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RFMO adaptation to climate change

A case study of redistribution of fish stocks in the North-East Atlantic

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Master's thesis in Law of the Sea JUR-3910-1, September 2024



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List of abbreviations

ABNJ – Areas beyond national jurisdiction

BBNJ – Agreement on Biodiversity Beyond National Jurisdiction

CBD – Convention on Biological Diversity

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

CMS – Convention on Migratory Species

DWFN- Distant Water Fishing Nations

FAO – Food and Agricultural Organization of the United Nations

IATTC- Inter-American Tropical Tuna Commission

ICCAT - The International Commission for the Conservation of Atlantic Tunas

ICES – International Council for the Exploration of the Sea

IFB – International Frameworks and Bodies

IMO – International Maritime Organization

ITLOS- The International Tribunal for the Law of the Sea

IUU – Illegal, Unreported and Unregulated Fishing

LOSC – United Nations Convention on the Law of the Sea

MSY – Maximum sustainable yield

NAFO: Northwest Atlantic Fisheries Organization

NEAFC – North East Atlantic Fisheries Commission

OECM- (NEAFC) Working Group Other Effective Area Based Conservation Measures

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

PECMAS – NEAFC Permanent Committee on Management and Science

RFMO – Regional Fisheries Management Organizations

SEAFO - The South East Atlantic Fisheries Organisation

TAC – Total allowable catch

UNFSA – United Nations Fish Stocks Agreement

VME - Vulnerable Marine Ecosystem

WCPFC- The Western and Central Pacific Fisheries Commission

1. Introduction

1.1. Climate change impacts on the oceans and the redistribution of fish stocks

According to the IPCC, carbon emissions from human activities have had numerous effects on the global oceans, causing ocean acidification, oxygen loss, increased temperatures, and sea level rise.¹ The effects of the warming waters include altered volume and species distributions, spanning from the equatorial regions to the polar areas, and from coastal areas into the deeper oceans.² The migration patterns are striking, estimated about 60-70/km per decade.³ Many commercially valuable stocks are affected, impacting local communities and the global food security, necessitating urgent mitigation and adaptation strategies.⁴

As the man-made boundaries remain firm, the stocks are moving in and out of areas of national jurisdiction, known as ABNJ.⁵ In principle, these areas are open for all states for *inter alia* navigation and fishing. Regional fisheries management organisations (RFMOs) are autonomous international organisations established to adopt legally binding conservation and management measures in respect of the High Seas fish stocks under their jurisdiction.⁶ When the stocks they manage migrate into new waters, their structure and purpose are getting increasingly challenged. In recent years, most of the around 20 RFMOs have started to address impacts of climate change but differ in their approaches to handle the issue.⁷ Scholars, such as Pentz et al. suggest that many of the existing governance regimes for managing fisheries are unstable and structurally complicated, inflexible to meet future ecosystem change.⁸

¹ N.L Bindhoff et al., 'Changing Ocean, Marine Ecosystems, and Dependent Communities' in H.O Pörtner et al. (eds), IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (IPCC 2019) 447-587.

² International Council for the Exploration of the Sea (ICES), 'Climate aware: Can the influence of climate change on aquaculture, fisheries, and ecosystems be accounted for in ICES advice?' (ICES, accessed 19 June 2024) <https://www.ices.dk/news-and-events/news-archive/news/Pages/WKCLIMAD.aspx>.

³ M. Pinsky et al., 'Preparing Ocean Governance for Species on the Move' (2018) 360 *Science* 1180. Some scholars mention 60 and others 70. See E.S Poloczanska *et al.*, 'Global Imprint of Climate Change on Marine Life' (2013) 3 *Nature Climate Change* 923.

⁴ IPCC, (n1) 450.

⁵ For this thesis "areas under national jurisdiction" refers to the territorial sea, contiguous zone and the Exclusive Economic Zone, extending up to 200 nm.

⁶ R. Rayfuse., 'Addressing Climate Change Impacts in Regional Fisheries Management Organizations' in Richard Caddell and Eric J Molenaar, *Strengthening International Fisheries Law in an Era of Changing Oceans* (Hart Publishing 2019) 250.

⁷ *Ibid.* 259.

⁸ B. Pentz et al., 'Can Regional Fisheries Management Organizations (RFMOs) Manage Resources Effectively during Climate Change?' (2018) 92 *Marine Policy* 13, 901.

Climate change impacts the effectiveness of everything from small scale to multilateral management structures, although the consequences are intertwined with other factors such as overfishing, increased seabed activities and shipping.⁹ As a result of climate change, some states are witnessing the arrival of new stocks, while others may face a depletion of their marine living resources, where they are in the risk of becoming unregulated and overfished.¹⁰ This phenomenon was prominently illustrated by the “mackerel dispute” in the North-East Atlantic, where shifting climatic conditions were identified as a key factor contributing to the conflict between Norway, Iceland, the Faroes Islands, and the EU.¹¹

The North-East Atlantic has some of the world's most productive fishing grounds, significantly contributing to the global fish supply. The region has also become one of the hotspots where the climatic changes are especially noticeable, with predicted temperature increase between 0.5 to 1.5 C° in 2070, causing great changes to the ecosystem and increased migration of marine living resources.¹² Fisheries in the North-East Atlantic are managed through various arrangements, including national policies and regulations, bilateral and multilateral agreements between coastal states with shared stocks, the European Union Common Fisheries Policy, as well as 3 RFMOs: the International Commission for Conservation of Atlantic Tunas (ICCAT),¹³ the North Atlantic Salmon Conservation Organization (NASCO),¹⁴ and last (but not least) the North East Atlantic Fisheries Commission (NEAFC)¹⁵ which will be the focus of this thesis.¹⁶

⁹ W.E. Morrison and V. Termini, ‘Climate Change and Ocean Governance: Politics and Policy for Threatened Seas’ in Harris (ed), *Climate Change and Ocean Governance: Politics and Policy for Threatened Seas* (Cambridge University Press 2019).

¹⁰ This includes species entering a jurisdictional zone where they priorly have not been regulated, but also stocks leaving designated conservation areas. See. M. Lennan, ‘Fisheries Redistribution under Climate Change: Rethinking the Law to Address the “Governance Gap”?’ (22 September 2021) <<https://papers.ssrn.com/abstract=3928575>> accessed 3 April 2024.

¹¹ R. Caddell and E.J. Molenaar (eds), *Strengthening International Fisheries Law in an Era of Changing Oceans* (Hart Publishing 2019) 21 <<http://www.bloomsburycollections.com/book/strengthening-international-fisheries-law-in-an-era-of-changing-oceans>> accessed 22 April 2024.

¹² A.H. Hoel, ‘The Geopolitics of Fish in the Arctic’ [2020] 4 <<https://nupi.brage.unit.no/nupi-xmlui/handle/11250/2673499>> accessed 27 May 2024.

¹³ International Convention for the Conservation of Atlantic Tunas (1972) 7th Revision.

¹⁴ Convention for the Conservation of Salmon in the North Atlantic Ocean, 2 March 1982, UNTS 1338, 33.

¹⁵ Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries (adopted 18 November 1980, in force 17 March 1982)

¹⁶ FAO, *Impacts of Climate Change on Fisheries and Aquaculture: Synthesis of Current Knowledge, Adaptation and Mitigation Options* (AO Fisheries and Aquaculture Technical Paper No 627, 2018) 89 <<http://www.fao.org/3/i9705en/I9705EN.pdf>>.

1.2. Research question

This thesis aims to answer: How is NEAFC adapting to climate-induced redistribution of fish stocks in the North-East Atlantic, and are the current legal and management practices sufficient to address these issues? To answer this question, it is necessary to discuss (1) how redistributions of fish stocks are covered in the existing legal framework, (2) how climate change is affecting the management of living marine resources in the North-East Atlantic, (3) How NEAFC is currently addressing these challenges, and (4) if the current practices are sufficient to combat the current and future issues that arise from redistribution of stocks within and outside the Convention area. Lastly (5) if the current practices are not sufficient, what can be done further?

1.3. Methodology and sources

This thesis aims to provide a legal analysis of the implications of climate-induced changes in fish stock distributions in the North-East Atlantic. A doctrinal approach to analysing the international legal framework of state obligations with the redistribution of stocks is adopted. Given the urgent need for adaptation it is necessary to evaluate the suitability of the current legal framework and how international law might evolve to address these issues more effectively. Aligning with Lennan's view that by taking a systemic and evolutive interpretation of the international legal framework, one can address the emerging challenges to the marine environment, avoid governance gaps and thereby strengthen the rule of law.¹⁷ By examining how NEAFC is facing the challenges that comes with outflow, influx and redistribution within its Convention area, this research evaluates the strength and weaknesses with the existing management measures. As the final thesis question states, it is important to understand what can be done further to fill the potential responsiveness gaps, and not only focus on the *de lege data*. The final chapter discovers the *de lege ferenda*, a discussion on future solutions.

As a natural starting point, the primary sources for this research will include provisions from the UN Convention on the Law of the Sea (LOSC),¹⁸ and the UN Fish Stock Agreement

¹⁷ Lennan (n 10) 167.

¹⁸ United Nations Convention on the Law of the Sea, Montego Bay (adopted 10 December 1982, in force 16 November 1994) UNTS 397. Hereafter abbreviated LOSC

(UNFSA).¹⁹ Treaties are the most significant sources of international law, as listed in article 38 of the Statutes of the International Court of Justice and are thus binding on states that have ratified these obligations.²⁰ The first chapter highlights relevant features that may facilitate effective adaptation to the redistribution of marine species.²¹ Reference will be made to the precautionary and ecosystem approach, recognised as general principles of international law in connection to the protection and preservation of the marine environment, but have later also been codified into binding obligations found *inter alia* in the UNFSA. International agreements that are important to the regulation of living marine resources will also be introduced, such as the Convention on Biological Diversity (CBD)²² and the Convention on Migratory Species (CMS).²³ It must be mentioned that the “new” 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)²⁴ will also be discussed although it has not entered into force, because of its potential impacts once ratified.²⁵

The subject of quota distribution between states is highly political, and therefore it is important to include other important factors besides “hard” law. The non-binding instruments are known as “soft law” but can nevertheless have important legal effects.²⁶ Therefore, soft law is to be included in the analysis, considering its political and normative weight, such as FAO guidelines, the climate change resolution adopted by NEAFC, as well as NEAFC performance reviews. Secondary sources, including scholarly writings, will be used in examining the regulatory gaps within RFMOs, particularly in their adaptation to climate change. Case law will also be mentioned where relevant, providing further understanding of the topic.

¹⁹ Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (New York, 4 December 1995, in force 11 December 2001) 2167 UNTS 3. Hereafter abbreviated UNFSA

²⁰ Statute of the International Court of Justice (adopted 26 June 1945, in force 24 October 1945) UNTS 993

²¹ Lennan (n 10) 167.

²² United Nations Convention on Biological Diversity (CBD), Rio de Janeiro, 22 May 1992, in force 29 December 1993, 1760 UNTS 79.

²³ Convention on the Conservation of Migratory Species of Wild Animals (CMS), Bonn, 23 June 1979 in force 1 November 1983, 1651 UNTS 333.

²⁴ 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, UNGAOR, Further resumed 5th Sess, UN Doc A/CONF.232/ 2023/4 (19 June 2023) (BBNJ agreement)

²⁵ As of 17 of June 2024, 7 countries have ratified the treaty and 89 have signed it. See: 'The EU is ready to ratify the High Seas Treaty' (European Commission, 17 June 2024) https://oceans-and-fisheries.ec.europa.eu/news/eu-ready-ratify-high-seas-treaty-2024-06-17_en accessed 2 August 2024

²⁶ H. Thirlway, ‘The Sources of International Law’ in M Evans, *International Law* (5th edn, Oxford University Press 2018).

1.4. Structure

The text will be structured as follows; firstly, an introduction to how redistribution of stocks is covered in the existing legal framework, namely the LOSC, UNFSA and other relevant agreements as well as secondary sources and documents. Chapter 2 provides a basis to refer to when discussing NEAFCs obligations for adapting to climate change induced shifts. Chapter 3 introduces NEAFC as an organisation and discusses the challenges in the North-East Atlantic in the age of climate change. Chapter 4 will be devoted to discussing how NEAFC is adapting to redistribution of stocks, and chapter 5 examines what is lacking in the current system and the way forward. Concluding remarks are made in chapter 6.

1.5. Delimitation of scope

The aim of the research is to get a deeper understanding the management of fish stocks in the age of climate change. However, the attention will be on redistribution of fish stocks as a consequence of climatic changes rather than all changes associated with climate change. With a particular focus on the North-East Atlantic, the focus will be given to the regulation of marine living resources within NEAFCs Convention Area. NEAFC can adopt conservation and management measures throughout the region, provided that a state party requests so and votes in favour of the recommendation.²⁷ In practice, NEAFC has its primary focus on the parts of the Convention Area on the High Seas, referred to as the Regulatory Area.²⁸ With its mandate in mind, the text examines how NEAFC implements climate change in the management of stocks in the Regulatory Area in the North-East Atlantic.

As for the geographical delimitation, there are several organisations with competence in the North-East Atlantic, but not all can be discussed in depth. Bilateral agreements will be excluded, although they make up a substantial part of the fishing quotas in the chosen region.²⁹ The thesis focuses primarily on adaptation rather than mitigation, so how fishing vessels and NEAFC as an organisation can lower their carbon footprint will therefore be excluded.

