs operate through this system, which allows a minority of actors to block progress towards additional conservation and management measures for the high seas.

→ LACK OF TRANSPARENCY AND ACCOUNTABILITY:

Civil society participation and scrutiny of RFMO meetings is severely restricted, while industry representatives are granted a seat at the table, often being included in government delegations.

→ FAILURE TO FOLLOW SCIENTIFIC ADVICE:

Observer coverage rates on most RFMO fleets remain insufficient despite recommendations from their own scientific bodies, almost no bycatch species have mortality caps and many Vulnerable Marine Ecosystems remain unprotected; delegates consistently use doubt and a lack of scientific certainty as a tool to delay any progress towards new conservation measures.

This report recommends that the Global Ocean Treaty uses its new mandate to deliver marine protection for the high seas; that RFMOs strengthen their biodiversity conservation and sustainable management agenda; and that measures adopted under the Treaty are adequately implemented. Governments must act with urgency in the coming months and ensure the Treaty enters into force by the UN Ocean Conference in 2025.

A more detailed series of policy recommendations is available on p.28 of this report.

2. INTRODUCTION

The international legal regime for fisheries emerged halfway through the 20th century and has evolved significantly over the past 75 years. Perhaps the most notable development during this period was the establishment of exclusive economic zones (EEZs), which grants coastal and island nations rights and responsibilities over the resources up to the first 200 nautical miles of ocean from their coastline. Prior to the adoption and entry into force of the third UN Convention on the Law of the Sea (UNCLOS), in 1982 and 1994 respectively, the majority of the ocean fell under an open access regime, where international fleets could fish as close as three nautical miles from the coast. The establishment of EEZs under UNCLOS essentially created two legal regimes for fisheries management. The first is a high seas regime across the ocean beyond national jurisdiction, where flag states – the jurisdiction under whose laws a vessel is registered or licensed – are primarily responsible for the management of high seas fisheries, coordinated through regional bodies known as regional fisheries management organisations (RFMOs). The second is a domestic regime within EEZs, where coastal and island states have control over who has access to their fishing grounds. One of the challenges the RFMO framework is tasked with is the management of highly migratory* and straddling** species that cross multiple jurisdictions, including movement within and across both legal regimes.[2]

Coral Reefs at Raja Ampat, Papua, Indonesia

THE INCREASING IMPACTS OF GLOBAL FISHERIES

Wild capture fisheries have been documented from as long as 40,000 years ago.[3] Yet in the past 75 years there has been a dramatic change both in the nature of such fisheries and the scale of extraction. Global wild capture fisheries landings increased from approximately 20 million metric tonnes in 1950 to a high of around 90 million tonnes in the mid-1990s, and have stabilised at approximately that amount over the past three decades.[4] The fact that catches have remained stable despite improvements in gear technology and increased fishing effort implies that the catch per unit of effort since the mid-1990s has been in decline. Global landing estimates from the UN Food and Agriculture Organization (UNFAO) have, however, been challenged and considered an underestimate of actual landings, of around 30%.[5] Uncertainty about total catch rates are not the only reason for concern. In its State of the World Fisheries and Aquaculture report, the UNFAO estimates that global overfishing has been on the rise almost continually since the 1970s, and as of 2019 sits at a historic high of 35.4% of all assessed fish stocks.[6] It is important to note that hundreds of non-target or unassessed populations of fish, crustaceans or cephalopods are not included in this report and may also be overexploited.

Taxonomic groups such as elasmobranchs (comprised of sharks, rays and chimaeras), which now represent the most endangered vertebrates on the planet,[7] stand out as some of the most poorly managed under the existing international fisheries regime. Scientists estimate that the abundance of oceanic shark species, most of which have an ambiguous target/non-target status, has declined by 71% in just five decades.[8] The health of less ambiguous non-target species groups, such as sea turtles or seabirds, has also been compromised in recent decades, primarily due to habitat degradation, invasive species, climate change, pollution (including plastics) and unsustainable fisheries-induced mortality. According to the latest State of the World's Sea Turtles report, of the seven species of sea turtles in the world, six are listed under the "Threatened" category of the International Union for Conservation of Nature (IUCN) Red List, while the seventh is considered "Data Deficient".[9] Of the 359 species of seabird across the ocean, 31% are

* No operational definition of "highly migratory" has been given by the UNFAO, however, UNCLOS Annex I provides a list of species considered highly migratory at the time of elaboration of the Convention.

** Stocks which occur both within and beyond the exclusive economic zone of a single coastal State.

threatened with extinction according to the IUCN, while almost half (47%) have declining population trajectories.[10] Addressing climate, invasive species and fisheries bycatch impacts could directly benefit two-thirds of all seabird species, accounting for approximately 380 million seabirds.[11]

A shark is hauled onboard a Spanish longliner targeting swordfish in the south east Atlantic.

THE GLOBAL OCEAN TREATY

The Agreement 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 (BBNJ Agreement), also known – and referred to in this report – as the Global Ocean Treaty, is the world's first cohesive, international and legally binding framework to specifically protect high seas biodiversity. It represents a historic opportunity to accelerate the conservation and sustainable use of biological diversity across almost half of Earth's surface.

Recognising the growing threat of anthropogenic activities on biological diversity in the open ocean and gaps in the governance around the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (ABNJ), the UN General Assembly decided in June 2015, under resolution 69/292, to develop an international legally binding instrument under UNCLOS. The Global Ocean Treaty stands on four foundational pillars to enhance the governance of biodiversity in ABNJ:

→ AREA-BASED MANAGEMENT TOOLS (ABMTs)

The Treaty sets out a legal framework and process for establishing networks of ABMTs, including marine protected areas (MPAs), also known as ocean sanctuaries, in ABNJ. If effectively protected and well managed, these will help realise the target to protect at least 30% of our ocean by 2030 (the "30x30" target), as agreed by countries in December 2022 under the Kunming-Montreal Global Biodiversity Framework. The Treaty gives the international community more transparency and a greater say in decisions regarding activities that could harm high seas ocean biodiversity and a potential avenue to standardise impact assessments.

→ ENVIRONMENTAL IMPACT ASSESSMENTS (EIAs)

The Treaty ensures the transfer of marine technology to developing countries to support equitable opportunities to implement the Treaty globally. A funding mechanism will be established to support such activities.

→ CAPACITY BUILDING AND TRANSFER OF MARINE TECHNOLOGY (CBTMT)

The Treaty ensures the fair and equitable sharing of benefits derived from MGR from the high seas and seabed.

→ MARINE GENETIC RESOURCES (MGR)

The Global Ocean Treaty was formally agreed in March 2023 and adopted by the UN in June the same year. Its entry into force, which many have called for to take place by the third UN Ocean Conference in June 2025, will take place 120 days after the 60th ratification of the Treaty by a UN member state. The Treaty aims to promote the conservation and sustainable utilisation of marine biological diversity in ABNJ, potentially addressing deficiencies and constraints within current structures governing fishing in the high seas. In these, a patchwork of regional and sectoral bodies have been driven by exploitation of the ocean and its life, with sustainability more of an afterthought.

Most significantly, Part III of the Treaty legally empowers the Conference of Parties (COP) to establish, according to provisions in the Agreement, fully or highly protected areas on the high seas, which are vital for resilience in the face of climate and ecological breakdown: proposals are to include a management plan (Article 19.4 (f)).

The Treaty will not replace or override existing instruments, frameworks and bodies – rather it will aim to enhance cooperation and coordination among them (see Box 1). Recognising the geographical and governance constraints and limitations within current frameworks and organisations is therefore crucial for ensuring effective implementation of the Treaty.

As explained later in this report, the taxonomic mandate of RFMOs under international law extends beyond target stocks, yet the lack of effective management measures to reduce biodiversity loss represents a threat that could undermine the effective implementation of the Global Ocean Treaty. Other dimensions of the existing RFMO framework that potentially undermine the conservation and sustainable use of biodiversity beyond national jurisdiction include asymmetries in RFMO state membership, industry[12] representation, and consensus-based voting which slows down the adoption of conservation and management measures.[13]

This report provides an overview of the international regime for fisheries, how it has been operationalised over time, its shortcomings and limitations, and how the Global Ocean Treaty can help strengthen the conservation and sustainable use of biodiversity in ABNJ.

Projection onto New York's iconic Brooklyn Bridge, on the eve of the IGC5 negotiations at the United Nations in August 2022.

BOX 1: EXAMINING THE RELATIONSHIP BETWEEN RFMOS AND THE GLOBAL OCEAN TREATY: WHAT DOES THE TREATY SAY?

The interaction between the future Global Ocean Treaty COP and RFMOs was a key discussion during the negotiations, especially in relation to the text of the Treaty which addresses Area Based Management Tools (ABMTs) and how this will play out in practice once the Treaty has entered into force.

Article 5(2) of the Treaty provides that: "This Agreement shall be interpreted and applied in a manner that does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies (IFBs) and that promotes coherence and coordination with those instruments, frameworks and bodies."

The term "not undermine" is best understood in terms of "not undermining the effectiveness of the IFB and its measures"; this is clearly distinct from "respecting the competences" of IFBs, which involves their jurisdiction and capabilities. Provided the ABMTs established by the Global Ocean Treaty do not impede the capacity of an RFMO to effectively oversee the sustainable management of targeted, associated and dependent species, such measures should not be deemed as undermining, even if they affect fishing distribution, but enhancing, in light of the well known benefits of MPAs for fish and fisheries.

Decisions made by the COP will be binding on states party to the Treaty, who are responsible for making sure any activities under their control are aligned withsuch decisions, and are mandated to promote COP decisions in relevant instruments, frameworks or bodies of which they are members (Article 25).

The Treaty underscores the importance of international cooperation — Article 8 emphasises the need for collaboration for marine biodiversity conservation. Importantly, it includes promoting Global Ocean Treaty objectives within IFBs, including RFMOs. It introduces a cooperative mechanism wherein states party to the Treaty participating in IFBs must advocate for Treaty objectives.

Additionally, overarching principles such as the precautionary principle, ecosystem approach and transparency provisions are pertinent to RFMO engagement in ABMTs, ensuring inclusive decision making and sustainable practices.

Article 22 further details the mandate of the COP in establishing ABMTs: the COP shall take decisions on establishment of MPAs and related measures to protect them (Article 22(1)(a)). It may also take decisions on measures compatible with those adopted by relevant IFBs in cooperation and coordination with those IFBs Article 22(1)(b). Where proposed measures are within the competence of other IFBs, the COP may make recommendations to states party to the Treaty and IFBs to promote the adoption of relevant measures through such IFBs, in accordance with their mandates. (Article 22(1)(c))

These complex provisions are overlaid with crucial provisions on cooperation, including the general obligation of cooperation in article 8(1) and the specific obligation in article 8(2) aimed at promoting Global Ocean Treaty objectives when participating in decision-making in IFBs as well as the obligation in article 25(4) to promote the adoption of measures in IFBs such as RFMOs to support decisions made by the COP.

The Treaty outlines procedures for collaboration and consultation, with states party to the Treaty expected to engage with IFBs, including RFMOs, in proposal development, in order to build on their inputs, expertise and data, existing ABMTs and other relevant knowledge, so that COP decisions "respect the competences of and [do] not undermine existing bodies" (Article 5(2)).

The consultation process involves notifying and inviting IFBs to contribute views and information. Certain procedures for collaboration and consultation are provided for in the text of the Treaty, while others will be subject to decisions of the COP.

Implementation involves promoting Treaty measures within IFBs and ensuring that they align with Treaty decisions, even for non-IFB participants.

Monitoring involves reports from states party to the Treaty and IFBs, with emergency measures available in consultation with relevant IFBs to mitigate serious harm to marine biodiversity, underscoring cooperation and coordination across agreements.

MPA proponents can begin scientific studies and assessments to prevent biodiversity damage from fishing activities in potential high seas MPA sites, and initiate consultations with and within IFBs about measures such as fisheries closures, even before the Global Ocean Treaty comes into effect.