²⁷ NEAFC Convention, article 6(1)

²⁸ FAO, 2024. 'Regional Fishery Bodies Summary Descriptions. North-East Atlantic Fisheries Commission. Fishery Governance Fact Sheets.', *Fisheries and Aquaculture*. (FAO 2024)
<<https://www.fao.org/fishery/en/organization/rfb/neaftc?lang=en>> accessed 15 June 2024.

²⁹ A.H Hoel. *The evolving management of fisheries in the Arctic*. In K. N Scott and D. L VanderZwaag, *Research Handbook on Polar Law* (Edward Elgar Publishing Limited 2020) 200
<<http://ebookcentral.proquest.com/lib/tromsoub-ebooks/detail.action?docID=6422459>> accessed 7 May 2024.

2. International fisheries law under climate-induced shifts in stocks

2.1. Background: the inherently challenging task of fisheries management

It has been estimated that as of 2019, 30% of all fish stocks were overfished.³⁰ Highly migratory and transboundary stocks associated with High Seas fisheries are overrepresented.³¹ By being transboundary in its nature, and with the jurisdictional boundaries being man made, fisheries management is inherently a difficult task and climate change can be viewed just as an extra layer of stressors on an already complicated regime.

Churchill, Lowe, and Sanders have mentioned some of the causes to why fisheries management is a complex matter. Firstly, there is a lack of comprehensive scientific knowledge to determine population sizes.³² Secondly, the stocks rarely remain in one location or within one state's jurisdiction in its harvestable stage, so that measures taken by one state may undermine efforts by another.³³ Thirdly, stocks do not exist in isolation, as they are interacting within the ocean ecosystem. Exploiting one species could therefore impact the whole ecosystem. Complicating management further is the concept of fish as a common property resource, frequently entailing challenges referred to as the "tragedy of the commons"³⁴ where actors (states) will exploit stocks independently of each other, seeking to maximize short-term benefits.³⁵

Nevertheless, a comprehensive legal framework regarding the conservation and management of marine living resources has been developed, where the LOSC stands as a "constitution of the oceans".³⁶ The current chapter will introduce state obligations under international law regarding stock (re)distributions, and the duty to protect and preserve the marine environment. It also examines to what extent climate change is integrated in the existing legal framework.

³⁰ FAO. 2022. The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. <https://doi.org/10.4060/cc0461en> accessed 15 June 2024.

³¹ Ibid.

³² R. Churchill, V. Lowe, and A. Sander, *The Law of the Sea* (Fourth edition, Manchester University Press 2022).

³³ Ibid

³⁴ The concept was first presented in: G. Hardin, 'The Tragedy of the Commons' (1968) 162(3859) *Science* 1243.

³⁵ A. Østhagen, J. Spijkers and O. A. Totland, 'Collapse of Cooperation? The North-Atlantic Mackerel Dispute and Lessons for International Cooperation on Transboundary Fish Stocks' (2020) 19 *Maritime Studies* 155, 138.

³⁶ T.B. Koh, "A Constitution for the Oceans" remarks adapted from statements made by the President on 6 and 11 December 1982 at the final session of the Conference at Montego Bay. See: K.N. Scott, "The LOSC: 'A Constitution for the Oceans' in the Anthropocene?", *The Australian Year Book of International Law Online* 41, 1 (2023): 269-298, doi: <https://doi.org/10.1163/26660229-04101019>

2.2. LOSC

The global framework for fisheries is addressed in the LOSC, particularly in parts V and VII. Essentially, the legal regime under the Convention has given coastal States sovereign rights for its marine resources, extending up to 200 nm, an area known as the Exclusive Economic Zone (EEZ).³⁷ The coastal state is to set the Total Allowable Catch (TAC) for stocks within its EEZ by taking into account “the best scientific evidence available” to ensure proper conservation and management, protecting its stocks from overexploitation.³⁸ Moreover, the TAC should be set at the Maximum Sustainable Yield (MSY), which is the “highest theoretical equilibrium that can be continuously taken from a stock under existing environmental conditions without significantly affecting the reproduction process”.³⁹ As a result, the coastal state has to balance the need to harvest for economic and social benefits while also protect its marine living resources from overexploitation.⁴⁰

The High Seas encompass all areas of the sea that do not fall within a state's “exclusive economic zone, territorial sea, internal waters, or the archipelagic waters of an archipelagic state”.⁴¹ In other words, outside the jurisdiction of coastal states, vessels from any nation are entitled to the freedoms of the High Seas, including the right to fish.⁴² Nevertheless, despite the principle that no state can claim sovereignty of the High Seas, it is not an area without law. States are required to have due regard for the interests of other states in exercising the freedoms of the High Seas and are obligated to cooperate on the conservation of the living marine resources.⁴³ The seabed under the High Seas in ABNJ is called “the Area” and is regarded as common heritage of mankind, falling under part XI LOSC, where the international Seabed Authority (ISA) has competence to regulate deep seabed mining.⁴⁴

³⁷ According to LOSC article 77(4), the coastal state has sovereign rights over its sedentary species, following its continental shelf rights.

³⁸ LOSC, art. 61

³⁹ FAO Fisheries Department. Fisheries management. 2. The ecosystem approach to fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 2003. 112 p.

⁴⁰ Accurate TAC estimation depends on comprehensive data about fish populations, which has been explained earlier as rather difficult, often incomplete or inaccurate. Furthermore, MSY calculations often focus on individual species, overlooking ecosystem interactions and the impacts on non-target species. It has also been criticized when states are trying to reach the limit of the MSY, one is putting the ecosystem at risk rather than trying to conserve the stock.

⁴¹ LOSC, article 86

⁴² LOSC, article 87

⁴³ LOSC, article 94 and 118. However, the duty to collaborate does not entail that a binding decision must be met and goes only as far as to say that parties shall seek collaboration. The UNFSA gives stricter obligations.

⁴⁴ LOSC, article 134-136

2.2.1. Cooperation across boundaries

The provisions in the LOSC are based on a zonal approach that are consequently less suitable for managing stocks that are transboundary in nature, where different rules that apply to each jurisdictional zone.⁴⁵ However, as stated in the *SRFC Advisory opinion* “Fisheries conservation and management measures, to be effective, should concern the whole stock unit over its entire area of distribution or migration routes”.⁴⁶ In doing so, states shall seek to collaborate, either directly or via subregional or regional organisations, to ensure the conservation and sustainable management of these stocks.⁴⁷ This is a *due diligence* obligation, or an obligation of conduct where parties are “to do the utmost” to fulfil its obligation.⁴⁸ There are several provisions in part V and VII that relates to cooperation. Article 63 concerns shared stocks, occurring within two or more EEZ, whereas article 63(2) regards transboundary stocks that occur both within the EEZ and on the High Seas. In both instances state parties shall seek cooperation and are obliged to engage in good faith to adopt effective measures.⁴⁹

However, the LOSC regime did not provide any specific rules for the sharing of the stocks, other than cooperation. Management agreements tend to be either, bilateral, trilateral or multilateral agreements. These agreements have often been established on political concerns or past historical catches. Currently, most agreements are on a larger extent are based on a zonal attachment model, that allocates fishery resources based on the geographic distribution of fish stocks across different life stages.⁵⁰

Neither climate change nor its effects are mentioned in the LOSC. However, The ITLOS have stated in its *Climate Change Advisory Opinion*, that the LOSC entails obligations on State Parties to take necessary measures to conserve the living marine resources threatened by climate

⁴⁵ Under the LOSC regime, the oceans have been divided into different jurisdictional zones, making it challenging to effectively manage and protect ecosystems as a whole. For instance, the ISA has competence to regulate deep seabed mining in the area, the IMO regulates shipping.

⁴⁶ Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, para. 214

⁴⁷ Ibid, para 215

⁴⁸ Ibid, para. 129

⁴⁹ In the literature the terms shared, joint, straddling and stocks may be used interchangeably. For this thesis, the term shared stock is used. There is also a distinction between transboundary stocks, and highly migratory species, where highly migratory species are listed in Annex 1 LOSC, that migrate several EEZ's and High Seas areas.

⁵⁰ P.Gullestad, S.Sundby and O.S. Kjesbu, ‘Management of Transboundary and Straddling Fish Stocks in the North-East Atlantic in View of Climate-Induced Shifts in Spatial Distribution’ (2020) 21 Fish and Fisheries 1008 1002.

change impacts and ocean acidification.⁵¹ Article 61 calls for states to “take into account relevant environmental and economic factors”, and the impact of climate change is to be included as such a factor. Equal requirements apply for art 116 to 119, as the conservation duties “concerns the High Seas equally”.⁵² Decisions shall be taken on the basis of the best scientific information available to the state.⁵³

2.2.2. Protection and preservation of the marine environment

Part XII of the Convention includes various provisions where the duty to protect and preserve the marine environment encompass all current threats, regardless of the jurisdictional zone,⁵⁴ and is to be viewed as an *erga omnes* obligation.⁵⁵ Article 192 is the first of the part and entails an open-ended obligation, thus it is not specified how the marine environment is to be protected.⁵⁶ It is the following provisions in part XII and external rules applicable to the parties as stated in the VCLT article 31(3) that provide relevant guidance on the obligations of article 192, for instance the UNFCCC and the Paris agreement.⁵⁷

As a response to the loss of biodiversity and other implications following from climate change, Area Based Management Tools (ABMTs) and Marine Protected Areas (MPAs) are suitable tools to restore marine habitats and protect living marine resources.⁵⁸ Elferink explain how ABMTs and MPAs differ, where “one is a tool applicable to a specific area and the other characterizes the nature of a specific area”.⁵⁹ ABMTs are primarily designed as single-sectoral to regulate specific activities in a specific area, where the objectives can vary.

⁵¹ Request for Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law, Advisory Opinion, 21 May 2024, ITLOS Reports 2024. Para. 418 (from now abbreviated Climate Change Advisory Opinion)

⁵² Ibid.

⁵³ LOSC, article 119

⁵⁴ Climate Change Advisory Opinion, Para 441(4)(B)

⁵⁵ Lennan (n 10). 170

⁵⁶ Climate Change Advisory Opinion, para. 417

⁵⁷ Ibid. para.388

⁵⁸ FAO (n16) 71.

⁵⁹ For a further discussion see: A.O. Elferink, ‘Protecting the Environment of ABNJ through Marine Protected Areas and Area-Based Management Tools: Is the Glass Half Empty or Half Full and Whose Glass Is It Anyway?’ in V. De Lucia, A.O. Elferink and L.N. Nguyen (eds), *International Law and Marine Areas beyond National Jurisdiction* (Brill | Nijhoff 2021) 205
<<https://brill.com/view/book/edcoll/9789004506367/BP000008.xml>> accessed 18 April 2024.

The concept of a MPA is rather broad, and are not mentioned specifically in Part XII, although article 194(5) entails an obligation for states to take active measures to “protect and preserve rare and fragile ecosystems” as well as “the habitat of depleted, threatened or endangered species and other forms of marine life”.⁶⁰ MPAs can range from fully “no take” areas or MPAs that seeks to protect a specific species.⁶¹ As argued by Rayfuse, ABMTs and MPAs are considered to enhance resilience for adapting to the impacts of climate change and are increasingly recognised in various treaties at the global and regional level.⁶²

Regional arrangements are often more successful in implementing environmental protection goals than global ones. This is also the case for the Convention for the Protection of the Marine Environment of the North East Atlantic⁶³ (OSPAR Convention), that have adopted a broad scope of comprehensive regulations for most environment-relevant human activities, apart from fishing, whaling and shipping.⁶⁴ OSPAR has also been in the forefront with the establishment of MPAs in ABNJ in the North-East Atlantic, and was even highlighted in the climate change advisory opinion for protecting the marine environment and establishing regional cooperation.⁶⁵ The collaborative work between NEAFC and OSPAR will be discussed in chapter 5.

2.3. The UNFSA

As affirmed by ITLOS in the *Climate Change Advisory Opinion*, the UNFSA has improved the framework for the conservation and management of straddling and highly migratory fish stocks applicable to climate-driven shifts.⁶⁶ While supplementing the fisheries regime of the LOSC,

⁶⁰ The Tribunal in the *South China Sea Arbitration* noted that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) classifications provide valuable guidance in interpreting terms related to what constitutes endangered species to fulfill its obligations in regard to article 194(5), as there is no definition of the terms term “depleted, threatened or endangered species” in the LOSC. See: *The South China Sea Arbitration between the Republic of the Philippines and the People’s Republic of China*, Award of 12 July 2016, RIAA, Vol. XXXIII

⁶¹ R. Churchill and D.Owen, ‘The International Framework of Fisheries Management’ in R Churchill and D. Owen, *The EC Common Fisheries Policy* (1st edn, Oxford University PressOxford 2010) 122 <<https://academic.oup.com/book/38707/chapter/336784305>> accessed 22 March 2024.

⁶² R. Rayfuse (n 6) 266. Inside a MPA there are usually restraints on certain activities, such as drilling and fishing. Protecting the marine environment from human activities can also be done through special ‘no discharge’ areas under MARPOL, IMO “sensitive sea areas”, or closed areas within RFMOs jurisdiction.

⁶³ Convention For The Protection Of The Marine Environment Of The North-East Atlantic, Paris, 22 September 1992, in force 25 March 1998.

⁶⁴ G. Xue and Y. Long, ‘The Changing Arctic and an Adaptive Approach to the Protection of Arctic Marine Ecosystems’ in Myron H Nordquist, John Norton Moore and Ronán Long (eds), *Challenges of the Changing Arctic*, vol 19 (Brill Nijhoff 2016).