3. THE RFMO GOVERNANCE FRAMEWORK

While the issues surrounding modern high seas regional fisheries management organisations are innately tied to the modern Anthropocene era, the first RFMOs were established over 100 years ago (Table 1). At the time, some considered fish an unbounded resource, with the English biologist and anthropologist TS Huxley famously saying, *"nothing we do seriously affects the number of fish"* at the Inaugural Fisheries Congress Meeting in the late 19th century.[14] However, in the post-war era, tools created for war, like sonar and radar, began to be used in the fishing industry to increase catch for a growing and demanding population.[15] Environmental groups and scientists became concerned with this industrial expansion[16] when governments began using it as a tool to help them achieve foreign policy objectives, as in the case of the US State Department during the Cold War.[17] In 1949, the UN called for the codification of the high seas and territorial waters, in what led to three Conferences, from 1958 to 1982, for the UN Convention on the Law of the Sea (UNCLOS).[18]

With many disagreements remaining after the second conference, Arvid Pardo, who is often referred to as the 'Father of the Law of the Sea', called for an effective international regime for the high seas in 1967. Pardo demanded *consensus-based decision making* to incentivise states to find common ground and agree on a text.[19] However, this approach slowed the speed of international ocean policy making;[20] the final Conference began in 1973 and wasn't concluded until 1982, when modern high seas fisheries began to emerge. UNCLOS III declared the high seas to begin at 200 nautical miles from EEZ boundaries, created the International Tribunal for the Law of the Sea, and promoted the idea of marine areas beyond national jurisdiction as the *common heritage of mankind.* In an incredible moment for international collaboration, the UNCLOS – the international constitution of the ocean – came into force in 1994, after the 60th country, Guyana, ratified the agreement.

The future of RFMOs and high seas fisheries management of migratory species was notably absent from UNCLOS III. This is despite the fact that fishing was fundamental to its creation, delineation and implementation, given that states pushed for the 200 nautical mile EEZ boundary to ensure coastal nations' fishing rights.[21] This 200 nautical mile zone is a political delineation and not an ecological boundary, creating tension when fish species exist in both the high seas and EEZs.

In 1992, the UN Rio Conference on Environment and Development declared that the current Law of the Sea Convention was not able to address the issue of distant water fishing states increasing their catch.[22] This threatened high seas sustainability due to what the UN claimed was the overcapitalisation of the fishing industry, excessive fleet size, overexploitation of resources, unregulated fishing, vessels changing their flag to escape controls, insufficiently selective fishing gear, unreliable databases and lack of sufficient cooperation between states.[23]

The UN then convened and began negotiations in 1993 for what would become the second implementing agreement under UNCLOS, the 1995 UN Fish Stocks Agreement (UNFSA),[24] which regulates migratory and transboundary fisheries such as tuna or salmon. The UNFSA mandates the application of the precautionary approach, as well as the need to adopt conservation and management measures (for target species and for other species impacted by fishing), ensure cooperation between nations to manage migratory stocks and conserve marine ecosystems, develop measures to end overfishing, and rebuild stocks to levels that support *maximum sustainable yield**** based on the best available science.[25] The UNFSA strengthened the role of RFMOs and created clear standardised mandates. While UNFSA gave RFMOs the international legitimacy for high seas fisheries management, only 5 of the 17 RFMOs were created after UNFSA entered into force, and only 8 of them were created after the 1992 Rio Conference (Table 1). The mandate was created with the goal to standardise current and future RFMOs and regulate fishing activities in their convention areas through identifying species targets and enforcing catch allocations.[26] However, the guidelines set in the UNFSA are the "generally recommended international minimum standards" for international fisheries sustainable management, despite the fact that according to studies, 75% of an assessed 48 high seas fish stocks are considered depleted or overfished.[27] Research suggests that RFMOs have failed in their mandate to regulate fishing,[28] with an average of 55% of RFMO-managed stocks considered collapsed and overexploited.[29]

***Maximum sustainable yield (MSY) is based on the understanding that a precise level of fishing will provide the maximum amount of fish as food each year without fish population decline. MSY is controversial within the marine science and conservation community because of its susceptibility to bias, misapplications and political distortions that can lead to policies that enable overfishing.

A TIMELINE OF RFMO GOVERNANCE FRAMEWORK

1923  The first RFMO is implemented

1958  UNCLOS I concludes

1960  UNCLOS II concludes

1973  UNCLOS III begins

1982  UNCLOS III concludes & results in new UNCLOS Convention

1992  UN Rio Conference

1993  UNFSA negotiations begin

1994  UNCLOS comes into force

1995  UNFSA is agreed

2001  UNFSA is ratified

2018  BBNJ negotiations begin

2023  BBNJ Agreement is adopted

INSTITUTIONAL CHALLENGES WITHIN RFMO GOVERNANCE

RFMOs are composed of nation states as contracting parties to the RFMO agreement that become the voting bloc for all conservation and management measures. Effective decision making is part of the minimum standards needed for RFMOs to uphold their mandate to create policies that prevent, slow down or stop overfishing.[30] However, many RFMOs are often unable to reach timely decisions on necessary conservation and management measures at their annual convention meetings.[31] Some experts suggest that RFMOs work on a reactionary basis rather than taking a proactive approach; this is generally attributed to the consensus-based voting system recognised across international treaties, which traces its roots back to Arvid Pardo and the second UNCLOS conference.[32] While on the surface, consensus voting suggests that all voting members agree and the power of rich nations is reduced, this is not the case for RFMOs. In practice, consensus voting allows powerful nations to elect to disagree, or allows the amendment to be altered and watered down until it becomes weak or insignificant legislation.[33] This is particularly noticeable for conservation-focused measures (e.g. reduction of catch limits, creation of protected areas, closure of fishing areas to protect vulnerable marine ecosystems, measures to proactively conserve populations threatened by climate change) that can't be passed, allowing the status quo to be upheld.[34]

RFMOs and other high seas diplomatic negotiations, such as those for the Global Ocean Treaty, are also deeply affected by international and geopolitical global events. Further, in times of conflict and insecurity, these fora often serve as platforms for states to express their position on the global situation before dealing with specific agenda items. These dynamics extend to various aspects of state diplomacy and negotiation strategies, including deliberations on text concerning conservation and management measures, as well as decisions regarding catch allocation and fisheries closures. The dynamics that play out in consensus decision-making thus create opportunities for large and powerful nations to maintain their veto power and prevent any regulatory checks on their own state and private sector activities.[35] This web of power dynamics pervades the consensus-based voting process at all RFMOs.[36]

RFMO reliance on consensus-based decision making creates what scholars call a "responsiveness gap"; it restricts RFMOs' ability to respond in adaptive ways and thus creates a gap between them and majority-based decision-making groups.[37] This gap can be dangerous for the protection of marine biodiversity and fish stocks**** because it delays conservation and management measures during the ongoing biodiversity and climate crises. At a time when high seas biodiversity measures are needed more than ever, the Global Ocean Treaty has the potential to close the responsiveness gap by allowing majority-based decision making for high seas protection and conservation. The Treaty declares that decisions on establishing MPAs require a two-thirds vote to determine a lack of consensus, followed by a three-quarters majority vote to approve a proposal. During the Treaty negotiations, consensus-based versus majority-based decision making was a contentious topic, with conservation-minded states falling into the majority-based decision quorum, and nations that prioritise fishing access falling into the consensus-based camp. This is indicative of the responsiveness gap and the importance of majority-based voting for conservation and sustainable use goals.

Black tip reef sharks in Raja Ampat, Papua, Indonesia

****Emerging treaties consider fish stocks distinct from biodiversity so we separate them here as well, regardless of their clear connection to the marine ecosystem as biodiversity.

© Paul Hilton / Greenpeace
Humpback whale in the Indian Ocean

4. TAXONOMIC SCOPE OF RFMOs IN RELATION TO THE GLOBAL OCEAN TREATY

The Ocean Biodiversity Information System (OBIS[38]) hosted by UNESCO is the most comprehensive, publicly accessible and spatially explicit repository of ocean biodiversity information in the world. According to OBIS, 28,178 unique species have been identified in ABNJ from the 1800s until today.[39] Despite notable improvements in our understanding of the composition and distribution of biodiversity beyond national jurisdiction, large spatial and taxonomic gaps remain.[40] The proliferation of anthropogenic activities into ABNJ over the last century raises the question as to which governance regime bears responsibility for monitoring and effectively managing the impacts of these activities on ocean biodiversity.

Philippine purse seine fishing operation in the high seas.

UNCLOS, which calls for the establishment of "subregional or regional fisheries organizations" (Article 118) to ensure the cooperation of states in the conservation and management of living resources, does not specify which species or species groups are to be monitored and managed by these bodies. The second implementing agreement under UNCLOS, the 1995 UNFSA, provides more clarity on the taxonomic scope/mandate of RFMOs. While the overarching aim of the UNFSA is *"to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks"*, Article 5, which outlines the General Principles, calls on fishing states and relevant management bodies to monitor and manage a broader array of species, namely to:

> *"(d) assess the impacts of fishing, other human activities and environmental factors on target stocks* ***and species belonging to the same ecosystem or associated with or dependent upon the target stocks;****"*

> *"(e) adopt, where necessary, conservation and management measures* ***for species belonging to the same ecosystem or associated with or dependent upon the target stocks,*** *with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened".*

Similar language is used under Article 6, which calls on states to implement the precautionary approach:

> *"2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures."*
> *"5. Where the status of target stocks or non-target or associated or dependent species is of concern, States shall subject such stocks and species to enhanced monitoring in order to review their status and the efficacy of conservation and management measures. They shall revise those measures regularly in the light of new information."*

The UNFSA unequivocally extends the monitoring and management mandates and responsibilities of RFMOs and

fishing states beyond the principal target stocks. However, the UNFSA does not provide a precise list or methodology for determining the taxonomic breadth of these responsibilities, which range from:

- → **Species "associated with" the target stocks – which could be interpreted as species caught alongside the target species as bycatch;**
- → **Species "dependent upon the target stocks" – which likely refers to species with a close ecological (e.g. predator–prey) relationship with the target stock;**
- → **Species "belonging to the same ecosystem" as the target stock – which includes a much broader range of biodiversity that co-occurs with the target species throughout its range, and which could include hundreds to thousands of species.**

A reasonable starting point for delineating the taxonomic mandate of RFMOs in relation to BBNJ can be found in a 2006 report by the UNFAO, which identified approximately 200 target species being fished on the high seas either as "highly migratory", "straddling" or "other high seas".[41] However, it is well known that a wider range of species is directly impacted by fisheries that operate within RFMOs.[42] According to the recent report by the Convention on Migratory Species (CMS) on the State of the World's Migratory Species[43] and work by Lascelles et al. (2014),[44] there are approximately 1,000 marine migratory species in the ocean. The CMS report lists overfishing and fisheries bycatch as two of the main factors driving the decline of marine migratory biodiversity, in particular migratory fish biodiversity. While RFMOs frequently establish conservation and management measures for non-target biodiversity,[45] to date they have not mainstreamed the establishment of bycatch limits to ensure that the abundance of non-target species remains sustainable. Unmanaged target species, including many species of shark, also lack catch limits across RFMOs. A recent study noted that despite a tenfold increase in fishing regulations for sharks, their fishing mortality continues to increase.[46]

Furthermore, RFMOs generate limited information on the ecological status of many of the species their fisheries interact with. For example, while fisheries operating within the International Commission for the Conservation of Atlantic Tunas (ICCAT) interact with over 100 species of elasmobranch,[47] only three species (2.75%) have stock assessments *(Prionace glauca, Isurus oxyrinchus and Lamna nasus)*.[48] In the Indian Ocean, pelagic longline fisheries alone reportedly catch 46 species of elasmobranch throughout their range.[49] Since its establishment in 1996, the Indian Ocean Tuna Commission (IOTC) has only conducted stock assessments for one species of elasmobranch *(Prionace glauca)*.[50] While catches and international markets for shark and ray species have expanded globally, hundreds of shark and ray species are impacted by RFMO fisheries' lack of adequate monitoring and management plans – as demonstrated by their precipitous decline in abundance over recent decades.[51]

During the Global Ocean Treaty negotiations, several states called for the removal of all fish biodiversity from the taxonomic scope of the Treaty, alleging that existing legal instruments and frameworks, as well as global, regional, subregional and sectoral bodies – namely RFMOs – already provide sufficient regulatory oversight.[52] However, a 2019 study noted that of the more than 4,000 species of fish recorded in ABNJ, less than 5% had abundance estimates, which are necessary for their sustainable management.[53] Such limitations in the taxonomic scope of the existing RFMO framework have been noted for many years.[54] One of the steps identified to harmonise cooperation between the Global Ocean Treaty and RFMOs is the clarification of their scope of application.[55] This should include taxonomic scope to clarify which framework is responsible for monitoring or managing the 28,178 species that have been documented in ABNJ and the additional species that are yet to be discovered. The Global Ocean Treaty COP could provide a space to harmonise the taxonomic scope of all existing frameworks.

5. GAPS IN SPATIAL COVERAGE AND USE OF SPATIAL MANAGEMENT BY RFMO FRAMEWORK

A shark is hauled into the hold of a Spanish longliner targeting swordfish in the south Atlantic ocean.

GAPS IN SPATIAL COVERAGE BY RFMOs

The current RFMO framework comprises three principal types of RFMO: tuna RFMOs, general (or benthic/non-tuna) RFMOs and salmon/halibut RFMOs, which together cover the majority of ABNJ. While the five tuna RFMOs and the four salmon/halibut RFMOs provide comprehensive spatial coverage of the ranges of the main target species, including areas within national jurisdiction, significant geographic gaps remain in the framework of the eight general RFMOs (Fig 1). We know from vessel tracking technologies that multiple fleets operate in ABNJ targeting species which are not under the purview of any RFMO.[56] This unreported and unregulated fishing jeopardises the conservation and sustainable use of biodiversity in large regions of the ocean. Regions affected by this absence of a governance body include the eastern and western tropical Pacific, the central and southwest Atlantic Ocean, and the northern and eastern Indian Ocean (Fig 1). Many of these regions are home to highly industrialised fleets, such as the Chinese squid fishery and other fishing powers in the northwest Indian and southwest Atlantic Oceans.[57]

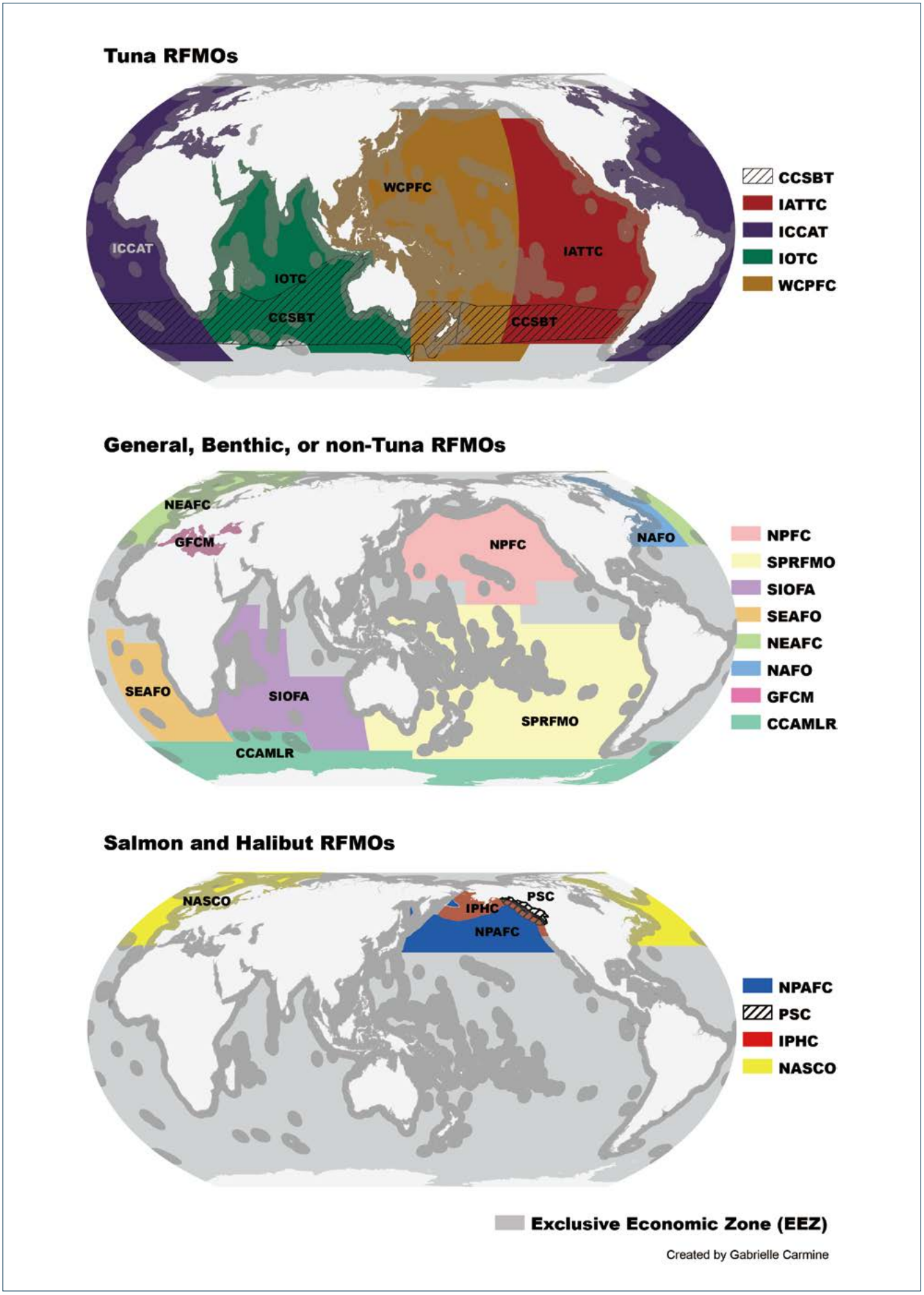


Figure 1[58]: Spatial coverage of all RFMO jurisdictions (for full RFMO names, see Table 1)

LACK OF SPATIAL MANAGEMENT MEASURES TO REDUCE IMPACTS ON NON-TARGET SPECIES BY TUNA RFMOs

A hierarchical and sequential series of measures can be established to reduce the impacts of fisheries on non-target biodiversity.[59] Avoiding non-target biodiversity in space and time is the first proposed step, followed by measures to mitigate catch probability and steps to increase the post-release survival of bycaught species. Since the first RFMOs were created, few have established spatial management measures, or ABMTs, to avoid harming non-target, threatened or vulnerable species and ecosystems. Only general and salmon/halibut RFMOs have made use of ABMTs[60] as a means of reducing adverse fisheries impacts on non-target biodiversity, primarily through the establishment of vulnerable marine ecosystem (VME) fisheries closures. Their implementation is geographically skewed, however, as most VME closures are found in the Atlantic Ocean basin.[61,62] Tuna RFMOs have established some spatial management measures over the decades, but these have all been designed to reduce catches of target species or limit fishing with fish aggregating devices (FADs).[63] While tuna RFMOs have no spatial closures to reduce non-target species bycatch,[64] tuna purse seine FAD closures intended to reduce tuna catches can also result in reduced bycatch.

Frozen Albacore Tuna on Fishing Boat in Pacific Ocean

FAILURE OF GENERAL/BENTHIC RFMOs TO PROTECT VULNERABLE MARINE ECOSYSTEMS

Founded in 2009 and 2015 respectively, the South Pacific Regional Fisheries Management Organisation (SPRFMO) and the North Pacific Fisheries Commission (NPFC) are much younger than most RFMOs. They have a responsibility to manage and conserve non-tuna species in the Pacific, and the NPFC in particular has a progressive mandate to protect ecosystems as well as fish stocks.[65]

Few ecosystems in the world are in such desperate need of protection as oceanic seamounts. In 2006, the UN General Assembly recognised the immense threat to seamount ecosystems, with states committing to "…sustainably manage fish stocks and protect vulnerable marine ecosystems, including seamounts, hydrothermal vents and cold water corals, from destructive fishing practices, recognizing the immense importance and value of deep sea ecosystems and the biodiversity they contain".[66]

The Emperor Seamount Chain in the North Pacific was devastated by intense bottom trawling from the 1960s until the 1980s. It is now widely recognised that deep-sea habitats are very slow to recover when damaged, which is reflected in the steep decline in fish populations and fishing pressure over the past 40 years on the Emperor Seamounts. In recent years, two vessels have reportedly continued to trawl the few delicate corals and sponges that have somehow survived the decades-long assault on the Seamounts, searching for North Pacific armorhead (*Pentaceros wheeleri*) and splendid alfonsino (*Beryx splendens*).[67,68]

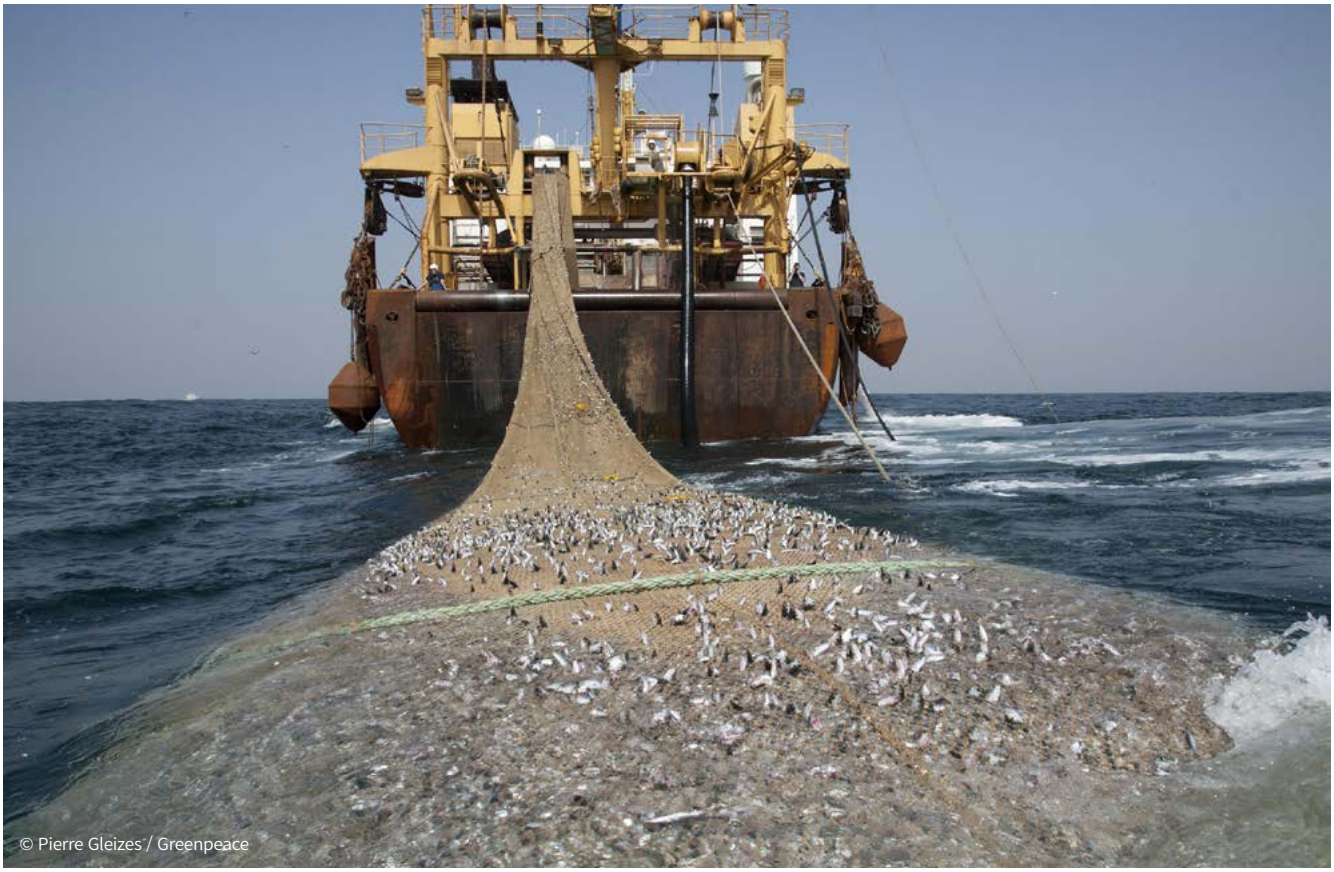
At the eighth NPFC meeting in April 2024, the USA and Canada proposed closing the Emperor Seamounts to bottom trawling while further research was carried out. While this measure wasn't as strong as the action that scientists and conservation NGOs had been calling for, it would at least have brought the deep-sea habitat some respite and represented an advancement for conservation.[69] However, the NPFC makes decisions by consensus. The only country that currently has an industrial fishing interest, Japan,[70] opposed the proposal – and therefore it did not advance.[71] The Commission is failing on its obligations under international law to deliver its General Principle of "protecting biodiversity in the marine environment, including by preventing significant adverse impacts on vulnerable marine ecosystems".[72]

Action on bottom trawling is now deferred for at least another year, by which point the NPFC will have existed for a full decade without giving the Emperor Seamounts the protection they need.