⁶⁵ Climate Change Advisory Opinion, para 439

⁶⁶ Climate Change Advisory Opinion, ITLOS, 2024, Para. 425

the UNFSA remains a self-standing treaty.⁶⁷ Initially established for transboundary stocks occurring on the High Seas, articles 5, 6 and 7 also relate to areas under national jurisdiction. Rather than prescribing specific management measures, the UNFSA contains overarching governance expectations for current and future cooperation, as well as the promotion to adopt an ecosystem-based and precautionary approach to fisheries.⁶⁸ Under the UNFSA fishing in ABNJ is essentially prohibited if the area is regulated by an RFMO/A, unless that state becomes a party.⁶⁹

Article 5 advocates for the protection of marine ecosystems and biodiversity, and emphasizes the need to see the ecosystem as a whole aligning with what we today call the ecosystem approach.⁷⁰ Article 6 outlines the application of the precautionary approach, entailing that states are to adopt more cautious management strategies when data is uncertain or insufficient.⁷¹ The provision requires parties to apply reference points set out in annex II.⁷² As for exploratory fisheries, or stocks that have recently been observed, precautionary measures shall be adopted until the necessary data is available, to assess the impact of the fisheries on the long-term sustainability of the stocks.⁷³

2.4. RFMOs

To address management of transboundary stocks, RFMOs have been established with the aim of conserving and managing transboundary and High Seas living marine resources.⁷⁴ The UNFSA has provided a regulatory template for the treaties of new RFMOs and inspired older structures to integrate clearer environmental obligations into their mandates.⁷⁵ At present, there are about 20 RFMOs, focusing either on one specific species (often tuna) or several species in a particular region, such as NEAFC. There are no generally accepted definitions of an RFMO, though an Regional Fisheries Management Agreement (RFMA) is defined in the UNFSA as “a

⁶⁷ R. Caddell, ‘Where’s the Catch? Shifting Stocks, International Fisheries Management and the Climate Change Conundrum’ (2021) 6.

⁶⁸ UNFSA, articles 5 and 6

⁶⁹ UNFSA, article 7(2)(a)

⁷⁰ FAO, *Regional Fisheries Management Organizations and Advisory Bodies: Activities and Developments, 2000–2017* (Fisheries and Aquaculture Technical Paper, FAO 2018). 7

⁷¹ UNFSA article 6(2)

⁷² UNFSA, article 6(6)

⁷³ R.Churchill and D. Owen, (n61) 100.

⁷⁴ E. J. Molenaar, ‘Integrating Climate Change in International Fisheries Law’ in E. Johansen, I.U. Jakobsen and S.V Busch (eds), *The Law of the Sea and Climate Change: Solutions and Constraints* (Cambridge University Press 2020) 266

⁷⁵ R. Caddell (n 67) 6.

cooperative mechanism created by two or more States to establish conservation and management measures in a subregion or region for one or more straddling or highly migratory fish stocks”.⁷⁶ The main differences between them is that an RFMA can be established with as few as two states, and does not have a legal personality.⁷⁷

Parties to an RFMO may consist of relevant coastal states and Distant Water Fishing Nations (DWFN) with a “real” interest in the fishery.⁷⁸ What constitutes such interest is not further elaborated. The principle of *pacta tertiis* raises questions whether third states are bound by an RFMOs measures. Under the UNFSA, States fishing on the High Seas shall either become a member of such arrangement or apply to its measures.⁷⁹ Under the LOSC, there is no such obligation, but there is still the duty to cooperate on the management on stocks occurring on the High Seas. article 94 LOSC imposes duties on the flag states, and a due diligence obligation to not undermine the flag states responsibilities for the conservation of the living marine resources on the High Seas. A major problem that arises with the redistribution of fish stocks is that stocks migrate into new areas they have not been observed priorly.

None of the provisions in the UNFSA directly address the situation of stocks that shifted beyond the geographical competence of one RFMO to an area under the management of another RFMO, nor establishes any standards for the cooperation between RFMOs.⁸⁰ On the other hand, Article 14 calls for states to share «scientific, technical and statistical data with respect to fisheries for straddling fish stocks and highly migratory fish stocks», whereas article 12 requests transparency in “decision making processes and other activities” promoting indirect collaboration.

2.5. Other relevant international agreements and instruments

⁷⁶ UNFSA, art 1(1)(d)

⁷⁷ O.S. Stokke et al., ‘Introduction: Climate Change and Resilient Fisheries Management’, in O.S. Stokke, A. Østhagen and A. Raspotnik (eds) *Marine Resources, Climate Change and International Management Regimes* (Bloomsbury Academic 2022). 11

⁷⁸ UNFSA, art 8(3)

⁷⁹ Ibid.

⁸⁰ C. Goodman et al., ‘Enhancing Cooperative Responses by Regional Fisheries Management Organisations to Climate-Driven Redistribution of Tropical Pacific Tuna Stocks’ (2022) 9 *Frontiers in Marine Science* 5 <<https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2022.1046018/full>> accessed 14 August 2024.

In addition to the UNFSA and CITES, there are other international agreements relating to the conservation of marine living resources, which all refer to the LOSC providing coherence to the system.

2.5.1. The CBD

The Convention on Biological Diversity (CBD), adopted at the Rio Conference in 1992, provides many definitions which are useful to interpret the obligations to protect and preserve the marine environment, and goes beyond the language of Article 194(5) LOSC, calling for contracting parties to “Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity”.⁸¹ By the means of “system” it is implied that there is a need to establish several or a network of MPAs. It must be mentioned that there is a key jurisdictional limitation to the CBD, where establishment of ABMT in the High Seas is not legally binding.⁸²

Today, about 3% of the oceans are protected with MPAs that have sufficient regulations to safeguard biodiversity.⁸³ Based on the targets established by the COP15 Kunming-Montreal Global Biodiversity Framework under the CBD, the global target is that 30% of marine areas are to be established as MPAs in 2030, where a majority of them must be established on the High Seas to reach this goal.⁸⁴ 30% is viewed as the minimum requirement to “save the seas” and that it can only be achieved by creating a wide network of ocean protected zones.⁸⁵

2.5.2. The CMS

The parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) are obligated to cooperate in conserving species that migrate jurisdictional boundaries and their habitats, with the primary objective to protect migratory species threatened with extinction.⁸⁶ For endangered species listed in Appendix I, parties that are Range States must

⁸¹ CBD, article 8

⁸² CBD, article 4

⁸³ A.V Rebay, *The Designation of Marine Protected Areas A Legal Obligation* (Springer 2023) 47.

⁸⁴ UN, 'Classify 30% of National Maritime Space as Marine Protected Areas (MPAs) by 2030' (United Nations Sustainable Development Goals, 15 June 2020) <https://sdgs.un.org/partnerships/classify-30-national-maritime-space-marine-protected-areas-mpas-2030> accessed 29 August 2024.

⁸⁵ Ibid.

⁸⁶ CMS, article II

adopt national regulations which prohibit their taking, with limited exceptions such as for scientific purposes. Article III (4) does extend to climate adaptation and mitigation measures through the obligation to “prevent, reduce, or control factors that are endangering or are likely to further endanger” species listed in Appendix I, which includes several species of sharks and rays.⁸⁷ These are not targeted species, but often caught as bycatch. Appendix II lists migratory species with “unfavourable conservation status” that would benefit from increased international cooperation.⁸⁸

When it comes to non-CMS migratory species around 200 fish species are reported as Near Threatened species, entailing that they have not been added on the Appendixes yet, but might in the future.⁸⁹ Overexploitation is the greatest threat for many migratory species, including fish. The state of the worlds migratory species report from February 2024, calls for states to take action in regards to overfishing and incidental catch of marine migratory species, by establishing “catch/mortality limits for non-target marine species, increasing observer coverage and remote monitoring of marine capture fisheries, and increasing international collaboration, in particular between the CMS Secretariat and the relevant fisheries and regulatory bodies.”⁹⁰ The support to the ratification and implementation of the BBNJ agreement, is also recognised as important given the large numbers of ocean-going migratory species that are found in the High Seas, considering the worsening conservation status of CMS-listed fish, including sharks and rays, and the impact of bycatch on seabirds and marine mammals.⁹¹

2.5.3. The BBNJ Agreement

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) aims (among other things) to establish a comprehensive system of area-based management tools, including marine protected areas.⁹² Negotiations was concluded in March 2023, where the BBNJ becomes the third implementing agreement to the LOSC.⁹³

⁸⁷ Ibid, Appendices I and II

⁸⁸ Ibid, article IV.

⁸⁹ UNEP-WCMC, 2024. State of the World’s Migratory Species. UNEP-WCMC, Cambridge, United Kingdom.

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⁹⁰ Ibid.

⁹¹ Ibid.

⁹² A.O. Elferink (n59).

⁹³ United Nations, *The Agreement on Marine Biodiversity of Areas beyond National Jurisdiction* <https://www.un.org/bbnjagreement/en> accessed 28 August 2024. As written on the webpage The

The Conference of the Parties (COP) “shall take decisions on the establishment of area-based management tools, including marine protected areas, and related measures”.⁹⁴ Moreover, the BBNJ Agreement explicitly states that it shall not undermine other relevant instruments, to promote coherence and coordination with regional bodies.⁹⁵ The LOSC regimes sectoral nature have created several smaller regimes that are autonomous as they are not subject to the direct jurisdiction of States in ABNJ. The BBNJ agreement maintains this regime and highlights the mandates of these organisations.⁹⁶

2.5.4. The FAO

The Food and Agriculture Organization (FAO) of the United Nations plays a significant role in international fisheries law, promoting sustainable practices and helping to protect marine ecosystems.⁹⁷ Several action plans and other instruments have been implemented, including non-binding instruments such as the 1995 FAO Code of Conduct for Responsible Fisheries,⁹⁸ as well as legally binding instruments like the 2009 Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported and Unregulated (IUU)⁹⁹ Fishing.¹⁰⁰

The FAO produces a wide range of technical guidelines, including those related to ecosystem-based management to fisheries. In 2008, the FAO released the International Guidelines for the Management of Deep-sea Fisheries in the High Seas, which provide detailed criteria for identifying Vulnerable Marine Ecosystems (VMEs) and recommend actions for the long-term conservation and sustainable use of marine living resources in the deep sea.¹⁰¹ This has been

BBNJ Agreement “is open for signature by all States and regional economic integration organizations from 20 September 2023 to 20 September 2025, and will enter into force 120 days after the date of deposit of the sixtieth instrument of ratification, approval, acceptance or accession.”

⁹⁴ BBNJ, article 22(a)

⁹⁵ BBNJ, article 5.

⁹⁶ R.E. Kim, ‘The Likely Impact of the BBNJ Agreement on the Architecture of Ocean Governance’ (2024) 165 *Marine Policy* 106190, 2.

⁹⁷ R. Churchill, V. Lowe, and A. Sander, (n32) 350.

⁹⁸ Food and Agricultural Organization of United Nations, Code of Conduct for Responsible Fisheries (adopted on 31 October 1995)

⁹⁹ Illegal stands for violations of national laws or international obligations. Unreported fishing means that the catch has not been reported or has been wrongly reported, and unregulated fishing by vessels with no nationality or flying the flag of a non-party under the geographical area of an RFMO or fished on the High Seas conducted in a manner that violates the LOSC. See: A.K. Jørgensen, ‘Stock-Shifts and Regime Resilience in the Barents Sea’ in O.S. Stokke, A. Østhagen and A. Raspotnik (eds), *Marine Resources, Climate Change and International Management Regimes* (Bloomsbury Academic) 181.

¹⁰⁰ FAO. Agreement on Port State Measures to prevent, deter and eliminate illegal, unreported and unregulated fishing. Rome. (2016).

¹⁰¹ A.V Rebay, (n83) 47.

highly relevant for NEAFC that has adopted several VMEs in its Regulatory Area, and will be discussed more in depth in chapter 4 as a way taking the fisheries.

The FAO does also have expressed the issue of climate change in recent reports. In 2022, the FAO Committee on Fisheries (COFI) addressed the need for developing guidance on climate resilient fisheries management including a process to facilitate coordination and cooperation among RFMOs and RFMAs, which will be discussed in chapter 4 and 5.¹⁰² It is also mentioned that a number of challenges remain for the effective implementation of climate adaptation measures for redistribution of fish stocks that relate to political willingness, governance capacity, uncertainty over data, and an inflexible legal framework.¹⁰³

2.6. Concluding remarks

Having addressed the legal framework against the background of climate-induced range shifts, the primary obligation that rests on states is to cooperate, both when it comes to shared stocks but also for High Seas fisheries. Collaboration is vital for meeting the challenges of marine species redistribution, but the obligation stops there. There is little guidance on how straddling, transboundary and highly migratory fish stocks are to be allocated between states, an issue is highly relevant for the NEAFC Contracting parties.

It is fair to say that the existing international regulatory framework for fisheries management has a responsiveness gap, as it fails to fully address the issues arising from the fluctuating and changing distribution of fish stocks.¹⁰⁴ A clear weakness to the current regime is that the LOSC and the UNFSA did not account for redistribution of stocks beyond the borders of RFMOs.¹⁰⁵ The global framework for international fisheries mainly emphasizes the rights and responsibilities of individual States, with the duty to cooperate being intended for coastal and flag States within the context of a specific RFMO, rather than between different RFMOs. However, certain principles within this global framework can be used to advocate for increased cooperation.¹⁰⁶

¹⁰² FAO. *Adaptive management of fisheries in response to climate change*. FAO Fisheries and Aquaculture Technical Paper No. 667. Rome.

¹⁰³ Ibid

¹⁰⁴ Pinsky et al. (n3).

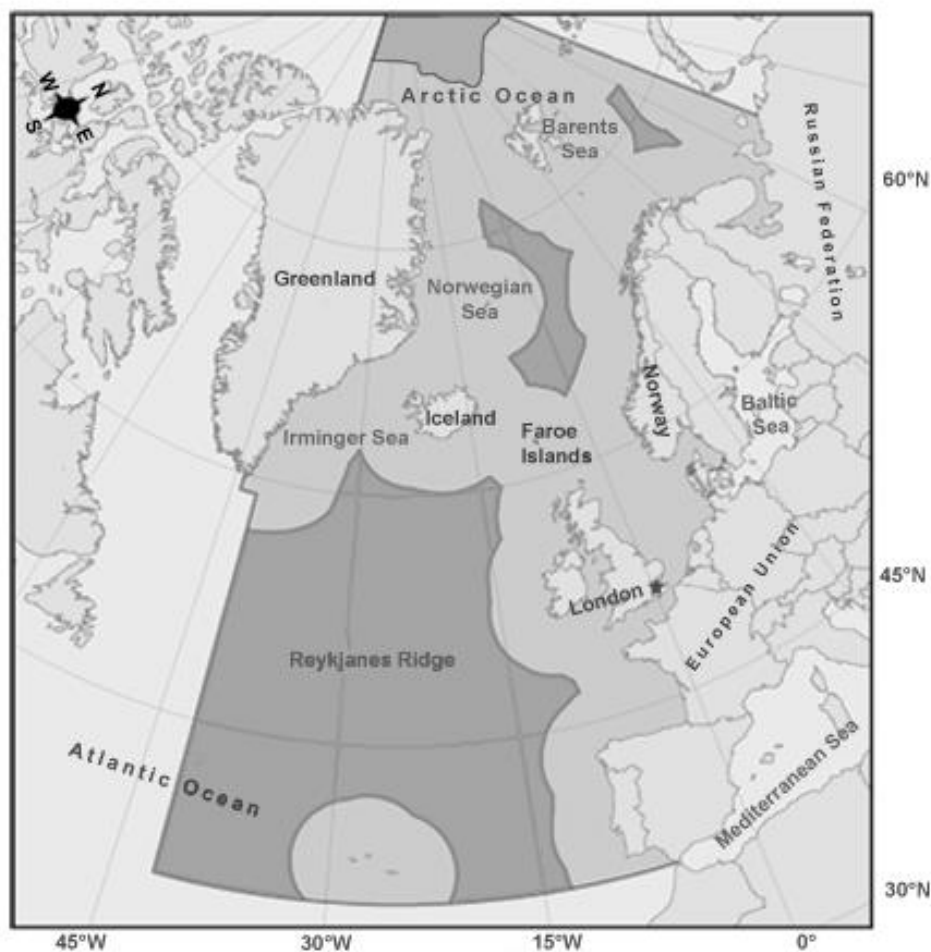
¹⁰⁵ C. Goodman et al. (n80)

¹⁰⁶ Ibid.

Although the different jurisdictional zones impose varied obligations, the overarching duty to protect and preserve the marine environment applies to all states. MPAs are increasingly enshrined in various treaties at the global and regional levels.¹⁰⁷ The BBNJ Agreement also represents a shift towards a more cohesive global approach, emphasizing the need for a cross-sectoral regime that enhances coordination. The institutional collaboration with NAFO is discussed in chapter 4 is one of the solutions. Cross sectoral coordination is needed to effectively protect and preserve the marine environment from climate induced shifts, as will later be shown with the NEAFC and OSPAR collaborative arrangement. The subsequent chapter will delve into the NEAFC Convention, exploring its organisational structure, current management practices, and the main challenges that arises with the redistribution of stocks in the North-East Atlantic.

3. Redistribution of marine living resources in the North-East Atlantic

3.1. Introduction and overview of NEAFC



¹⁰⁷ A.V. Rebay, (n83) 15.

Fig. 1. Map of the NEAFC Convention area within the light grey area and the Regulatory Area marked in dark grey. Source: NEAFC webpage, https://www.neafc.org/managing_fisheries/measures/ra_map

3.1.1. Establishment and objective

Established as early as in 1959, NEAFC covers areas with one of the most abundant fishing areas in the world, regulating between 10-20 fisheries.¹⁰⁸ The main objective of NEAFC is to sustain long-term conservation and optimum utilisation of living marine resources within the Convention Area.¹⁰⁹ Primarily, its mandate is to coordinate the regulation of fish stocks that migrate between the EEZ and High Seas areas within the Convention area. Agreements on these stocks are concluded by the members; Denmark (on behalf of the Faroe Islands and Greenland), the EU, Iceland, Norway, the UK and Russia. Furthermore, there are three cooperating non-Contracting Parties, namely Canada, Bahamas and Panama.¹¹⁰ NEAFC's mandate is not restricted to regulating fishing quotas.¹¹¹ Measures include gear requirements, fishing seasons and closed areas, monitoring and data collection.¹¹²

The geographical scope of its mandate varies. Articles 5 and 6 outline the management measures in the NEAFC Convention, where article 5 focuses on recommendations for the management of straddling stocks in ABNJ, and Article 6 set recommendations applicable to coastal states EEZ, with the consent of the relevant coastal state. Outside the NEAFC framework, Coastal States establish management measures and allocations for the entire distribution area of the respective fish stocks, mainly through bilateral agreements or through unilateral quotas.¹¹³ NEAFC adopts management recommendations by a qualified majority vote, which become binding on the parties unless an objection is raised.¹¹⁴

Most of the RFMO's have their own scientific body, whereas NEAFC relies on its information from an independent body, the International Council for the Exploration of the Sea (ICES).¹¹⁵ ICES serves as a scientific advisory organisation for the whole North Atlantic region with 20 member states, providing guidance to international organizations and national authorities with

¹⁰⁸ FAO (n28).

¹⁰⁹ NEAFC Convention, article 2

¹¹⁰ NEAFC, 'North-East Atlantic Fisheries Commission | Managing Fisheries in the North-East Atlantic' <<https://www.neafc.org/>> accessed 9 July 2024.

¹¹¹ NEAFC Convention, article 7

¹¹² Ibid.

¹¹³ P.Ørebeck, 'The "Lost Mackerel" of the North East Atlantic—The Flawed System of Trilateral and Bilateral Decision-Making' (2013) 28 *The International Journal of Marine and Coastal Law* 343.

¹¹⁴ NEAFC Convention, article 12

¹¹⁵ NEAFC, (n110).

the latest data regarding sustainable fishing for each species and other environmental issues.¹¹⁶ The advice is based on data provided by research institutes in member countries, which are processed and analysed by working groups within ICES. In NEAFCs performance review from 2015, it was concluded that the separation between NEAFCs work, and ICES scientific role should continue to be separated.¹¹⁷

3.1.2. Organisational structure

NEAFC consist of the commission, a secretariat, three permanent committees and working groups.¹¹⁸ The Commission manages the annual meetings where binding recommendations are voted on. The Secretariat, headed by the Secretary, implements these decisions. The Permanent Committees and Working Groups assist the commission in carrying out its responsibilities and functions¹¹⁹. The Permanent Committee on Monitoring and Compliance (PECMAC) advises on fishing controls and enforcement, and the Permanent Committee on Management and Science (PECMAS) collaborates with ICES on implementing the latest scientific advice. The Finance and Administration Committee (FAC) handles budgetary and administrative matters.¹²⁰

3.1.3. Geographical area

The Convention area encompasses a region from the southern tip of Greenland, east to the Barents Sea, and south to Portugal, excluding the Mediterranean and Baltic Sea.¹²¹ As previously mentioned, NEAFC primarily focuses on ABNJ. The Regulatory Area consists of four distinct High Seas portions. The first and northernmost region is situated in the Arctic, an area that is ice-covered most of the year, where no fisheries is conducted as of today. This area is overlapping with the recently adopted Central Arctic Ocean Fisheries Agreement (CAOFA),¹²² an agreement with the objective of preventing unregulated fishing in the Arctic

¹¹⁶ NEAFC, 'Report of the Performance Review Panel, North-East Atlantic Fisheries Commission (NEAFC)' (2014) 44 <https://www.neafc.org/system/files/Final%20Report%202014%20NEAFC%20Review_1.pdf>.

¹¹⁷ Ibid.

¹¹⁸ NEAFC, (n110).

¹¹⁹ NEAFC Convention, article 3(8)

¹²⁰ NEAFC Performance Review (n116).

¹²¹ NEAFC, (n110).

¹²² Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, adopted 3 October 2018, entered into force, 25 June 2021.

Ocean's High Seas portion.¹²³ The COAFA has many of the same parties as NEAFC, and was signed in 2018, thus there was no commercial fishing conducted at the time of signing. The CAOFA currently restricts all commercial fishing activities that has not been established by an existing RFMO or future RFMO that has competence in the Area.¹²⁴ Therefore, the CAOFA recognises that NEAFC has the ability to set quotas in the agreement area, although the chances for NEAFC to set quotas in the central arctic ocean in the near future is unlikely.¹²⁵ The three other high-seas areas NEAFC regulates as of today is one in the Atlantic Ocean between Iceland and the Azores called the Reykjanes Ridge, one in the Norwegian Sea called the Banana Hole, and the High Seas portion in the Barents Sea called the Loophole.¹²⁶

3.1.4. Management of transboundary and straddling fish stocks

During the late 1970s, the fisheries in the North-East Atlantic reached its peak at 13 million tonnes. Due to the high fishing pressure, most stocks dropped and has been decreasing ever since. In 2019, the catch was estimated at around 8 million tonnes, a slight drop from 2017 when catches were around to 9 million tonnes. Overall, 70% of the stocks were fished at sustainable levels in 2019.¹²⁷ In the Convention Area, there are several pelagic stocks that migrate far distances throughout their lifetime and are recognised for spanning several jurisdictional zones. The pelagic stocks that are managed through NEAFC today are Blue Whiting, Atlantic Mackerel and Norwegian spring-spawning herring (Atlanto–Scandian) herring. These are usually caught by large mid-water trawl and purse seine vessels. As for deep sea fisheries, NEAFC manages pelagic Redfish, Haddock and other deep sea species.¹²⁸ Substantial challenges persist in deciding how to allocate especially the pelagic stocks between the relevant coastal states and other NEAFC Contracting Parties, resulting in total catches that exceed scientific recommendations.

¹²³ E.J. Molenaar, 'Participation in the Central Arctic Ocean Fisheries Agreement', *Emerging Legal Orders in the Arctic* (Routledge 2019).

¹²⁴ CAOFA, preamble

¹²⁵ Ibid.

¹²⁶ In the Barents Sea, the Norwegian–Russian Fisheries Commission (JNRFC) regulates some fisheries outside the NEAFC context such as North-East Arctic cod and regional stocks of haddock, capelin and halibut. See: A.K. Jørgensen (n99)

¹²⁷ FAO (n30)

¹²⁸ T. Bjørndal, 'Overview, roles, and performance of the North East Atlantic fisheries Commission (NEAFC)'. (2009) Marine <<https://www-sciencedirect-com.mime.uit.no/science/article/pii/S0308597X09000086>>

NEAFCs mandate is not restricted to quota allocations, and has been crucial in combating Illegal, Unregulated, and Unreported (IUU) fishing.¹²⁹ In the NEAFC Regulatory Area, vessels must follow the current management measures as well as the NEAFC Scheme of Control and Enforcement, including inspection at sea and port state control of foreign vessels.¹³⁰ Initiated in 2005, the A and B List Scheme has successfully nearly eradicated illegal fishing by non-contracting party vessels in the Regulatory Area.¹³¹ Vessels without the correct license are added to an observer list, or the A-list.¹³² These vessels have certain restrictions on them. The flag-state conducts investigations on the vessel, and if there are no mitigating events the vessel is transferred to the B List with further restrictions. No vessels were added to NEAFCs IUU List B in 2022. These measures have successfully prevented IUU fisheries by non-contracting parties in the North-East Atlantic for over a decade.¹³³

3.2. Current challenges

As the century progresses, living marine resources on the High Seas and the organisations in charge for their management will increasingly be challenged by climatic changes.¹³⁴ Three main challenges arise with changing distribution patterns of stocks in the North-East Atlantic: outflow (or the loss of stocks), influx (the arrival of new ones) and lastly redistribution of stocks within the NEAFC Convention Area.

Stokke et al. has divided future management tasks for regional fisheries bodies as a result of climate change into three categories; *cognitional*, *regulatory* and *behavioural* tasks.¹³⁵ The *cognitional* management task regards providing scientific advice based on a comprehensive and well-supported understanding of how different levels of harvesting pressure impact fish stock conditions, as well as their long-term capacity to support employment and food security. *Regulatory* challenges include moving from current practices which includes more individuality into the establishment of joint commitments among states. The *behavioural* or

¹²⁹ NEAFC, (n110).

¹³⁰ Ibid.

¹³¹ NEAFC, “Submission Regarding the Report of the Secretary-General of the United Nations on Oceans and the Law of the Sea, pursuant to General Assembly Resolution 77/248” (United Nations, 18 July 2023) https://www.un.org/Depts/los/general_assembly/contributions78/18NEAFC.pdf accessed 23 August 2024.

¹³² Ibid.

¹³³ Ibid.