A very similar situation has played out in the South Pacific at the SPRFMO. Bottom trawling in areas of high biodiversity, such as the Louisville Seamount Chain situated in the South Pacific to the east of New Zealand, has resulted in significant coral bycatch.[73] That has included individual trawls bringing up 3,000kg and 5,000kg of stony corals.[74] Although shocking, this high bycatch is also unsurprising, since the areas open to trawling are located on the summits of seamounts and features, and the Louisville Seamount Chain has been identified by the Convention on Biological Diversity (CBD) as an Ecologically or Biologically Significant Marine Area (EBSA).[75] While some RFMOs have closed all seamounts to trawling, the SPRFMO has taken a spatial management approach, agreeing in 2023 to protect at least 70% of VMEs within each fishery management area.[76] This is inadequate to prevent significant adverse impacts on all VMEs, which countries committed to do at the 2006 UN General Assembly.[77]

New Zealand, the only country still bottom trawling on seamounts in the South Pacific,[78] tasked its scientists with proposing boundary adjustments to comply with the 2023 decision to protect 70% of VMEs.[79] However, the resulting proposal still left seamount summits open to bottom trawling, including sites where extremely high coral bycatch has occurred.[80] New Zealand, supported only by the Faroe Islands, then blocked the adoption of the revised trawl boundaries, allowing continued bottom trawling on known and likely VMEs – further demonstrating why RFMOs are not up to the task of conserving marine biodiversity.[81]

In 2021, 15 years after the UN General Assembly recognised the dangers facing seamounts, the UN's Second World Ocean Assessment stated that "fishing, especially bottom trawling, constitutes the greatest current threat to seamount ecosystems".[82] However, as these recent cases illustrate, RFMOs often fail to conserve biodiversity in line with scientific necessity due to opposition by states with industrial fishing interests.



Dutch super trawler fishing 30 miles off the coast of Mauritania.

6. CORPORATE INFLUENCE ON RFMOs

Jennifer Jacquet's *2022 The Playbook: How to Deny Science, Sell Lies, and Make a Killing in the Corporate World* reveals in a satirical way the tools employed by corporations across sectors – such as tobacco, animal agriculture, oil and gas, fisheries, chemical industry, pharmaceuticals and more – to prevent the regulation that the science calls for. She shows how in order to influence the decision-making process, an industry member must be present in one capacity or another (PR campaigns, influencing the scientific and policy discussions, etc).[83] Seafood companies are present, in one capacity or another, at all meetings surrounding their potential regulation.[84]

Accountability for anthropogenic impacts on the ocean and environment from overfishing is increasingly falling onto companies (as opposed to solely governments), along with increased scrutiny of these firms.[85] The high seas fishing industry and the beneficial ownership (the entity that benefits and ultimately owns and/or controls an asset) of their fishing vessels and vessel activity, has only recently been understood and revealed in the academic literature.[86] Many of the companies involved do not disclose their fishing locations even to their shareholders, with one study showing that up to 84% of publicly traded seafood companies hide this information.[87] When annual fishing activity (in hours) is clustered by the ultimate parent corporation, sometimes referred to as the "beneficial owner", the study found that the ten most active fishing companies spent the majority (62%–100%) of their total annual fishing activity in the high seas, and six of the ten companies spent more than 90% of their fishing hours in the high seas.[88] This distinct group of corporations and firms have vested interests in high seas fishing areas that increases their reliance on RFMO policies.[89] According to academic research, some of the same corporations benefiting from fishing the high seas are also attending RFMO meetings as part of state delegations or as observers, which can be seen as blurring the interests of states and corporations in the area of high seas fisheries governance.[90] Of the companies fishing on the high seas according to Carmine et al 2020, key firms of the most active companies and beneficial owners of high seas fishing effort (in hours fished) attended an RFMO meeting in 2018.[91]

All RFMOs except one (PSC) share a list of attendants at their annual convention meetings on their websites. These include the names of people attending with each delegation for each RFMO contracting party. While all RFMOs have industry representatives at their annual convention meetings, some tuna RFMOs have been notable for a large and disproportionate industry presence at their annual meetings.[92] Of the five tuna RFMOs, the Western and Central Pacific Fisheries Commission (WCPFC) is reportedly responsible for around 2.6 million tonnes of tuna caught and distributed annually.[93] According to a 2023 study, since WCPFC's formation in 2004, the number of fishing and seafood industry representatives at its annual convention meeting has tripled, with almost the same number of industry representatives present as government officials and diplomats.[94] According to the same study, half of the ten largest state delegations had more representation from industry than government.[95] For the IOTC, the EU delegation has been under increased scrutiny since it was revealed in the Guardian last year that the majority of its delegation consisted of fishing industry lobbyists.[96] A study in 2019 showed that for every annual meeting between 2004 and 2011 for all five tuna RFMOs, there were more delegates from the seafood and fishing industry than from civil society, with industry attendees demonstrating the strong continuity that is known to increase their ability to influence decision making.[97] Attendance is a good indicator of priorities, and this trend of increasing the presence of the seafood industry over that of other groups demonstrates RFMOs' prioritisation of industry over other values such as conservation, management or science.

Some argue that the seafood industry has the right to attend RFMO meetings as seafood companies are stakeholders in the fishing industry. However, seafood company representatives are not engaging in RFMO meetings as transparent stakeholders when they are delegates for a member state, because they inherently speak for the interests of the industry, not the nation. There is a clear conflict of interest when these companies are on delegations where the diplomatic outcome has direct financial impacts on them. And attendee numbers alone do not tell the full story of industry influence on the RFMO decision-making process. Each state delegation's decision-making priorities begin to be set well in advance of the RFMO annual convention, in a domestic consultation process. Industry representatives have been known to attend these meetings, giving them access to national administration, high-level officials and national media. According to qualitative research by the IOTC, policymakers experience strong coercion from their delegation's industry representatives at the RFMO meeting.[98] For the IOTC, the brand names and seafood retailers directly influence member decisions during

the domestic consultation process and send their stance on IOTC measures through industry NGOs (INGOs), which their respective states take seriously.[99] Only three RFMOs – SEAFO, SIOFA and SPRFMO – reportedly have barriers in place to prevent bribery or coercion; it is unclear if these barriers have been successful.[100]

HOW CORPORATE INTERESTS USE DOUBT AS A TOOL

While doubt is fundamental to the scientific process, it can also be weaponised by corporate interests to prevent the regulation that the best available science demands.[101] This is seen clearly in the case of the tobacco industry, which knew about the dangers of smoking to human health as early as 1953 but conspired for decades to suppress this knowledge. As one tobacco executive wrote in 1969, **"doubt is our product…"** (Smoking and Health Proposal 1969). More recently, the "ExxonKnew" scandal laid bare Exxon's campaign to deny, sow doubt and deceive the public on the legitimacy of the science behind the climate crisis, when its scientists knew about it 40 years before it gained momentum in academic and scientific circles.[102] Other industries have used similar tactics when science posed a threat to the status quo of their business practices and annual earnings.[103] Lessons from other sectors can be a useful tool in understanding the risk of potential parallel interactions of the seafood industry in RFMO policy making.[104]

The use of doubt as a tool to delay regulatory policy making can be found within RFMOs and fisheries science. When an industry-aligned scientist or delegate notes that catch limits are sufficient and MPAs aren't needed, it plants enough doubt for action to be delayed.[105] For deep sea ecosystems and the RFMOs that manage fisheries around them, such as the NPFC, there is a system in place called the "move-on rule". When a fishing vessel catches more than a set amount or "threshold" of an indicator species of vulnerable marine ecosystems (VMEs), such as deep-water cold coral reefs, it must move on a set distance before it can begin fishing again, to protect the supposedly previously unknown VME location. According to the meeting minutes from the 2023 meeting, NPFC sets the threshold for cold-water sponges at 500kg in order to trigger a fishing vessel to move away.[106] This is high for this species compared to the thresholds set by other RFMOs, like SPRFMO which the EU, US, and Canada reminded NPFC at this meeting that their limit is set to 25kg, affirming that NPFC is not engaging with a precautionary approach.[107] When discussions about changing the measure arose at the NPFC's seventh annual commission meeting, the scientific committee chair said they thought the threshold of 500kg was "large".[108] The Canada, EU and US delegations "considered that a 500kg threshold for sponges is tantamount to not setting a threshold at all," but one undisclosed member didn't support the change or specification of any new threshold that hadn't been reviewed by the scientific committee.[109] While this member's identity is hidden, it is clear that the winner is not marine biodiversity but the interests of the fisheries industry. Just one member disagreeing and asking for more science apparently casts just enough doubt to override the views of the scientific committee chair, Canada, the US, the EU and noted observers. The decision-making process makes that member's argument sufficiently legitimate to ensure that more scientific inquiry must be conducted to eventually lower this high threshold, while fishing interests maintain the status quo.

Shark tail fins found on a Taiwanese tuna longliner in the Pacific Ocean, in clear violation of Taiwanese law and Pacific fishing rules.

LESSONS FROM THE MONTREAL PROTOCOL

The Global Ocean Treaty has been hailed as one of the most significant diplomatic successes for the (potential) protection for ocean biodiversity in the 21st century. However, while the Treaty provides a framework for potential high seas biodiversity protection, its impact depends on how states will utilise and operationalise the Treaty text. At this crucial time before the ratification of the Global Ocean Treaty, lessons can be learned from the Montreal Protocol, which is seen as one of the biggest environmental policy and regulation success stories in the past 100 years for banning chemicals responsible for ozone depletion. Yet an under-recognised aspect of this international treaty is the persistent efforts of the chemical industry to challenge the science about the cause of the hole in the ozone layer. Many industry groups publicly affirmed that ozone depletion wasn't real, while those who recognised the depletion claimed it was minimal or the result of natural causes, such as volcanos.[110] Chemical industry proponents in government consistently dismissed the crisis as an "ozone scare" as late as 1987, after the Montreal Protocol had been agreed but before it entered into force in 1989.[111] The casting of doubt in the legitimacy of the crisis in hopes of reducing regulatory impacts to the industry continued throughout the policy making and ratification process.

The Global Ocean Treaty is currently at the stage which was so critical for the Montreal Protocol (i.e. agreed to, but not entered into force). There is a need to be concerned about potential industry influence and the weaponisation of science in the forthcoming Global Ocean Treaty Conference in relation to ABMTs and MPA creation. The Treaty includes that all protected area proposals must be developed through collaboration and consultation, as appropriate, with many groups including "the private sector".[112] Given the lessons learned from industry involvement in RFMOs, this wording has the potential to give an opening to the private sector that could directly undermine the Treaty's ability to effectively protect biodiversity beyond national jurisdiction. It is critical that the Global Ocean Treaty looks to environmental diplomatic success stories like the Montreal Protocol, that resisted the influx of doubt to protect the ozone layer in a timely and effective manner.

© Gavin Newman / Greenpeace
Captive bluefin tuna inside a transport cage.

7. FAILURE TO FOLLOW SCIENTIFIC ADVICE

CHALLENGES IN ESTABLISHING COMPREHENSIVE CONSERVATION AND MANAGEMENT MEASURES (CMMS) WITHIN RFMOs

For decades there have been concerns about the way in which RFMOs establish CMMs, in particular the non-alignment of RFMO decisions to the best available science, the lack of timeliness in establishing CMMS, and the adoption of CMMs that are not sufficiently rigorous.[113, 114] A lack of transparency[115] on the establishment of CMMs across RFMOs manifests in several ways. Firstly, limited access to crucial biological, economic and social science data limits the decision-making process. In many cases, this information can only be accessed through privatised research agreements or is protected through "commercial-confidence" claims, limiting its accessibility to relevant stakeholders.[116] Secondly, negotiation processes for CMMs are often closed-door meetings which restrict the participation of civil society; this fosters distrust among stakeholders and impedes the adoption of scientifically informed conservation measures. Thirdly, a lack of transparency permeates the compliance monitoring schemes of CMMs, primarily as a result of data being protected and observer access restricted. These transparency challenges undermine the establishment of effective CMMs and assessment of their performance. Ultimately, they erode RFMOs' ability to adequately conserve the marine environment, as called for by UNCLOS Article 192.

A shark is hauled in as bycatch by crew onboard an Iranian flagged vessel fishing for tuna in the Northern Indian Ocean.

For years, RFMO scientific committees have called for an increase in observer coverage on pelagic longline vessels to at least 20%, but their recommendations are yet to be fully implemented.[117] For example, Resolution C-19-08 ("Resolution on Scientific Observer for Longline Vessels") by the Inter-American Tropical Tuna Commission (IATTC), despite *"Taking into account that IATTC scientific staff and the IATTC Working Group on Bycatch have reiteratedly recommended at least 20% observer coverage on longline vessels"*, could only agree that members and cooperating non-members (states with an interest in fishing who didn't sign the RFMO convention) should ensure 5% observer coverage. In many cases even 5% is not reached, or there is insufficient information to verify that it has been reached (e.g. WCPFC,[118] ICCAT[119]). Observer coverage in pelagic fisheries in the North Atlantic can be as low as 1%.[120]

The Hawaiian shallow-set pelagic longline fishery stands out globally as one of the few oceanic fisheries that have implemented restrictions on the amount of sea turtle bycatch across the fleet. Specifically, there is an annual fleet-wide interaction limit (referred to as a "hard cap") of 16 leatherback sea turtles – a population that is critically endangered, according to the IUCN Red List.[121,122] If this limit is reached, the fishery is shut down for the rest of the calendar year. However, this fishery is the exception: as far as known, no hard cap limits have been established for any non-target species caught in any fishery across any of the RFMOs. While the number of elasmobranch-related regulations in RFMOs has increased tenfold since the start of the century, including shark finning and retention prohibitions, there is widespread evidence that these measures alone remain insufficient to prevent shark population declines.[123, 124] And while the implementation of no-retention measures and bycatch reduction CMMs are an important step towards reducing the extinction risk of threatened elasmobranchs and other non-target species, they often do not lead to a reduction in species mortality, as many of the bycaught specimens die before they can be discarded.[125]

The tuna purse seine industry has three modalities of fishing, one of which relies on drifting fish aggregating devices (FADs), which mimic natural floating debris and create an artificial aggregation point for fish.

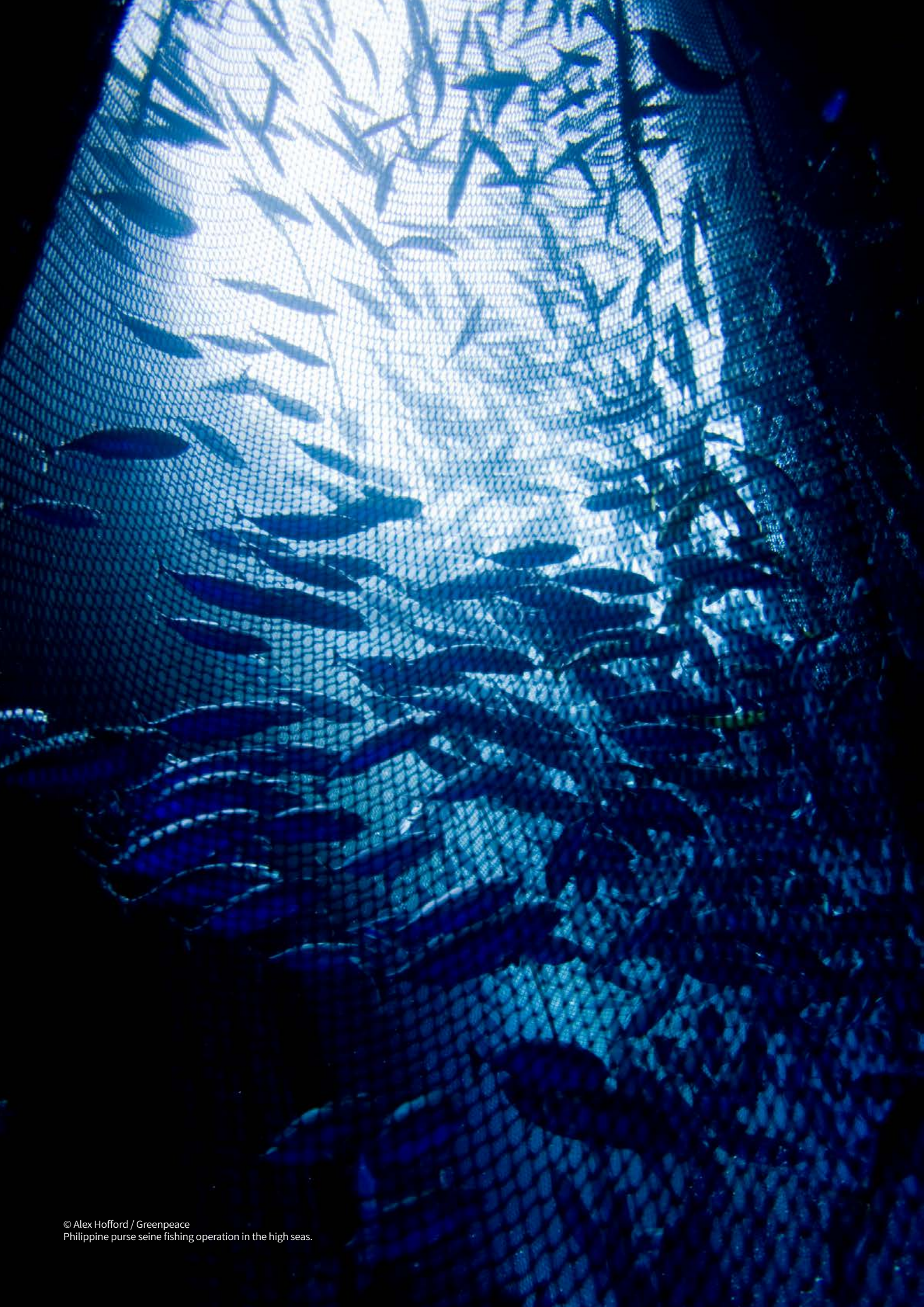
© Paul Hilton / Greenpeace

Greenpeace activists prepare to board an illegal fishing vessel in the Pacific Ocean, to expose out of control tuna fisheries. Tuna fishing has been linked to shark finning, overfishing and human rights abuses.

FAD fishing is known to have much higher bycatch rates than other modalities such as fishing on "free schools".[126] To date, few limitations have been established on the total number of drifting FADs that can be deployed in ABNJ. Recent efforts by the ICCAT, the IOTC and the IATTC are attempting to "limit" the number of FADs deployed by large tuna purse seine vessels to 300,[127] 250[128]and 315[129] per vessel, respectively. While these management measures are steps in the right direction to reduce the magnitude of the impact of FAD fisheries, they only contain the threat and do not eliminate it.

RFMOs are trading in doubt and operationalising scientific uncertainty in ways seen in many other industry sectors. In practice, uncertainty around exact fish stock status creates a gray area for policy making. Within this gray area, values and ideology become the key factors in deciding how and what decisions are made and taken to scale in the international arena. It has become clear that RFMOs value fish extraction as a priority over conservation, and possibly even over sustainable use.

The Global Ocean Treaty has emerged out of need, not thin air. In the Anthropocene era, where conservation is paramount, RFMO values that place extraction over protection threaten global ocean biodiversity.



© Alex Hofford / Greenpeace
Philippine purse seine fishing operation in the high seas.

8. CONCLUSION

Under the purview of RFMOs, ocean ecosystems have continued to face threats from overfishing, the extraction of sensitive species and the destruction of vulnerable marine ecosystems. While there have been moderate conservation gains under their watch, the overarching picture is one of alarming ecological breakdown and extinction, in particular for marine straddling and migratory species. While RFMOs have the responsibility to monitor and manage fisheries' impacts on biodiversity beyond their target species, there has been limited progress on this front. Even more concerning is the limited protections in place for species groups such as sharks, which are often directly targeted by fishing activities. The current, single-stock assessment approach that dominates RFMO management does not adequately account for impacts on non-target species and knock-on effects on the marine biological community as a whole. Scientists estimate that 95% of high seas fish biodiversity is not currently assessed by RFMOs.[130]

While RFMOs have, over the decades, established measures to reduce bycatch risk, many RFMOs have rarely (or never) utilised ABMTs, including MPAs, to force fishing vessels to steer clear of high-risk zones for non-target biodiversity.[131] This has likely been a major contributing factor towards the decline in migratory and straddling biodiversity observed in recent decades. The consensus-based voting system of most RFMOS delays the implementation of proactive monitoring and conservation actions, while negotiations frequently take place in closed-door meetings. These lack transparency and often include government and industry representatives, while civil society is generally excluded.

The newly agreed Global Ocean Treaty represents a historic opportunity to accelerate the conservation and sustainable use of biological diversity across almost half of Earth's surface, including reducing the harmful impacts of commercial fishing in ABNJ. The majority of species recorded in the high seas are data deficient or poorly monitored by existing frameworks, highlighting the need to more actively operationalise the precautionary principle and precautionary approach, as agreed under Part I of the Global Ocean Treaty. The Treaty COP will have the legal purview to create fully protected areas on the high seas, which are vital for resilience in the face of climate change and biodiversity loss.

9. RECOMMENDATIONS

Tuna caught by Spanish longliner in the South West Indian Ocean.

Guided by the text of the Global Ocean Treaty, the preamble below is written in relation to the scope of the implementation of the Treaty, lessons from the historical oversight of RFMOs, and the future relationship between this new legally binding instrument and existing IFBs, including RFMOs:

Recalling that the overarching objective of the Global Ocean Treaty is to ensure the conservation and sustainable use of biodiversity across all areas beyond national jurisdiction (Article 2), including those where legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies (IFBs) already exist,

Recalling also that the Treaty empowers the COP to establish MPAs on the high seas that are designated and managed to achieve specific long-term biological diversity conservation objectives, where measures adopted can apply to activities under RFMO jurisdiction, given the emphasis on collaboration outlined in Article 8 of the Treaty and the introduction of a cooperative mechanism wherein parties to the Treaty participating in IFBs must advocate for Treaty objectives,

Recognising the need to address, in a coherent and cooperative manner, biological diversity loss and degradation of ecosystems of the ocean, due, in particular, to climate change impacts on marine ecosystems, such as warming and ocean deoxygenation, as well as ocean acidification, pollution, including plastic pollution, and, most notably, unsustainable use from industrial fishing activities that have the potential to cause partial ecosystem collapse, as set out in the Preamble of the Global Ocean Treaty,

Aware of Article 5(2) of the Treaty, which provides that: "This Agreement shall be interpreted and applied in a manner that does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies and that promotes coherence and coordination with those instruments, frameworks and bodies,"

Convinced that the term "not undermine" delineates preserving the effectiveness of measures, which is distinct from "respecting the competences" of IFBs, which denotes acknowledging their jurisdiction and capabilities,

Recalling further that overarching principles like the precautionary approach and transparency provisions are pertinent to RFMO engagement in ABMTs, ensuring inclusive decision-making and sustainable practices,

THIS REPORT RECOMMENDS THAT:

- Proponents of ABMTs, including MPAs, can begin scientific studies and assessments to prevent biodiversity damage from fishing activities in potential high seas sites, and initiate consultations with IFBs, including RFMOs, about AMBT establishment before the Global Ocean Treaty comes into effect. States must be prepared to submit MPA proposals to the first Global Ocean Treaty COP, to remain on track to achieve the minimum goal to create a network of protected areas covering 30% of the ocean by 2030. These areas must be fully or highly protected to effectively restore and preserve biodiversity.