¹³⁴ Pinsky et al. (n3)

¹³⁵ O.S. Stokke et al., (n77) 6–7. His model is based on broader implications that comes with climate change rather than redistribution alone.

compliance task regards ensuring that the rules actually shape the performance of the parties involved.¹³⁶ This chapter discusses each challenge that arise with distribution pattern changes in the North-East Atlantic with its main implications found by Stokke et al.

3.2.1. Challenges relating to the outflow of stocks

One of the predicted consequences of the changing oceans is an overall fish decline, either due to changes in the migration patterns, but also because the food chain is getting increasingly disrupted.¹³⁷ The main implication that follows from less fish in the NEAFC Regulatory Area is that the quotas will have to be lowered, or in a worst-case scenario quotas cannot be allocated at all.¹³⁸

The cognitional challenge that follows with outflow lies mostly at ICES, with predicting the shifts at a reasonable time for states to be informed.¹³⁹ Some stocks may migrate outside the NEAFC Convention area, and in some cases the whole stocks unit may move. The regulatory task with fewer quotas is for states to agree on a lower quota or agreeing to a no-catch quota rather than objecting the set recommendation. IUU fishing by third states has not been a difficulty in recent years, and in 2022 not a single vessel was added to the B-list.¹⁴⁰

Compliance by the NEAFC Contracting Parties is another issue, the main contributors to overfishing in the NEAFC Regulatory Area. It is the inability of the Contracting Parties to agree on the quota allocation that has become evident as the main obstacle to adopt a comprehensive management for all relevant fish stocks in the North-East Atlantic. While the parties usually agree on the overall recommended TAC, they may disagree on how to allocate the quotas among themselves.¹⁴¹

¹³⁶ Ibid.

¹³⁷ See J.A. Fernandes, 'Changes of potential catches for North-East Atlantic small pelagic fisheries under climate change scenarios - ProQuest' 4 20 116, 116. Fernandes also states that there is a potential for catch increase in the northern areas in the North East Atlantic Ocean, but a decreases in southern areas, due to changes in primary production and warmer temperature.

¹³⁸ Some species already has a "zero quota" entailing that there should be no fishing on that particular species. But will still have to be reported if caught as bycatch.

¹³⁹ ICES have already been introduced in past chapters, and its ability to give NEAFC the necessary scientific information will not be discussed in this thesis. For a discussion on this topic see: A.H. Hoel (n29) 217.

¹⁴⁰ NEAFC, (n110).

¹⁴¹ NEAFC Performance Review (n116).

It is difficult to persuade Contracting Parties to stricter regulations than necessary. Scientific disputes can also arise when states believe that the scientific data used to set the recommendations are either flawed or incomplete, which have resulted in an issue where a few of the pelagic stocks are consistently overfished.¹⁴² As an example, the Blue whiting (*Micromesistius poutassou*) has been regulated by a TAC system since 1994 based on ICES advice. However, the Contracting parties have most often set their own quotas instead.¹⁴³ In 2003, the NEAFC contracting parties harvested about 2.4 million tonnes of Blue whiting when ICES recommendation for the Convention area was 600 000 tonnes.¹⁴⁴ Coastal states have been unwilling to follow recommendations that have been based on an underestimation of the stock size. After the 42nd annual meeting held in November 2023, there was no agreement on the sharing of blue whiting.¹⁴⁵ The recommendation given by ICES was that the TAC for 2024 should not exceed 1 529 754 tonnes.¹⁴⁶

The recommendation does not become binding on the parties if 3 has voted against and does become binding on parties that have objected to the recommendation. 8 objections were raised in total at the 42nd annual meeting, mostly by Russia.¹⁴⁷ The EU also raised an objection on Recommendation 02: 2024 on Redfish. The EU argued that the latest NEAFC recommendation was not based on independent scientific advice and therefore not compliant with Article 4 of the Convention.¹⁴⁸ ICES on the other hand claims that the Redfish stock are different species, depending on where they live and vulnerable to over-exploitation. ICES has stated that the current data is insufficient to assess the spawning stock biomass or fishing mortality in relation to risk, leaving the status of the stock uncertain.¹⁴⁹

It is uncertain if objecting to ICES advice can be called a “behavioural task”, as Stokke phrased it. Since objections to the TAC are in conformity with the NEAFC Convention, the parties are

¹⁴² Objection procedures will be discussed further in chapter 5.

¹⁴³ T. Bjorndal (n128)

¹⁴⁴ Ibid.

¹⁴⁵ North-East Atlantic Fisheries Commission, ‘42nd Annual Meeting of the North-East Atlantic Fisheries Commission’ (2023) 42 https://www.neafc.org/system/files/Report%20AM_2023%20Final.pdf 8.

¹⁴⁶ Ibid.

¹⁴⁷ Because of the sanctions following the war in Ukraine, Russia was not able to pay its contribution as a member state, imposing article 17(8) of the NEAFC Convention. Russia could not vote on any recommendations at the meeting. However the right to object does exist even for members that have lost their right to vote. See: 42nd Annual Meeting of the North-East Atlantic Fisheries Commission (n145).

¹⁴⁸ NEAFC, ‘Objections to Recommendations’ <https://www.neafc.org/managing_fisheries/asures/objections-to-recommendations>. The EU catches comprise 90% of overall redfish catches on the High Seas, and with the latest ICES advise the quota would decrease from 18 to 5.9%.

¹⁴⁹ T. Bjorndal (n128)

not partaking in IUU fishing as such. On the other hand, the behavioural or compliance issue entail that the rules that are agreed should shape the performance of the parties.¹⁵⁰ In that case, the compliance task really relate to if the parties will follow the recommendations given by ICES rather than setting their own quota that is higher.

To conclude, an issue that comes with the loss of stocks is for ICES to estimate the stock size. More importantly, when there are scientific uncertainties over stock sizes, or if there are disagreements on the TAC, the recommendation does not become binding on the contracting parties that do not wish to follow. Overfishing becomes an issue when the Contracting Parties continuously set a higher TAC than the set recommendation.

3.2.2. Challenges relating to influx

Moreover, it is projected a catch increase in northern areas of the Atlantic Ocean,¹⁵¹ and with the arrival of new stocks, several challenges come to the surface. A primary consideration is how NEAFC will manage new marine resources and with whom. A regulatory task that arises is how to define these stocks, and who is to be given quotas. Compliance or behavioral issues could arise if the current parties and newcomers would undermine the conservation efforts established. This could also be an issue if the NEAFC Contracting Parties does not comply with new arrangements and the inclusion of new entrants.

Newly observed species are to be regulated under exploratory fishing in line with article 6(6) UNFSA, where states shall adopt precautionary conservation and management measures as soon as possible, including, *inter alia*, catch limits and effort limits. This would also apply if a new species would arrive within the NEAFC Regulatory Area. New and exploratory fisheries is not mentioned in the NEAFC Convention text, and there exists no regulations for pelagic fisheries. However, NEAFC is regulating exploratory bottom fishing and to start bottom fishing in new areas there are various restrictive conditions, including a pre-assessment of the planned activities and these have to be assessed by PECMAS and later approved by the Commission.¹⁵² If a new pelagic species migrate into NEAFC High Seas areas (that are not regulated as a deep-sea species) regulations similar to the exploratory bottom fishing should be applied.

¹⁵⁰ Ibid.

¹⁵¹ J.A. Fernandes (n 137) 118.

¹⁵² FAO, 'Vulnerable Marine Ecosystems Database. NEAFC Regulatory Area. In: Fisheries and Aquaculture.' <https://www.fao.org/fishery/en/vmeregulatory/vme_neafc_regulatory/2021> accessed 29 July 2024.

Another question that arises is who shall be allocated quotas of the newly observed stocks. Are states or existing RFMOs which have lost “their stocks” due to migratory changes, to participate in the fishery within the NEAFC Regulatory Area? According to Ørebech it appears that the NEAFC contracting parties are striving to impede newcomers from harvesting and taking part in decision making procedures.¹⁵³ This is more of a political issue, where the UNFSA is clear that states with a “real interest” in the fishery can become parties.

In the guidelines for non-contracting parties from the NEAFC Annual Meeting in 2003, it is written that all current stocks are fully allocated by the contracting parties. Fishing opportunities for new members will likely be limited to new fisheries, that is stocks that are not allocated yet.¹⁵⁴ The new stocks migrating into NEAFC waters, could therefore “on paper” be allocated between new and old parties. In defining what states would possibly be granted quotas, the UNFSA constitutes that all states with a “real interest” could become parties to an RFMO.¹⁵⁵

Further, article 11 provides a list for states in determining the nature and extent of participatory rights for new members of a RFMO. States shall take into account the status of the straddling fish stocks, the respective interests, fishing patterns and practices of both new and existing members, and their contributions to the conservation and management of the stocks. The interests of developing States in the region where the stocks occur within their national jurisdictions must be considered.¹⁵⁶ The question then arises what obligations NEAFC has in the allocation on future stocks, that previously “belonged” in the EEZ or in an RFMO where parties are developing states. Are they to be given a larger quota than others? There is no clear answer, yet the provision calls only for states to take into account the interest of developing states, which leaves room for NEAFC for interpretation.

To conclude, if new stocks are observed in the NEAFC Regulatory Area, they shall not be regulated as commercial stocks, but under new and exploratory fishing. According to the guidelines for non-contracting parties, both new and existing members of NEAFC can be allocated quotas of the newly observed stocks. According to the guidelines for non-contracting

¹⁵³ P. Ørebech (n113) 350

¹⁵⁴ NEAFC (n110).

¹⁵⁵ UNFSA, article 8(3)

¹⁵⁶ UNFSA, article 11(f)

parties, the “new contracting Parties will participate, on the same basis as existing Contracting Parties, in future allocations of stocks which are unregulated at the time when the application is made.”¹⁵⁷

3.2.3. Redistribution within the NEAFC Convention area

As previously mentioned, coastal states have the sovereign right to explore and exploit the natural resources within its EEZ but will have to collaborate on the management of shared or straddling stocks that migrate between them. Following the zonal attachment model, Ørebech indicates that both the current fishing nations, and newcomers that have “gained” a new resource, should enjoy full access to the decision-making procedures, and that prior participation is irrelevant.¹⁵⁸

Traditionally, fixed allocations for stocks on the High Seas were the norm within NEAFC, and bigger quotas depending on the “zonal attachment” of the stock.¹⁵⁹ Each year the same states were given about the same amounts, providing stability in the management. With stock sizes fluctuating due to environmental changes and the high fishing pressure for several decades, ICES recommendations now vary and have been lowered.¹⁶⁰ Again, the cognitional task is for ICES to provide the scientific data that the stocks are moving, while the regulatory task is for parties to agree on the newest management recommendations. The debate on what constitutes “equitable sharing” might be the biggest one.

The mackerel dispute shows that cognitional challenges, providing scientific data on the species movement quickly results into regulatory ones. In 2006, The North East Atlantic mackerel (*Scomber scombrus*) shifted its distribution in a north-westerly direction into Icelandic, Greenland’s and Faroese waters.¹⁶¹ With an increased stock in its EEZ, both the Faroe Island and Iceland unilaterally decided to increase the annual catch and began extensive mackerel fishing in 2007. The decision was heavily criticized by Norway and the EU which saw the fluctuations as an irregularity, whereas Iceland considered it as a part of an ongoing climatic

¹⁵⁷ NEAFC (n110)

¹⁵⁸ P. Ørebech (n113) 344

¹⁵⁹ Ibid. What is meant with zonal distribution is if the stock was mainly in one states EEZ and partly in another’s waters, the state with the highest percentage of fish biomass would be allocated the bigger quota. Ørebech raises some issues with how one can measure the relative and seasonal balance of biomass between jurisdictional areas, and that there will be different data depending on how the stocks are estimated.

¹⁶⁰ A.K. Jørgensen (n99) 155.

¹⁶¹ A. Østhagen, J. Spijkers and A. Totland (n35).

shift. the parties did not agree on how the TAC was to be shared and has been overfished ever since.¹⁶²

In 2019, mackerel lost its MSC certification, entailing that it no longer meets the sustainability standard, engaging in practices that harm the marine environment or the fish population.¹⁶³ The fishing pressure for Atlantic Mackerel in 2022 alone exceeded the ICES recommendation by 42%.¹⁶⁴ In the latest annual meeting in 2023, the Contracting parties did settle on an overall TAC but did not agree on how it was to be shared. Each state has then established its own measures for mackerel fishery in the NEAFC Regulatory Area for 2024.¹⁶⁵

Unilateral quota setting that exceed the scientific recommendations are not in line with the UNFSA; which states that “conservation and management measures established for the High Seas and those adopted for areas under national jurisdiction shall be compatible in order to ensure conservation and management of the ... stocks in their entirety”.¹⁶⁶ Ørebech recognises the problems arising with the current allocation method and suggest an allocation process which is entirely based on “a scientific assessment of biomass as a product of volume, time and space; spread out during the year”¹⁶⁷

As a conclusion, the main issue with redistribution within the NEAFC Convention area is to find equitable sharing between the parties and avoid disputes where the parties set their own TAC above MSY levels.

4. How NEAFC is currently addressing climate change

This chapter examines how NEAFC is currently addressing the issue of climate change. In the latest performance review from 2014, it was commented that many of the marine living resources regulated by NEAFC seem to be sensitive to climate effects and must be considered

¹⁶² Ibid.

¹⁶³ Marine Stewardship Council ‘MSC Certificates Suspended for All North East Atlantic Mackerel Fisheries’ (*MSC International*) <<https://www.msc.org/media-centre/press-releases/press-release/msc-certificates-suspended-for-all-north-east-atlantic-mackerel-fisheries>> accessed 27 May 2024.

¹⁶⁴ Marine Stewardship Council, ‘North-East Atlantic Pelagic Fisheries – Management Challenges for Straddling Fish Stocks’ (2023) Report No. R.4069. 10 <https://www.msc.org/docs/default-source/default-document-library/nea_pelagics_2023-06-21.pdf>.

¹⁶⁵ ‘Rec 04 2024: Mackerel | North-East Atlantic Fisheries Commission’ 04 <<https://neafc.org/rec/2024/04>> accessed 27 May 2024.

¹⁶⁶ UNFSA, article 7

¹⁶⁷ P. Ørebech (n113)

more explicitly.¹⁶⁸ Still, NEAFC has not adopted any specific conservation measures aimed at addressing climate change impacts. On the other hand, much work has been done to manage stocks more sustainably, implementing the ecosystem and precautionary approach to fisheries, adopting VMEs and collaborative agreements with other international organisations. Some of the measures are even adaptations to climate change, although it was not known at the time.

4.1. Integrating the ecosystem and precautionary approach

According to Rayfuse, the ecosystem and precautionary principles are considered to be vital for climate change adaptation.¹⁶⁹ In the NEAFC convention text, there is no mention of climate change. However, there has been a shift from focusing on target species and bycatches of economically important species in the 90's, to an increased focus on the effects of fisheries on the marine ecosystem as a whole.¹⁷⁰ The NEAFC Convention was amended in 2006 to include the ecosystem and precautionary approach, in line with the UNFSA.¹⁷¹ Article 4 of the NEAFC Convention reads that the Commission shall when making its recommendation:

- a) *ensure that such recommendations are based on the best scientific evidence available;*
- b) *apply the precautionary approach;*
- c) *take due account of the impact of fisheries on other species and marine ecosystems, and in doing so adopt, where necessary, conservation and management measures that address the need to minimise harmful impacts on living marine resources and marine ecosystems; and*
- d) *take due account of the need to conserve marine biological diversity.*

What it actually entails to have an ecosystem approach to fisheries was discussed in the 42nd annual NEAFC meeting. Collaboration with key stakeholders, including ICES and OSPAR concerning various factors such as “the impact of fishing activity on fish populations, sensitive species, and the overall ecosystem” reflects the ecosystem principle. Additionally, NEAFC should also address “prey-predator relationships and the effects of climate change on natural mortality and recruitment.”¹⁷² NEAFC has also been active using seasonal closures, restricting

¹⁶⁸ NEAFC Performance Review (n116)

¹⁶⁹ R. Rayfuse (n 6) 258.

¹⁷⁰ ‘NEAFC and OSPAR. The Process of Forming a Cooperative Mechanism Between NEAFC and OSPAR’ (2015) <<https://www.ospar.org/documents?v=35111>>

¹⁷¹ Article 4 of the NEAFC Convention entered into force in 2013

¹⁷² North-East Atlantic Fisheries Commission (NEAFC), ‘Report of the 42nd Annual Meeting, Report Annexes’ (2023) Annex C, 4 <<https://www.neafc.org/system/files/Annexes%20A-O.pdf>>.

fishing activities to specific times of the year.¹⁷³ Although no-take MPAs are recognised as the most effective ABMT, fisheries closures do also have great benefit for fisheries productivity.¹⁷⁴

NEAFC has been a leading RFMO when it comes to the protection of vulnerable marine ecosystems and the management of deep sea fisheries.¹⁷⁵ Starting in the early 2000s, NEAFC began implementing measures to mitigate the potential adverse impacts of bottom fisheries, focusing on the conservation of deep-sea fish species, both target species and by-catch.¹⁷⁶ These measures are also aimed to protect the epifauna vulnerable to damage from bottom-contact fishing gear, such as beam trawling, where metal plates are dragged along the bottom of the sea.¹⁷⁷ The first closures of areas to protect VMEs were established in 2004, following a proposal by Norway. Over time, these closures evolved into a primary tool for VME protection, becoming part of a broader, more comprehensive approach.¹⁷⁸ This strategy involved defining “existing bottom fishing areas”, where fisheries could continue with minimal restrictions, and regulating “new bottom fishing areas”, limiting it to exploratory fisheries subject to strict conditions, requiring a pre-assessment of proposed activities, only permitted following evaluation by PECMAS and approval by the Commission.¹⁷⁹

Areas are closed for bottom fishing if the scientific advice suggest that the area constitutes a VME.¹⁸⁰ It is estimated that 97% of the NEAFC Regulatory Area is closed for bottom fishing, either through VME closures, or throughs strict exploratory fishing regulations, before commercial bottom fishing could be opened.¹⁸¹ Areas where bottom fishing has historically occurred are open since it is unlikely that it will adversely impact the ecosystem of the seabed.

NEAFCs efforts when it comes to the regulation of bottom fishing and establishing VMEs are examples that shows that the NEAFC Contracting Parties have taken an adaptive management strategy that responds to an environmental risk, and that similar measures can be taken when it comes to redistribution of stocks within the Regulatory Area.

4.2. The resolution on climate change

¹⁷³ NEAFC and OSPAR (n170) 9

¹⁷⁴ B. Pentz et al. (n8) 902

¹⁷⁵ Ibid.

¹⁷⁶ FAO (n 102).

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

¹⁸⁰ NEAFC and OSPAR (n170) 9

¹⁸¹ Ibid.

During the 42nd annual meeting, the United Kingdom proposed a non-binding resolution on climate change, which was adopted by consensus.¹⁸² In short, the resolution gives a direction to how NEAFC is to address the issue of climate change in its management and science processes. It also acknowledges the need for NEAFC to reduce the environmental impacts of its meetings. Denmark (in respect of the Faroe Islands and Greenland) noted that knowledge from the latest advisory opinions from ITLOS could assist in the understanding of the new way forward.¹⁸³ The resolution does not explicitly mention redistribution but climate change as a whole.

The declaration is divided into 7 points, where PECMAS is first requested to “consider the potential impacts of climate change on all relevant NEAFC stocks, including non-target species based on the data given by ICES”.¹⁸⁴ This request is rather “straight forward”, but have broad implications. Significant challenges persist in converting the understanding of broader ecosystem changes, including cumulative effects, into precise recommendations for determining the TAC of a specific stock or a combination of stocks.¹⁸⁵

The third provision goes a bit further and entail that PECMAS is to “Consider the best available scientific information and advice available from ICES on the potential impacts of climate change on all relevant NEAFC stocks, species, and ecosystems, and related impacts on fisheries.”¹⁸⁶ Climate change does affect the whole ecosystem and not only targeted species. “All relevant NEAFC stocks” refers mainly to North-East Atlantic mackerel, Herring and Blue Whiting. Non target species refer to species harvested as bycatch. Looking into the potential impacts rather than just the existing effects is a way to implement the precautionary approach to fisheries. however, a problem with implementing the precautionary approach is that predicting ecosystem changes is even harder in the age of climate change, making it an “admirable effort” but hard to implement in practice.

The second point asks for PECMAS to discuss “how to best integrate climate change science in the NEAFC decision making processes”. It has been shown that objection procedures are

¹⁸² 42nd Annual Meeting of the North-East Atlantic Fisheries Commission (n145). Annex M.

¹⁸³ Ibid.

¹⁸⁴ With non-target species or by-catch what is meant is species incidentally taken while fishing for a target species, for instance fishing for tuna and capturing sharks.

¹⁸⁵ NEAFC, (n131).

¹⁸⁶ 42nd Annual Meeting of the North-East Atlantic Fisheries Commission (n145). Annex M. Para 6.

hampering the decision-making processes at the annual meetings. Scientific disputes have occurred where parties question the science behind the recommendations. An example of this is the latest objection made by the EU, that questions the latest advice given by advice on the catch of Redfish in ICES Sub-areas I and II in the Regulatory Area.¹⁸⁷

Getting parties to agree on a lower quota from future predictions that are not certain make approval of the latest advice even more difficult to accomplish. It also seems that research that has not been conducted by ICES is viewed as less trustworthy. Further, there are no dispute settlement procedures within NEAFC, although parties may solve them through dispute settlement procedures in the LOSC. If there is a scientific dispute, parties resume to objection procedures rather than settling it through mediation or other means of dispute settlement.

The fifth point asks for PECMAS to look into “work undertaken by other international organisations, such as global best practice and potential overlap with the work of NEAFC, including under the framework of the OSPAR-NEAFC collective arrangement.” Some RFMOs may have taken steps to adapt to climate change already, where similar adaptation can be done by NEAFC. Some of the Tuna RFMOs have been proactive in this regard, which will be further discussed in chapter 5.

4.3. Joint management with other RFMOs

The collective management of redfish (*Sebastes mentella*) in the Irminger sea southeast of Greenland, serves as a model for how RFMOs can adapt to the challenges posed by climate change through coordinated management efforts and represents in many ways the future in collaboration of straddling stocks between RFMOs. It must be mentioned that the NEAFC and NAFO Contracting Parties do heavily overlap, making collaboration a bit smoother.

Redfish can be harvested with mid-water trawls and bottom trawls, from April and continuing until late in the autumn.¹⁸⁸ Originally, the management of pelagic redfish in the Irminger Sea

¹⁸⁷ European Commission, Objection to NEAFC Recommendation 2 for 2024 - Redfish in ICES Sub-area 1 & 2 (15 August 2023)

<https://www.neafc.org/system/files/objectionfiles/Objection%20to%20NEAFC%20recommendation%202%20for%202024%20-%20Redfish%20in%20ICES%20sub-area%201%262.pdf> accessed 29 August 2024.

¹⁸⁸ T. Bjorndal (n128)

was solely led under NEAFC.¹⁸⁹ However, in the late 1990s, warming waters led to the westward displacement of a portion of the stock, bringing it within the jurisdiction of NAFO. Some of the state parties to NAFO started extensive fishing on Redfish in the High Seas area adjacent to NEAFC Convention area.¹⁹⁰ Both organisations sought to maximise their catches, and in 1996, a TAC set at 153 000 tonnes for the NEAFC Convention Area,¹⁹¹ and 37 000 tonnes were fished in the NAFO Convention area the same year.¹⁹²

The stock now straddled both Convention areas, which prompted for coordinated management. Although it was not known at the time, warming seas have been assumed as the main drivers for the migration change.¹⁹³ In 2001, joint working group meetings were held to explore this co-management, which led to the Special Fisheries Commission of NAFO in Copenhagen in March 2001.¹⁹⁴ The foundation for the agreement was established according to article 119 LOSC, that “established fishing patterns” and “the rights of existing fisheries” would be counted in the quota setting.¹⁹⁵ NAFO contracting parties had to give due regard for the existing fishing of Redfish. Taken this into account, NEAFC continues to set the TAC, while a portion of the quota is allocated to NAFO.¹⁹⁶

It must be mentioned that ICES advice has remained a zero catch since 2022 for both shallow and deep redfish.¹⁹⁷ Surveys from later years have indicated that the Redfish stock in the Irminger Sea is about 20% of what it was only ten years ago.¹⁹⁸ Redfish is slow growing species and late maturing, therefore sensitive to overfishing.¹⁹⁹ It is probable that the extensive

¹⁸⁹ There are two types of Redfish, the shallow pelagic (< 500 m) and the deep pelagic (> 500 m) stock. See: The Norwegian Institute of Marine Research The Norwegian Institute of Marine Research, ‘Beaked Redfish in the Irminger Sea’ (18 December 2018) <<https://www.hi.no/en/hi/temasider/species/redfish/beaked-redfish-in-the-irminger-sea>>.

¹⁹⁰ NAFO and NEAFC have many of the same member states. The contracting parties to NAFO: Canada, Cuba, Denmark (in respect of Faroe Islands and Greenland), European Union, France (in respect of St. Pierre et Miquelon), Iceland, Japan, Norway, Republic of Korea, Russian Federation, Ukraine, and United States of America. See: FAO 2024. Regional Fishery Bodies summary descriptions. Northwest Atlantic Fisheries Organization. Fishery Governance Fact Sheets. In: *Fisheries and Aquaculture*. Rome. <https://www.fao.org/fishery/en/organization/rfb/nafo>

¹⁹¹ The Norwegian Institute of Marine Research (n189)

¹⁹² NAFO ‘NAFO Quota Table for 1996’ <<https://www.nafo.int/Portals/0/PDFs/Quotas/1996.pdf>> accessed 13 August 2024.

¹⁹³ R. Rayfuse (n 6) 253.

¹⁹⁴ R. Caddell (n 67).

¹⁹⁵ Ibid.

¹⁹⁶ NEAFC Performance Review (n116).

¹⁹⁷ 42nd Annual Meeting of the North-East Atlantic Fisheries Commission (n145).

¹⁹⁸ The Norwegian Institute of Marine Research (n189).

¹⁹⁹ T. Bjørndal (n128)

overfishing in the 90's in both NEAFC and NAFO Convention areas are the reason to the declining stock.²⁰⁰

4.4. Concluding remarks

Returning to the critics that have suggested that the existing RFMOs are inflexible to meet future ecosystem change,²⁰¹ it appears that NEAFC has responded to climate change in certain areas. By implementing the ecosystem and precautionary approach, NEAFC has taken precautionary measures in regards of bottom fishing. Although the measures on bottom fisheries does not apply to the conservation and management of stocks applicable to climate-driven shifts, it shows that the NEAFC Contracting Parties are open for adaptation to ecosystem change in certain areas. Therefore, the resolution on climate change marks a beginning for how NEAFC will be adjusting to climate change impacts in the future.