- States party to the Global Ocean Treaty should promote Treaty measures within IFBs that they are members of, such as RFMOs, and ensure these measures are consistent with Treaty decisions that prioritise biodiversity protection over maximising fisheries yield. Parties that are not IFB parties should cooperate towards marine biological diversity of ABNJ (reference BBNJ Article 25(4)).

- Relevant IFBs must proactively enhance biodiversity monitoring within their competencies and data-sharing efforts to help identify, establish and monitor future ABMTs and MPAs under the Global Ocean Treaty.

- Governments must prioritise the precautionary approach within RFMOs to better protect biodiversity and ecosystem integrity, both within and outside of MPAs.

- States party to the Global Ocean Treaty should create a system that ensures checks and balances for the future scientific and technical body. These should prevent the weaponisation of doubt in the scientific process for the benefit of the fishing industry and private sector over high seas biodiversity protection and conservation.

- Efforts must be comprehensive to raise awareness about how implementing the Global Ocean Treaty will engage IFBs, including all RFMOs, and establish effective communication channels between IFBs and the future Global Ocean Treaty COP to ensure the conservation and sustainable use of all biodiversity in ABNJ, including species associate with, dependent on, or part of the same ecosystem as targeted stocks.

IN ADDITION, TO FACILITATE TIMELY IMPLEMENTATION OF THE RECOMMENDATIONS ABOVE, GREENPEACE RECOMMENDS:

→ At least 60 countries ratify the Global Ocean Treaty so that it enters into force by the third UN Ocean Conference in June 2025. After ratification, governments must continue to prioritize ocean protection through a rapid and effective implementation of the Treaty.

→ The UN must set up a Preparatory Commission by the end of 2024. A number of key decisions, including rules of procedure, financial regulations and size, terms of reference and modalities of subsidiary bodies must be made at the first Global Ocean Treaty COP. This is critical to ensure the first meetings of the COP will be used to advance protection needed to reach global biodiversity conservation goals, including targets under the Kunming-Montreal Global Biodiversity Framework.

→ The Global Ocean Treaty must deliver on promised support for developing countries through capacity building and the transfer of marine technology. This is vital for equitable implementation of the Treaty across data and capacity-poor regions, and will empower all states to realise their rights and develop, implement, monitor and manage future high seas MPAs.

10. ANNEX I

Table 1: All RFMOs, their abbreviation, the year they came into force, and how we categorise them for the purpose of this report.

Regional fisheries management organisation (RFMO)	Abbreviation	Year RFMO came into force	Type of RFMO
International Pacific Halibut Commission	IPHC	1923	Halibut
General Fisheries Commission for the Mediterranean	GFCM	1949	General
Inter-American Tropical Tuna Commission	IATTC	1950	Tuna
International Commission for the Conservation of Atlantic Tunas	ICCAT	1969	Tuna
Northwest Atlantic Fisheries Organization	NAFO	1979	General
Commission for the Conservation of Antarctic Marine Living Resources	CCAMLR	1982	General
North-East Atlantic Fisheries Commission	NEAFC	1982	General
North Atlantic Salmon Conservation Organization	NASCO	1983	Salmon
Pacific Salmon Commission	PSC	1985	Salmon
Commission for the Conservation of Southern Bluefin Tuna	CCSBT	1994	Tuna
North Pacific Anadromous Fish Commission	NPAFC	1993	Salmon
Indian Ocean Tuna Commission	IOTC	1996	Tuna
South East Atlantic Fisheries Organization	SEAFO	2003	General
Western and Central Pacific Fisheries Commission	WCPFC	2004	Tuna
Southern Indian Ocean Fisheries Agreement	SIOFA	2006	General
South Pacific Regional Fisheries Management Organization	SPRFMO	2012	General
North Pacific Fisheries Commission	NPFC	2015	General

© Alex Hofford / Greenpeace
Philippine purse seine fishing operation

11. REFERENCES

1. **Cullis-Suzuki S. and Pauly D. (2016)** Global evaluation of High Seas Fishery Management.in: Pauly D and Zeller D (2016) Global Atlas of Marine Fisheries: A critical appraisal of catches and ecosystem impacts. Island Press, pp 76-85.
2. **UN General Assembly.** 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. https://www.un.org/depts/los/convention_agreements/convention_20years/1995FishStockAgreement_ATahindro.pdf
3. **O'Connor S., Ono R. and Clarkson C.J. (2011).** Pelagic Fishing at 42,000 Years Before the Present and the Maritime Skills of Modern Humans. Science, Vol. 334, Issue 6059, pp. 1117-1121. https://doi.org/10.1126/science.1207703
4. **FAO (2022).** The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome: FAO. https://doi.org/10.4060/cc0461en
5. **Pauly D. and Zeller D. (2016).** Catch reconstructions reveal that global marine fisheries catches are higher than reported and declining. Nature Communications, Vol. 7, article 10244.
6. **FAO (2022).** The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome: FAO. https://doi.org/10.4060/cc0461en
7. **Dulvy N.K., Pacoureau N., Rigby C.L. et al. (2021).** Overfishing Drives over One-Third of All Sharks and Rays toward a Global Extinction Crisis. Current Biology, Vol. 31, Issue 21, pp. 4773-4787. https://doi.org/10.1016/j.cub.2021.08.062
8. **Pacoureau N., Rigby C.L., Kyne, P.M. et al. (2021).** Half a century of global decline in oceanic sharks and rays. Nature 589, 567-571. https://doi.org/10.1038/s41586-020-03173-9
9. **SWOT Report Volume 19 (2024).** The State of the World's Sea Turtles. https://www.seaturtlestatus.org/swot-report-vol-19
10. **BirdLife International. (2022).** State of the World's Birds. https://www.birdlife.org/state-of-the-worlds-birds/
11. **Dias M.P., Martin R., Pearmain E.J. et al. (2019).** Threats to seabirds: A global assessment. Biological Conservation, Vol. 237, pp. 525-537. https://doi.org/10.1016/j.biocon.2019.06.033
12. **Carmine G., Mayorga J., Miller N.A. et al. (2020).** Who is the high seas fishing industry? One Earth, Vol. 3, Issue 6, pp. 730-738. https://doi.org/10.1016/j.oneear.2020.11.017
13. **Leroy A. and Morin M. (2018).** Innovation in the decision-making process of the RFMOs. Marine Policy, Vol. 97, pp. 156-162. https://doi.org/10.1016/j.marpol.2018.05.025
14. **Huxley T.H. (1883).** Inaugural Meeting of the Fishery Congress. London: W. Clowes and sons
15. **Smith T.D. (1994).** Scaling Fisheries: The Science of Measuring the Effects of Fishing, 1855–1955. Cambridge: Cambridge University Press; Finley C. and Oreskes N. (2013). Maximum sustained yield: a policy disguised as science. ICES Journal of Marine Science, Vol. 70, Issue 2, pp. 245-250. https://doi.org/10.1093/icesjms/fss192
16. **Tickler D., Meeuwig J.J., Palomares M.L. et al. (2018).** Far from home: Distance patterns of global fishing fleets. Science Advances, Vol. 4, Issue 8. 10.1126/sciadv.aar3279; Swartz W., Sala E., Tracey S. et al. (2010). The spatial expansion and ecological footprint of fisheries (1950 to present). PLoS One, Vol. 5, Issue 12. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0015143
17. **Finley C. and Oreskes N. (2013).** Maximum sustained yield: a policy disguised as science. ICES Journal of Marine Science, Vol. 70, Issue 2, pp. 245-250. https://doi.org/10.1093/icesjms/fss192; Finley C. (2013). All the Fish in the Sea: Maximum Sustainable Yield and the Failure of Fisheries Management. https://doi.org/10.7208/chicago/9780226249681.001.0001
18. **Rothwell, D. and others (eds) (2015).** The Oxford Handbook of the Law of the Sea. https://doi.org/10.1093/law/9780198715481.001.0001
19. **UN General Assembly,** 22nd Session.
20. **Buzan B. (1980).** 'United We Stand…': Informal Negotiating Groups at UNCLOS III. Marine Policy, Vol. 4, Issue 3, pp. 183-204, https://doi.org/10.1016/0308-597X(80)90053-6; Rothwell, D. and others (eds) (2015). The Oxford Handbook of the Law of the Sea. https://doi.org/10.1093/law/9780198715481.001.0001
21. **Brooks C.M., Weller J.B., Gjerde K. et al. (2014).** Challenging the 'Right to Fish' in a Fast-Changing Ocean. Stanford Environmental Law Journal, Vol. 33. https://law.stanford.edu/wp-content/uploads/2018/05/brooks-289.pdf
22. **UN (1992).** Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992. Volume 1, Resolutions Adopted by the Conference. https://www.un.org/esa/dsd/agenda21/Agenda%2021.pdf; Brooks C.M., Weller J.B., Gjerde K. et al. (2014). Challenging the 'Right to Fish' in a Fast-Changing Ocean. Stanford Environmental Law Journal, 33. https://law.stanford.edu/wp-content/uploads/2018/05/brooks-289.pdf
23. **UN (1992).** Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992. Volume 1, Resolutions Adopted by the Conference, https://www.un.org/esa/dsd/agenda21/Agenda%2021.pdf
24. **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 (UNFSA).** https://www.un.org/depts/los/convention_agreements/convention_20years/1995FishStockAgreement_ATahindro.pdf
25. **Buga I. (2015).** Between Stability and Change in the Law of the Sea Convention: Subsequent Practice, Treaty Modification, and Regime Interaction. Oxford: Oxford University Press.
26. **UN General Assembly.** 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. https://www.un.org/depts/los/convention_agreements/convention_20years/1995FishStockAgreement_ATahindro.pdf
27. **Cullis-Suzuki S. and Pauly D. (2010).** Failing the high seas: A global evaluation of regional fisheries management organizations. Marine Policy, Vol. 34, Issue 5, pp. 1036-1042. https://doi.org/10.1016/j.marpol.2010.03.002; Cullis-Suzuki S. and Pauly D. (2016) Global evaluation of High Seas Fishery Management.in: Pauly D and Zeller D (2016) Global Atlas of Marine Fisheries: A critical appraisal of catches and ecosystem impacts. Island Press, pp 76-85.
28. **Cullis-Suzuki S. and Pauly D. (2010).** Failing the high seas: A global evaluation of regional fisheries management organizations. Marine Policy, Vol. 34, Issue 5, pp. 1036-1042.