Several issues remain, especially the political will amongst the Contracting Parties to implement measures needed to adopt to climate change. The current system has not hindered several disputes on pelagic stocks to unfold in the North-East Atlantic in recent years. Further, the cooperation with NAFO shows that although there are no provisions in the LOSC nor the UNFSA on the sharing of a fish stocks between RFMOs, solutions can be made in an *ad hoc* manner when needed, thus the findings suggest that the cooperation on redfish in the Irminger Sea came far too late, after years of overfishing. It is also a bit surprising that the collaboration of redfish in the early 2000s did not start a larger discussion on co-management off stocks between RFMOs. The next chapter discovers the gaps that are hindering NEAFC as an organisation to meet climate change, as well as some thoughts for possible solutions.

5. Fit for purpose? Strengthening adaptation responses

In the previous chapters, climatic changes and its main implications for the governance of transboundary fish stocks in the North-East Atlantic have been the focus (chapter 2 and 3). How NEAFC has been meeting these changes have also been discussed (chapter 4), that is that NEAFC does not have any specific initiatives aimed at meeting redistribution of stocks as of today.

²⁰⁰ The Norwegian Institute of Marine Research (n189)

²⁰¹ B. Pentz et al. (n8) 901.

It is suggested that challenges that comes with influx and outflow in the NEAFC Convention area shall be met with collaboration with relevant organisations, where chapter 5.1 is devoted to discussing how this collaboration may look like. Challenges that come with redistribution within the Convention area itself is discussed in chapter 5.2. The “responsiveness gap” within NEAFC will be discussed in turn in the next sub-question, with the objective to find solutions, the *de lege feranda* on how NEAFC as an organisation can adapt to climate change, or more specifically to redistribution of its fish stocks. These issues are similar to *regulatory challenges* as Stokke et al. phrased it. Chapter 6 makes a conclusion of the findings and the way forward.

5.1. Adaptive responses to influx and outflow

5.1.1. Cooperation with other RFMOs

What is required for RFMOs (NEAFC included) for adapting to redistribution of fish stocks is increased cooperation and coordination, data sharing and joint management measures with other RFMOs, yet the existing framework for international fisheries law does not provide much guidance for direct cooperation between RFMOs.²⁰² In 2022, the FAO Committee on Fisheries (COFI) addressed the need for developing guidance on climate resilient fisheries management including a process to facilitate coordination and cooperation among RFMOs and RFMAs.²⁰³ RFMOs have the ability to regulate fisheries within their area of competence, and when stocks migrate beyond their jurisdiction, it is critical that consistent conservation measures are upheld in both areas. If not, the stocks they manage are in risk being overfished in one region, undermining conservation efforts in another.²⁰⁴ Such an outcome is not only less effective but there is also a risk of weakening the system in its entirety.²⁰⁵ The collaborative efforts should be made even before the stocks have migrated, to ensure that the stocks are not overfished.

A question then arises if the existing legal framework is fit for purpose, or if new agreements or amendments should be made to include a provision on cooperation between RFMOs more

²⁰² C. Goodman et al., (n80)

²⁰³ P. Mannini, et al., ‘FAO’s Support to RFBs for Sustainable Fisheries Management in the Face of Climate Change’ (ICSP-17, 16 May 2024)

https://www.un.org/Depts/los/convention_agreements/ICSP17/Presentations/ICSP-17Segment3-PieroMannini.pdf accessed. Accessed 22 August 2024.

²⁰⁴ It must be mentioned that RFMOs mandate is to regulate fisheries, but not all RFMOs manage the same species. ICCAT and NEAFC operate in the same area but does not relate to the same species. The problem with species migration will therefore not always result to overfishing.

²⁰⁵ FAO (n102)

explicitly. Looking at the current legal framework, the LOSC stands as a living treaty, where dynamic approaches to the existing provisions makes it possible to meet emerging challenges that comes with climate change.²⁰⁶ Current practice seems to include cooperation between RFMOs when needed. The UNFSA does also contain obligations regarding indirect cooperation for instance through transparency and sharing of scientific data.²⁰⁷

NEAFC and NAFO serve as an example that collaborative efforts can be done with what already exist, with the collaborative management in the Irminger Sea. However, it must be mentioned that many of the NAFO contracting parties are also a part of NEAFC, making it less problematic to find equitable solutions. What is not mentioned in the resolution on climate change is for PECCMAS to include data and views from adjacent RFMOs. To fully adapt to redistribution of stocks, scientific research from ICES on data from in the North-East Atlantic alone is not sufficient.

Barkin and DeSombre have a creative solution to the issue and calls for the creation of “a new global institutional structure for regulating access to High Seas and highly migratory fish stocks”, with a central authority that could both make and enforce binding rules.²⁰⁸ By the very nature of international law, where rules are only binding on states that have agreed to be bound by them makes the creation of such an organization highly unlikely.²⁰⁹ However, the thought of shifting from micro-regulation to a more holistic management of High Seas fish stocks is needed. Climate change will put more pressure on states to collaborate on transboundary and highly migratory fish stocks and studying the work of a “global RFMO” is noteworthy for future management.

Politics, an inherent aspect of all international fisheries governance, seems to be both a challenge and a potential solution to future cooperation. Possible adaptations include creating new management regimes in unregulated areas, expanding membership or the geographic scope within existing regimes and modifying quota-allocation. At the time of writing, NEAFC has 3 non-Contracting Parties that does not have fishing rights in the Regulatory Area.²¹⁰ If states in

²⁰⁶ Lennan (n10) 167

²⁰⁷ C. Goodman et al., (n80)

²⁰⁸ J.S. Barkin and E.R. DeSombre, 'Do We Need a Global Fisheries Management Organization?' (2013) 3(3) *Journal of Environmental Studies and Sciences* <https://link-springer-com.mime.uit.no/content/pdf/10.1007/s13412-013-0112-5.pdf> accessed 23 August 2024.

²⁰⁹ Ibid.

²¹⁰ NEAFC, (n110).

other regions are “losing” their stocks to NEAFC, it is not guaranteed that they would be given access.

As mentioned earlier, the LOSC takes a zonal approach, where the competence to manage stocks depends on where it exists rather than who has harvested the resource priorly. There are some provisions in the LOSC that discuss traditional fishing rights as well but relates only to fishing within the territorial sea (12 nm from the coastline).²¹¹ However, given the “real interest”, due to past fishing practice in the fishery states from another RFMO would have a motive and real interest to become a member of NEAFC and should be able to become one as well.²¹²

NEAFC have stated that “new stocks” shall be allocated between both new and old members. This is where the politics come in, where the NEAFC Contracting parties do not necessarily want new members, and certainly do not want to give up a share of their quotas. New members would not be given quotas for the existing fisheries in the NEAFC Regulatory Area, only for new and exploratory fishing. If the stocks have partially migrated where a part of the stock has entered the NEAFC Regulatory Area, we might see a continuation of current practice where article 119 becomes a starting point for the sharing method. With no specific provision on the sharing of stocks between RFMOs, it is uncertain if we will see the term of transferable rights when it comes to future allocation practises.

As mentioned in the resolution on climate change, global best practice can influence PECMAS on how NEAFC will manage redistribution in the future, where some of the Tuna RFMOs could presents current best practice for cooperation. The Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC) are both located in the pacific and manage the same species (Tuna) in Convention Areas which not only adjoin but also overlap.²¹³ The two RFMOs have agreed to 3 formal instruments to make sure that conservation initiatives are upheld in both organisations. They include that they agree to consult and cooperate in the exchange of data, research on shared stocks and the approval for observers that operates in both Convention Areas. Currently, cooperation between WCPFC and IATTC is managed ad hoc, consisting of attending each other's meetings, communication

²¹¹ LOSC, article 51

²¹² UNFSA, article 8(3). If parties from another RFMO have lost their stocks, and wants to become a party to NEAFC, article 11 of the UNFSA provides guidance on how to share the living marine resources.

²¹³ C. Goodman et al., (n80)

between Executive Directors, data sharing, and collaborating on certain northern stocks through the Joint Working Group.²¹⁴

This serves as a model for how NEAFC can collaborate with adjacent RFMOs. Similar activities or informal collaboration are also conducted by NEAFC which cooperates regularly with 2 other RFMOs located in the Atlantic Ocean, namely ICCAT and SEAFO.²¹⁵ With ICCAT there is established cooperation on the report of bycatch species (mainly sharks). NEAFC does have informal cooperation with SEAFO on the secretarial level, and several regulations in SEAFO are based on those in force by NEAFC.²¹⁶ The NEAFC Secretariat is also obliged to share information from the IUU-B list with secretariats of other RFMOs. Although these provisions do not relate to climate change directly, informal and formal collaborations can further promote coordination.²¹⁷ By publicizing catch statistics, it will be out in the open if any other RFMOs are harvesting the NEAFC targeted species.

5.1.2. The impact of the BBNJ agreement

ABMTs are measures that can potentially effectively protect vulnerable fish stocks. Furthermore, the establishment of ABMTs should be consistent with conservation measures across RFMO/As, especially if they have competence in the same geographical area. If target stocks leave a designated conservation area on the High Seas, there is a risk that they would be undermined with the lack of regulations in an adjacent High Sea's areas, as shown in the Irminger Sea in the North Atlantic. This is not much of an issue for NEAFC northwards since the COAFA in the Central Arctic Ocean currently stands as a moratorium for commercial fisheries but might be of importance to the west and in the south.

Effective protection initiatives require cross-sectoral coordination, where Young and Stokke propose that a strategy for cooperation should be in a middle ground to not fall in a *reductionist peril* and an *overload peril*.²¹⁸ With a reductionist peril, the result is that regulations are incoherent, whereas with an overload peril a pitfall is that institutions get functionally broad

²¹⁴ Ibid.

²¹⁵ NEAFC Performance Review (n116).

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ O.R. Young and O.S. Stokke, Avoiding Institutional Failure: Risk Factors and Response Strategies in in Stokke OS, Østhagen A, and Raspotnik A, (eds), *Marine Resources, Climate Change and International Management Regimes* (2022) (Bloomsbury Publishing) 52

but procedurally weak with little actual decision making.²¹⁹ By improving interplay management through coordinated decision making, states can avoid falling into such a reductionist peril.²²⁰

When implemented, the BBNJ Agreement might be a solution for the lack of current coordination.²²¹ Kim suggests that the BBNJ Agreement “establishes an institutional framework that has the potential to systematize, rather than replace or undermine the existing ocean governance architecture.”²²² The BBNJ agreement covers 64% of the total ocean surface area, situated in a rather crowded environment with several international instruments.²²³ The Convention text makes numerous references to existing Institutions, Frameworks, and Bodies (IFBs) and to strengthen and enhance cooperation among them while respecting their autonomy.²²⁴ Article 22 (3) reads:

«The Conference of the Parties (COP) shall make arrangements for regular consultations to enhance cooperation and coordination with and among relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies (IFBs) with regard to area-based management tools, including marine protected areas, as well as coordination with regard to related measures adopted under such instruments and frameworks and by such bodies.»

Klerk has noted that the provision resembles the Collective Arrangement in the North-East Atlantic, where OSPAR took on a similar role to what is now envisioned for the BBNJ.²²⁵ The geographic areas in which OSPAR and NEAFC have competences does overlap, where NEAFCs mandate is to regulate fisheries and OSPAR has the competence to regulate pollution from land-based sources, dumping, and offshore sources, as well as human activities that may affect the conservation of marine biodiversity.²²⁶ About 40 % of OSPARs maritime area is located in ABNJ,²²⁷ and without the competence to comprehensively regulate activities in ABNJ, OSPAR has sought to coordinate with other international bodies.²²⁸

²¹⁹ Ibid.

²²⁰ Ibid.

²²¹ R.E. Kim, (n96), 2.

²²² Ibid.

²²³ The BBNJ will possibly interfere with no fewer than 52 institutions. See R.E. Kim (n96) 1

²²⁴ BBNJ Agreement, article 8(1)

²²⁵ B.E. Klerk, ‘A Wolf in Sheep’s Clothing? Reflections on the Institutional Nature of the New Regime for ABMTs and MPAs under the BBNJ Agreement’ (2024) *Ocean Development and International Law* [in press] 12

²²⁶ A.O. Elferink (n 59) 225.

²²⁷ OSPAR ‘MPAs in Areas beyond National Jurisdiction | OSPAR Commission’ <<https://www.ospar.org/work-areas/bdc/marine-protected-areas/mpas-in-areas-beyond-national-jurisdiction>> accessed 18 August 2024.

²²⁸ A.O. Elferink (n 59) 226.

The "Collective Arrangement" between OSPAR and NEAFC aims to coordinate area-based management measures, including the establishment of MPAs in areas ABNJ.²²⁹ Paragraph 6 of the collective arrangement outlines how participants should cooperate, including sharing scientific information and environmental data, notifying each other of future activities, and cooperating on environmental assessments. There has been no intention of establishing joint management, but to increase cross sectoral coordination.²³⁰ However, despite efforts to involve other organizations, OSPAR and NEAFC remain the only participants to date, limiting its full potential. Organisations that are invited to join meetings under the collective arrangement include e.g. the ISA, ICCAT and the IMO.²³¹ The arrangements between IFBs that are to be established in accordance with article 22 of the BBNJ are not mandatory and could result in a situation similar to the OSPAR collective agreement.