29. **Pauly D., Zeller D. and Palomares M.L.D. (eds) (2020).** Sea Around Us Concepts, Design and Data (seaaroundus.org); Carmine et al. (forthcoming, 2024). RFMO Performance Review
30. **UN General Assembly (1982).** 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. https://www.un.org/depts/los/convention_agreements/convention_20years/1995FishStockAgreement_ATahindro.pdf
31. **Pentz B. and Klenk N. (2017).** The 'responsiveness gap' in RFMOs: The critical role of decision-making policies in the fisheries management response to climate change. Ocean & Coastal Management, Vol. 145, pp. 44-51. https://doi.org/10.1016/j.ocecoaman.2017.05.007
32. **WANG C. (2010).** Issues on Consensus and Quorum at International Conferences. Chinese Journal of International Law, Vol. 9, Issue 4, pp. 717-739. https://doi.org/10.1093/chinesejil/jmq032; de Bruyn P., Murua H. and Aranda M. (2013). The Precautionary approach to fisheries management: How this is taken into account by Tuna regional fisheries management organisations (RFMOs). Marine Policy, Vol. 38, pp. 397-406. https://doi.org/10.1016/j.marpol.2012.06.019; Pentz B. and Klenk N. (2017). The 'responsiveness gap' in RFMOs: The critical role of decision-making policies in the fisheries management response to climate change. Ocean & Coastal Management, Vol. 145, pp. 44-51; https://doi.org/10.1016/j.ocecoaman.2017.05.007; Buzan B. (1980). 'United We Stand…': Informal Negotiating Groups at UNCLOS III. Op. cit.
33. **Telesca J.E. (2015).** Consensus for Whom?: Gaming the Market for Atlantic Bluefin Tuna through the Empire of Bureaucracy. The Cambridge Journal of Anthropology, Vol. 33, no. 1, pp. 49-64. https://www.jstor.org/stable/26370553
34. **Pentz B., Klenk N., Ogle S. et al. (2018).** Can regional fisheries management organizations (RFMOs) manage resources effectively during climate change? Marine Policy, Vol. 92, pp. 13-20, https://doi.org/10.1016/j.marpol.2018.01.011; de Bruyn P., Murua H. and Aranda M. (2013). The Precautionary approach to fisheries management: How this is taken into account by Tuna regional fisheries management organisations (RFMOs). Marine Policy, Vol. 38, pp. 397-406.
35. **Sinan H. and Bailey M. (2020).** Understanding Barriers in Indian Ocean Tuna Commission Allocation Negotiations on Fishing Opportunities. Sustainability Vol. 12, Issue 16. https://doi.org/10.3390/su12166665; Seto K., Galland G.R., McDonald A. et al. (2021). Resource allocation in transboundary tuna fisheries: A global analysis. Ambio 50, pp. 242-259. https://doi.org/10.1007/s13280-020-01371-3
36. **Sinan H., Bailey M. and Swartz W. (2021).** Disentangling politics in the Indian Ocean Tuna Commission. Marine Policy, Vol. 133. https://doi.org/10.1016/j.marpol.2021.104781; Telesca J.E. (2015). Consensus for Whom?: Gaming the Market for Atlantic Bluefin Tuna through the Empire of Bureaucracy. The Cambridge Journal of Anthropology, Vol. 33, no. 1, pp. 49-64. https://www.jstor.org/stable/26370553
37. **Pentz B. and Klenk N. (2017).** The 'responsiveness gap' in RFMOs: The critical role of decision-making policies in the fisheries management response to climate change. Ocean & Coastal Management, Vol. 145, pp. 44-51. https://doi.org/10.1016/j.ocecoaman.2017.05.007
38. **www.obis.org**
39. **https://obis.org/area/1**
40. **Crespo G.O., Dunn D.C., Appeltans, W. and Halpin P.N. (2018)** What Do We Know about Taxonomic Diversity beyond National Jurisdiction? The Nippon Foundation Nereus Program. https://nereusprogram.org/wp-content/uploads/2018/09/BBNJ-Policy-Brief-TaxonomicDiversity_v5_FINAL.pdf
41. **Maguire J.J., Sissenwine M., Csirke J. et. al. (2006).** The State of World Highly Migratory, Straddling and Other High Seas Fishery Resources And Associated Species. FAO Fisheries Technical Paper. No. 495. Rome: FAO. https://openknowledge.fao.org/server/api/core/bitstreams/c32aff1f-2af1-4194-af84-43af2ee7e1d3/content
42. **Wallace B., Lewison R., McDonald S. et al. (2010).** Global patterns of marine turtle bycatch. Conservation Letters, Vol. 3, Issue 3, pp. 131-142. https://doi.org/10.1111/j.1755-263X.2010.00105.x; Anderson O., Small C., Croxall J. et al. (2011). Global seabird bycatch in longline fisheries. Endang Species Res Vol. 14, no. 2, pp. 91-106. https://doi.org/10.3354/esr00347
43. **UNEP-WCMC (2024).** State of the World's Migratory Species. https://www.cms.int/sites/default/files/publication/State%20of%20the%20Worlds%20Migratory%20Species%20report_E.pdf
44. **Lascelles B., Notarbartolo Di Sciara G., Agardy T. et al. (2014).** Migratory marine species: their status, threats and conservation management needs. Aquatic Conserv: Mar. Freshw. Ecosyst., Vol. 24, pp. 111-127. DOI: 10.1002/aqc.2512
45. **Bycatch Management Information System (BMIS): Regulations.** https://www.bmis-bycatch.org/index.php/regulations
46. **Worm B., Orofino S., Burns E. et al. (2024).** Global shark fishing mortality still rising despite widespread regulatory change. Science, Vol. 383, Issue 6679, pp. 225-230. DOI: 10.1126/science.adf8984
47. **de Bruyn P. and Palma C. (2015).** Updated Species List for By-Catch Caught in ICCAT Fisheries. Collect Vol. Sci Pap ICCAT 71, pp. 2887–2899.http://www.iccat.es/Documents/CVSP/CV071_2015/n_6/CV071062887.pdf
48. **ICCAT. 2018.** Report of the 2018 ICCAT intersessional meeting of the shark species group (Madrid, Spain, 2-6 June 2018). ICCAT Col. Vol. Sci. Pap. 75(3): 357-434. SCRS/2018/009.
49. **Romanov E., Bach P., Rabearisoa N. and Natalya R. (2010).** Pelagic elasmobranch diversity and abundance in the Western Indian Ocean: an analysis of long-term trends from research and fisheries longline data. In: IOTC - 6th Working Party on Ecosystems and Bycatch. IOTC-2010-WPEB-16, Seychelles. https://iotc.org/documents/pelagic-elasmobranch-diversity-and-abundance-indian-ocean-analysis-long-term-trends
50. **IOTC.** Status summary for species of tuna and tuna-like species under the IOTC mandate, as well as other species impacted by IOTC fisheries
51. **Pacoureau N., Rigby C.L., Kyne P.M. et al. (2021).** Half a century of global decline in oceanic sharks and rays. Nature, Vol. 589, pp. 567-571. https://doi.org/10.1038/s41586-020-03173-9
52. **Crespo G.O., Dunn D.C., Gianni M. et al. (2019).** High-seas fish biodiversity is slipping through the governance net. Nat Ecol Evol, Vol. 3, pp. 1273-1276. https://doi.org/10.1038/s41559-019-0981-4
53. **Ibid**
54. **Gjerde K.M., Dotinga H., Hart H. et al. (2008).** Regulatory and Governance Gaps in the International Regime for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction. IUCN Environmental Policy and Law Paper - Marine series.https://iucn.org/resources/publication/regulatory-and-governance-gaps-international-regime-conservation-and
55. **Qu Y. and Liu R. (2022).** A Sustainable Approach towards Fisheries Management: Incorporating the High Seas Fisheries Issues into the BBNJ Agreement. Fishes, Vol. 7, Issue. 6. DOI: 10.3390/fishes7060389
56. **Dunn D., Jablonicky C., Crespo O. et al.** Empowering high seas governance with satellite vessel tracking data. Fish and Fisheries, Vol. 19, Issue 2. DOI: 10.1111/faf.12285
57. **Seto K., Miller N., Kroodsma D. et al. (2023).** Fishing through the cracks: The unregulated nature of global squid fisheries. Science

Advances, Vol. 9, Issue 10. DOI: 10.1126/sciadv.add8125

58. **Figure from Carmine G.., drawn from FAO** https://www.fao.org/figis/geoserver/factsheets/rfbs.html
59. **Gilman E., Chaloupka M., Booth H. et al. (2023).** Bycatch-neutral fisheries through a sequential mitigation hierarchy. Marine Policy, Vol. 150, https://doi.org/10.1016/j.marpol.2023.105522, https://www.sciencedirect.com/science/article/pii/S0308597X23000490
60. **Tuohy, C. (2022).** Evaluating Spatial Management on the High Seas: A Performance Review of Fisheries Closures and Marine Protected Areas. https://dukespace.lib.duke.edu/server/api/core/bitstreams/adc542ea-5f2f-47a2-b1cc-4426f0449c9f/content
61. **FAO.** Vulnerable Marine Ecosystems Database.
62. **Gianni, M., Fuller S.D., Currie D.E.J. et al. (2016).** How much longer will it take? A ten-year review of the implementation of United Nations General Assembly resolutions 61/105, 64/72 and 66/68 on the management of bottom fisheries in areas beyond national jurisdiction. Deep Sea Conservation
63. **Guillotreau, P., Salladarré, F., Capello, M., Dupaix, A., Floc'h, L., Tidd, A., Tolotti, M. and Dagorn, L., 2024.** Is FAD fishing an economic trap? Effects of seasonal closures and other management measures on a purse‐seine tuna fleet. Fish and Fisheries, 25(1), pp.151-167.https://onlinelibrary.wiley.com/doi/abs/10.1111/faf.12799
64. **Molenaar E.J. and Caddell R. (2019).** International Fisheries Law: Achievements, Limitations and Challenges. In Strengthening International Fisheries Law in an Era of Changing Oceans, pp. 3-10.
65. **FAO,** Fisheries and Aquaculture - North Pacific Fisheries Commission (NPFC)
66. **Resolution adopted by the UN General Assembly on 8 December 2006.** https://sdgs.un.org/documents/ares61105-sustainable-fisheries-incl-throug-19226
67. **Carver E. (2024, April 22).** No protection from bottom trawling for seamount chain in northern Pacific. Mongabay. https://news.mongabay.com/2024/04/no-protection-from-bottom-trawling-for-seamount-chain-in-northern-pacific/
68. **Greenpeace International (2023)** 30×30: From Global Ocean Treaty to Protection at Sea
69. **Carver E. (2024, April 22).** No protection from bottom trawling for seamount chain in northern Pacific. Mongabay. https://news.mongabay.com/2024/04/no-protection-from-bottom-trawling-for-seamount-chain-in-northern-pacific/
70. **Greenpeace International (2023)** 30×30: From Global Ocean Treaty to Protection at Sea
71. **Carver E. (2024, April 22).** No protection from bottom trawling for seamount chain in northern Pacific. Mongabay. https://news.mongabay.com/2024/04/no-protection-from-bottom-trawling-for-seamount-chain-in-northern-pacific/
72. **NPFC.** Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean. https://www.npfc.int/system/files/2017-01/Convention%20Text.pdf
73. **Meyer S., Report** - Final results: INT2021-02 Characterisation of protected coral interactions, 2023 https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marine-conservation-services/meetings/2023/twg-8-jun/int2021-02-characterisation-of-protected-coral-interactions-draft-final-report.pdf
74. **SPRFMO (2023).** 11th Meeting of the Scientific Committee. Development of a process to review all recent and historical benthic VME bycatch data: New Zealand submission https://www.sprfmo.int/assets/Meetings/02-SC/11th-SC-2023/Deepwater/SC11-DW10-NZL-Development-of-a-process-to-review-all-recent-and-historical-benthic-VME-bycatch-data.pdf
75. **Secretariat of the Convention on Biological Diversity (2014).** Ecologically or Biologically Significant Marine Areas (EBSAs). Special places in the world's oceans. Volume 1: Western South Pacific Region. https://www.cbd.int/marine/ebsa/booklet-01-wsp-en.pdf

Special places in the world's oceans. Volume 1: Western South Pacific Region. https://www.cbd.int/marine/ebsa/booklet-01-wsp-en.pdf

76. **SPRFMO (2023).** CMM03-23. Conservation and Management Measure for the Management of Bottom Fishing in the SPRFMO Convention Area. https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2023-CMMs/CMM-03-2023-Bottom-Fishing_29Mar23.pdf
77. **UN Department of Economic and Social Affairs, Sustainable Development.** https://sdgs.un.org/documents/ares61105-sustainable-fisheries-incl-throug-19226
78. **30×30: From Global Ocean Treaty to Protection at Sea,** Greenpeace International, 2023
79. **Carver E.**, Will new bottom trawling rules do enough to protect South Pacific seamounts? 2023
80. **Deep Sea Conservation Coalition (2023, Dec 29).** Protecting deep-sea biodiversity in the South Pacific: Briefing to 12th SPRFMO Commission Meeting, 2024. https://deep-sea-conservation.org/wp-content/uploads/2024/01/DSCC-briefing-to-SPRFMO-12th-CM-January-2024.pdf
81. **SPRFMO (2024).** SPRFMO COMMISSION 12th Annual Meeting Report, 29 January to 02 February 2024. https://www.sprfmo.int/assets/Meetings/01-COMM/12th-Commission-2024/COMM12-Report-2024-Final-26Feb24-No-Annexes.pdf
82. **UN (2021).** The Second World Ocean Assessment, Volume 1. https://www.un.org/regularprocess/sites/www.un.org.regularprocess/files/2011859-e-woa-ii-vol-i.pdf
83. **Jaquet J. (2022).** The Playbook: How to Deny Science, Sell Lies, and Make a Killing in the Corporate World. London: Allen Lane
84. **Carmine et al.** (forthcoming, 2024).
85. **Frumhoff P.C., Heede R. and Oreskes N. (2015).** The climate responsibilities of industrial carbon producers. Climatic Change, Vol. 132, pp. 157-171. https://doi.org/10.1007/s10584-015-1472-5; Österblom H., Jouffray J.-B., Folke C. et al. (2015). Transnational Corporations as 'Keystone Actors' in Marine Ecosystems. PLoS ONE, Vol.10, Issue 5. https://doi.org/10.1371/journal.pone.0127533; Carmine G., Mayorga J., Miller N.A. et al. (2020). Who is the high seas fishing industry? One Earth, Vol. 3, Issue 6, pp. 730-738. https://doi.org/10.1016/j.oneear.2020.11.017
86. **Carmine G., Mayorga J., Miller N.A. et al. (2020).** Who is the high seas fishing industry? One Earth, Vol. 3, Issue 6, pp. 730-738. https://doi.org/10.1016/j.oneear.2020.11.017
87. **Fish Tracker Initiative (2017).** Empty Nets: How overfishing risks leaving investors stranded
88. **Carmine G., Mayorga J., Miller N.A. et al. (2020).** Who is the high seas fishing industry? One Earth, Vol. 3, Issue 6, pp. 730-738. https://doi.org/10.1016/j.oneear.2020.11.017
89. **Ibid**
90. **Havice E. and Campling L. (2010).** Shifting Tides in the Western and Central Pacific Ocean Tuna Fishery: The Political Economy of Regulation and Industry Responses. Global Environmental Politics, Vol. 10, Issue 1, pp. 89-114. DOI: 10.1162/glep.2010.10.1.89; Carmine et al. (forthcoming, 2024)
91. **Carmine G., Mayorga J., Miller N.A. et al. (2020).** Who is the high seas fishing industry? One Earth, Vol. 3, Issue 6, pp. 730-738. https://doi.org/10.1016/j.oneear.2020.11.017
92. **Sinan, H., Bailey, M., and Swartz, W. (2021).** Disentangling politics in the Indian Ocean Tuna Commission. Marine Policy 133, 104781. https://doi.org/10.1016/j.marpol.2021.104781.;Schiller, L., Auld, G., Hanich, Q., and Bailey, M. (2023). Increasing industry involvement in international tuna fishery negotiations. One Earth. https://doi.org/10.1016/j.oneear.2022.12.001.; Petersson, M.T., Dellmuth, L.M., Merrie, A., and Österblom, H. (2019). Patterns and trends in non-state actor participation in regional fisheries management organizations. Marine Policy 104, 146–156.https://doi.org/10.1016/j.marpol.2019.02.025.; Carmine et al (forthcoming, 2024)

93. **Schiller, L., Auld, G., Hanich, Q., and Bailey, M. (2023).** Increasing industry involvement in international tuna fishery negotiations. One Earth. https://doi.org/10.1016/j.oneear.2022.12.001.
94. **Ibid**
95. **Ibid**
96. **McVeigh, K. (2023).** Revealed: most of EU delegation to crucial fishing talks made up of fishery lobbyists. The Guardian.
97. **Petersson M., Dellmuth L., Merrie A. and Österblom H. (2019).** Patterns and trends in non-state actor participation in regional fisheries management organizations. Marine Policy, Vol. 104, Issue 5, pp. 146-156. DOI:10.1016/j.marpol.2019.02.025
98. **Sinan H., Bailey M. and Swartz W. (2021).** Disentangling politics in the Indian Ocean Tuna Commission. Marine Policy, Vol. 133. https://doi.org/10.1016/j.marpol.2021.104781.
99. **Ibid**
100. **Carmine et al. (forthcoming, 2024)**
101. **Oreskes N. and Conway E.M. (2010).** Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming. 1st US ed. New York: Bloomsbury Press
102. **Supran G., Rahmstorf S. and Oreskes N. (2023).** Assessing ExxonMobil's global warming projections. Science, Vol. 379. DOI: 10.1126/science.abk0063
103. **Jaquet J. (2022).** The Playbook: How to Deny Science, Sell Lies, and Make a Killing in the Corporate World. London: Allen Lane; Oreskes, N. and Conway, E.M. (2010). Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming. 1st US ed. New York: Bloomsbury Press
104. **Ibid**
105. **Hilborn, R. (2013).** Environmental Cost of Conservation Victories. Proceedings of the National Academy of Sciences of the United States of America, Vol. 110. DOI: 10.1073/pnas.1308962110; Jaquet J. (2022). The Playbook: How to Deny Science, Sell Lies, and Make a Killing in the Corporate World. London: Allen Lane
106. **NPFC (2023, March 22-24)** 7th Meeting of the North Pacific Fisheries Commission https://www.npfc.int/sites/default/files/2023-05/COM07%20Final%20Report.pdf
107. **Ibid**
108. **Ibid**
109. **Ibid**
110. **Oreskes N. and Conway E.M. (2010).** Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming. 1st US ed. New York: Bloomsbury Press
111. **Ibid**
112. **UN BBNJ Agreement** 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 https://treaties.un.org/doc/Treaties/2023/06/20230620%2004-28%20PM/Ch_XXI_10.pdf
113. **McDorman T. (2005).** Implementing existing tools: Turning Words Into Actions – Decision-Making Processes of Regional Fisheries Management Organisations (RFMOs). The International Journal of Marine and Coastal Law, Vol. 20, Issue 3, pp.423-457. DOI: 10.1163/157180805775098595
114. **Davis R.A. and Hanich Q. (2022).** Transparency in fisheries conservation and management measures. Marine Policy, Vol. 136, p.104088. DOI: 10.1016/j.marpol.2020.104088
115. **Ibid**
116. **Ibid**
117. **Griffiths S.P., Lennert-Cody C., Wiley B. and Fuller L. (2021).** Update on operational longline observer data required under resolution C-19-08 and a preliminary assessment of data reliability for estimating total catch for bycatch species in the eastern Pacific Ocean. In 10th Meeting of the IATTC Working Group on Bycatch, 5 May 2021, La Jolla, California, USA. Document BYC-10 INF-D (Vol. 22). https://www.iattc.org/GetAttachment/476948e6-a594-4bc7-a470-69303b6e14c2/BYC-10-INF-D_Update-on-operational-longline-observer-data.pdf
118. **WCPFC Secretariat and SPC-OFP (2014).** An update on developing clearer guidelines to satisfy the required level of ROP longline observer coverage. WCPFC-TCC10-2014-13_rev1. 2014. https://meetings.wcpfc.int/node/8851
119. **ICCAT Secretariat (2014).** Secretariat report to the Compliance Committee. Doc. No. COC-303 / 2014.
120. **Bureau Veritas (2016).** North and South Atlantic swordfish Spanish longline fishery. Public Comment Draft Report, Volume 1.
121. **Wallace B.P., Tiwari M. and Girondot M. (2013).** Dermochelys coriacea. The IUCN Red List of Threatened Species 2013: e.T6494A43526147. https://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T6494A43526147.en
122. **NOAA Fisheries.** Hawai'i Shallow-set Longline Fishery Interactions with Leatherback Sea Turtles. www.fisheries.noaa.gov/pacific-islands/bycatch/hawaii-shallow-set-longline-fishery-interactions-leatherback-sea-turtles#:~:text=The%20annual%20fleet%2Dwide%20interaction,remainder%20of%20the%20calendar%20year
123. **Tolotti M.T., Filmalter J.D., Bach P. et al. (2015).** Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. Global Ecology and Conservation, Vol. 4, pp.1-7. https://doi.org/10.1016/j.gecco.2015.05.003
124. **Worm B., Orofino S., Burns E. et al. (2024).** Global shark fishing mortality still rising despite widespread regulatory change. Science, Vol. 383, pp. 225-230. DOI: 10.1126/science.adf8984
125. **Tolotti, M.T., Filmalter, J.D., Bach, P., Travassos, P., Seret, B. and Dagorn, L., 2015.** Banning is not enough: The complexities of oceanic shark management by tuna regional fisheries management organizations. Global Ecology and Conservation, 4, pp.1-7.
126. **Lezama‐Ochoa, N., Murua, H., Ruiz, J., Chavance, P., Delgado de Molina, A., Caballero, A. and Sancristobal, I., 2018.** Biodiversity and environmental characteristics of the bycatch assemblages from the tropical tuna purse seine fisheries in the eastern Atlantic Ocean. Marine Ecology, 39(3), p.e12504
127. **ICCAT(2023).**https://oceans-and-fisheries.ec.europa.eu/document/download/ea180a88-feb7-44ce-aa69-917a9269087c_en?filename=2023-11-27-non-paper-updates-2024-fishing-opportunities-regulation-com-587-iccat-iotc_en.pdf&prefLang=fr#:~:text=In%20order%20to%20reduce%20the,those%20measures%20in%20Union%20law
128. **IOTC(2023).**www.bmis-bycatch.org/sites/default/files/2023-03/Resolution_23-02E_-_On_Management_of_Drifting_Fish_Aggregating_Devices_DFADs_in_the_IOTC_area_of_competence-1.pdf
129. **Lopez J., Lennert-Cody C., Maunder M. and Aires-da-Silva A. (2019).** Adjusting current FAD limits to meet 2019 staff recommendations for tropical tuna management in the eastern Pacific Ocean. IATTC. Document FAD-04-01 Ad-Hoc Permanent Working Group on FADs, Bilbao. https://www.iattc.org/getattachment/5d0715b4-8e6b-4e37-80e1-b4dc92b925ad/FAD-04-01_Active-FAD-limits.pdf
130. **Crespo, G.O., Dunn, D.C., Gianni, M., Gjerde, K., Wright, G., and Halpin, P.N. (2019).** High-seas fish biodiversity is slipping through the governance net. Nature Ecology & Evolution 3, 1273–1276. https://doi.org/10.1038/s41559-019-0981-4.
131. **Caddell, R. and Molenaar, E.J. eds., 2019.** Strengthening international fisheries law in an era of changing oceans. Bloomsbury Publishing.

UN-TANGLED

HOW THE GLOBAL OCEAN TREATY CAN HELP REPAIR HIGH SEAS MISMANAGEMENT

Regional fisheries management organisations (RFMOs) provide a vivid example of the broken system of global ocean governance. Under their watch, ocean health has continued to decline, as they have failed to prevent overfishing, the decimation of sensitive species and the destruction of vulnerable marine ecosystems.

This report explores some of the reasons why RFMOs are not delivering on their mandate to preserve marine biodiversity, ranging from consensus decision making and limited scope, to corporate influence and failure to follow scientific advice. It outlines how the Global Ocean Treaty, once ratified, can work with RFMOs to take a holistic, truly ecosystem-based approach and ensure protection of at least 30% of the ocean by 2030, a target agreed by all governments in 2022.

PUBLISHED BY GREENPEACE INTERNATIONAL - JUNE 2024

GREENPEACE
PROTECT
THE OCEANS