If the COP were to propose catch limits or quota restrictions for RFMOs, they would also undermine the existing IFBs.²³² However, the risk of an imminent collapse of global fisheries could be considered a serious or irreversible threat to marine biodiversity, potentially prompting the COP to consider adopting emergency measures.²³³ A similar provision can be found in article 6(7) UNFSA, but in that provision only a natural phenomenon can result in emergency measures to be taken, leaving a debate on whether climate change can constitute a "natural phenomenon" or not. The NEAFC Convention is silent on this matter, and emergency measures have never been invoked in any RFMO under article 6(7) either. Nevertheless, article 24(1) of the BBNJ reads:

"The COP shall take decisions to adopt measures in ABNJ, to be applied on an emergency basis, if necessary, when a natural phenomenon or human-caused disaster has caused, or is likely to cause, serious or irreversible harm to marine biological diversity of ABNJ, to ensure that the serious or irreversible harm is not exacerbated."

The concept of emergency measures was proposed in the negotiations to address situations where a "natural phenomenon or human-caused disaster" could significantly impact the marine

²²⁹ Collective Arrangement between competent international organisations on cooperation and coordination regarding selected areas in areas beyond national jurisdiction in the North-East Atlantic. Updated version <www.ospar.org/documents?v=33030> accessed 21.08.24.

²³⁰ OSPAR (n227)

²³¹ NEAFC and OSPAR (n170)

²³² R.E. Kim (n96)

²³³ BBNJ agreement, article 24

environment.²³⁴ The provision is located in chapter III, and an issue that still remains is what the threshold is for triggering emergency ABMTs.²³⁵

If the NEAFC Contracting parties continues to overfish in the case of redistribution, or other effects of climate change, emergency measures could be invoked. Overfishing of stocks that are migrating the boundaries between RFMOs are likely to cause irreversible harm to the marine environment and is a threat to marine biological diversity in ABNJ. While the likelihood of such measures being implemented remains uncertain, the process would involve consultations with RFMOs, which could encourage greater cooperation and coordination among them.²³⁶ It follows from article 24(4) follows that the measures implemented end after two years or if the circumstances requiring the measures no longer exist.

5.2. Responses to redistribution within the convention area

This part of the discussion is devoted to how NEAFC can adapt to changes within the Convention Area. The decision-making processes and lack of dispute settlement procedures are the main obstacles for effective conservation of the target species. This can all be sourced back to the allocation of quotas amongst the contracting parties.

Finding equitable sharing is not a new problem. In 2015, a working group was established (by NEAFC) to address how pelagic stocks were to be allocated amongst parties the parties.²³⁷ Following article 119 LOSC, states shall when deciding on the TAC for fishing on the High Seas make decision according to the best scientific advice available, to sustain the stock at MSY levels, but also include “the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global”. The parties must also make sure that the conservation measures does not discriminate fisherman from any state.²³⁸ Several potential criteria were highlighted including, zonal attachment, historical fishing patterns, contributions to research as well as fisheries dependency.²³⁹

²³⁴ E. Mendenhall, R. Tiller and E. Nyman, ‘The Ship Has Reached the Shore: The Final Session of the “Biodiversity Beyond National Jurisdiction” Negotiations’ (2023) 155 *Marine Policy* 105686. 3

²³⁵ *Ibid.*

²³⁶ R.E. Kim (n96)

²³⁷ NEAFC, ‘Working Group on Allocation Criteria’ (2017) <<https://www.neafc.org/node/16443>>.

²³⁸ LOSC, article 119(3)

²³⁹ NEAFC (n110)

The working group concluded that zonal attachment (the stocks distribution throughout its lifetime) was the most important factor, although the participants did not reach consensus on what could be recognized as “equitable allocation”.²⁴⁰ Iceland and the Faroe Islands highlighted that both nations were dependent on fisheries, and some of the other states were not. Historical fishing was also to be taken into account.²⁴¹ However, the parties never achieved consensus, and meetings were put on hold in 2017.

5.2.1. Decision making processes

It is reasonable to state that the objection procedure within NEAFC does not arrange for sustainable solutions, leaving objectors able to free ride. According to the Norwegian representative in the 42nd annual meeting: “NEAFC is out-dated compared to other RFMO Conventions, and the number of objections to NEAFC recommendations are too high.”²⁴² The NEAFC Convention has specific provisions that allow Contracting Parties to object to the conservation and management measures.²⁴³ As previously mentioned, a recommendation only becomes binding on the parties that has not objected to it, and if more than three contracting parties object to the recommendation, it does not become binding on any of the parties.²⁴⁴ There is also no requirement to provide a reason for the objection.

As stated in an earlier chapter, the EU also raised an objection on Recommendation 02: 2024 on Redfish.²⁴⁵ The EU catches comprise 90% of overall redfish catches on the High Seas, and with the latest ICES advice the quota would decrease from 18 to 5.9%. The EU argued that the latest NEAFC recommendation was not based on independent scientific advice and therefore not compliant with Article 4 of the Convention.²⁴⁶ The EU raised concerns about the scientific basis for the recommendation, or rather the components of the stock, seeing it as one species. The Russian experts from ICES were suspended from participating after 2021, and ICES was unable to provide new advice after. The scientific basis for the redfish quota in ICES Sub-areas

²⁴⁰ Ibid

²⁴¹ Ibid.

²⁴² NEAFC Performance Review (n116) Annex C, 6.

²⁴³ T. Bjorndal (n128)

²⁴⁴ NEAFC Convention, article 12

²⁴⁵ European Commission (n187)

²⁴⁶ NEAFC, (n 148). Objection to Recommendation 02: 2024 by the EU.

I and II was therefore not based on ICES research but from a working group from the Norwegian Institute of Marine Research and a Russian institute.

Here again, the interface between science, politics and law come to the surface. The objection procedure raises the question on how to balance the need for collective decision-making with the rights of individual states. Shatz argues that unconstrained unilateral objection procedures should be removed from RFMO decision-making, as the legal effect of the objection is that the member may undermine the conservation efforts.²⁴⁷ The UNFSA mandates RFMOs to “agree on decision-making procedures which facilitate the adoption of conservation and management measures in a timely and effective manner.”²⁴⁸ However, the way objections have been used are not in conformity with the UNFSA and should be restrained.

The WCPFC has adopted a more comprehensive decision-making procedure, with a review panel which allows a state party that objected a decision or was absent during the decision to seek evaluation if the decision is inconsistent with the WCPFC Convention or the LOSC, or if it discriminates against the member. If the panel finds no need for changes, the decision becomes binding 30 days after the panel's recommendations. If the panel suggests modifications or revocation, the Commission must amend or revoke the decision accordingly.²⁴⁹

The decision-making procedures in NEAFC are based on a qualified majority vote, and if all measures were binding without the objection procedures, members would be restricted in their sovereign authority to shape their fisheries policies and restrict their freedom to fish on the High Seas.²⁵⁰ After February 2024, objections are now published on the NEAFC webpage, making the objection process and its outcomes more transparent. This may help to lower the number of objections by the parties. Re-establish the NEAFC Working Group on Allocation Criteria is also a first step in a right direction. The NEAFC Contracting Parties should adopt new decision-making procedures, and the provision is already “made” through article 18bis.

²⁴⁷ V. Schatz, ‘Provisions for Nullification of Conservation and Management Measures in RFMO Objection Procedures’ (2024) 166 Marine Policy 106230, 2.

²⁴⁸ UNFSA, article 10(k)

²⁴⁹ Convention on the Conservation and Management of Highly Migratory Fish stocks in the Western and Central Pacific Ocean, Art. 20 (6) to(9). <http://www.wcpfc.int/system/files/text.pdf>.

²⁵⁰ By having objection procedures, states are encouraged to become members, instead of not becoming a party at all.

5.2.2. Adoption of dispute settlement procedures

As shown earlier, climate change and stock redistribution have frequently ended in intergovernmental disputes. It has also become increasingly common to find compulsory dispute settlement in modern regional fisheries treaties, but to date, there has been no case solved in an international Tribunal regarding a fishery dispute and climate change.²⁵¹ Discussions in NEAFCs committees or working groups, as well as in coastal State consultations outside the NEAFC fora are reported to be the most used methods of settling disputes.²⁵² In some cases, specific working groups are set up to deal with particular issues that have proven to be difficult to resolve. In cases where the appropriate committee or working group is not able to settle disputes, they are referred to the NEAFC Commission.²⁵³ Effective dispute resolution mechanisms are also essential if the Contracting Parties reach a “dead end” in negotiations.

At the Annual Meeting in 2004, article 18bis was proposed by the EU and included as an amendment to the Convention.²⁵⁴ The provision reads that “the Commission shall make recommendations establishing procedures for the settlement of disputes arising under this Convention.” However, because article 18bis was objected by the Russian federation, it has not yet entered into force.²⁵⁵ As of today, the most used method of solving disputes between Contracting Parties are through negotiations in NEAFCs committees, or working groups, as well as in coastal State consultations outside NEAFC.²⁵⁶

With the aim to “sustain long-term conservation and optimum utilisation of living marine resources within the Convention Area,²⁵⁷ cooperation between the contracting parties is crucial both for short term and long-term solutions. Compulsory dispute settlement procedures are time consuming and a costly way to resolve a disagreement. Dispute settlement can be viewed more

²⁵¹ J. Harrison, ‘Key Challenges Relating to the Governance of Regional Fisheries’, *Strengthening International Fisheries Law in an Era of Changing Oceans* (Hart Publishing 2019) 13 <<https://www.research.ed.ac.uk/en/publications/key-challenges-relating-to-the-governance-of-regional-fisheries>> accessed 22 April 2024.

²⁵² S. Ásmundsson, ‘Freedom of Fishing on the High Seas, and the Relevance of Regional Fisheries Management Organisations (RFMOs)’ in M. H Nordquist, J.N. Moore and R. Long (eds), *Challenges of the Changing Arctic* (Brill | Nijhoff) 500 <https://brill.com/display/book/edcoll/9789004314252/B9789004314252_022.xml> accessed 4 August 2024.

²⁵³ Ibid.

²⁵⁴ Report of the 23rd Annual Meeting of the North-East Atlantic Fisheries Commission, 8-12 November 2004. Annex K.

²⁵⁵ S. Ásmundsson (n252)

²⁵⁶ Not all disputes are resolved through the working groups either, for instance the working group on allocation criteria that has not been active since 2017.

²⁵⁷ NEAFC Convention, article 2

as a last resort and is not always the best solution for future collaboration. Perhaps it is not the only answer to address climate change within the Convention area. However, it might be a part of the solution when quota disagreements have reached a dead end, or that some of the contracting parties have been systematically objecting quotas for years.

With the current lack of dispute settlement procedures, some of the Contracting Parties have sorted for unilateral actions instead. In a recent dispute between the EU and the Faroe Islands over herring management, the EU implemented coercive economic measures based on its unilateral determination that the Faroe Islands had breached various obligations under the NEAFC Convention.²⁵⁸

On the other hand, The LOSC already provides through part XV dispute settlement procedures relating to the interpretation and application of the Convention, which entails fisheries.²⁵⁹ Since article 18bis has not been ratified, disputes relating to fisheries in the NEAFC Regulatory Area, would still fall under the jurisdiction of dispute settlement under part XV LOSC. It would not be applicable to the whole Convention area, and under LOSC article 297(3)(a) a coastal State is not required to submit to dispute settlement in any issues concerning its sovereign rights over living resources in the EEZ, including decisions on the TAC, harvesting capacity, surplus allocation to other States, and the terms of its conservation and management laws. However, if the disputes regard the protection and preservation of the marine environment, it has been shown earlier cases that a tribunal might have jurisdiction, such as in the *Chagos MPA Case*.²⁶⁰

NEAFC member states should more frequently utilize the dispute settlement mechanisms provided under the LOSC regime to resolve disputes more decisively. By resorting to the LOSC rather than taking unilateral actions and further complicating matters, the established dispute settlement procedures can ensure more consistent and binding resolutions to conflicts, thereby enhancing the effectiveness of NEAFCs efforts in the North-East Atlantic.

The UNFSA, obliges parties to an RFMO to settle disputes by peaceful means either by “negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional

²⁵⁸ B. Kunoy, ‘Assertion of Entitlement to Shared Fish Stocks’ in Myron H Nordquist, John Norton Moore and Ronán Long (eds), *Challenges of the Changing Arctic* (Brill | Nijhoff) <https://brill.com/display/book/edcoll/9789004314252/B9789004314252_022.xml> accessed 4 August 202. 466

²⁵⁹ LOSC, article 281

²⁶⁰ See: Arbitration regarding the Chagos Marine Protected Area between Mauritius and the United Kingdom of Great Britain and Northern Ireland, Award of 18 March 2015, RIAA, Vol. XXXI

agencies or arrangements, or other peaceful means of their own choice”.²⁶¹ Where parties fail to reach an agreement over conservation measures within a reasonable time period, the issue may be referred by either party to dispute settlement found in part XV LOSC.²⁶² Pending an agreement, the parties shall, "make every effort to enter into provisional arrangements of a practical nature".²⁶³ If no agreement is reached, a Court or Tribunal may prescribe provisional measures, for instance in the *Southern Bluefin Tuna* case, where all fishing activities were put on hold to protect and preserve the marine environment.²⁶⁴

Two recommendations on dispute settlement procedures did not get ratified.²⁶⁵ The first regarded that a contracting party that has made an objection in accordance the NEAFC Convention shall state its reasons for doing so and state any alternative measures to be taken instead.²⁶⁶ The second recommendation establish procedures for the settlement of disputes, where the contracting parties shall seek to solve disputes regarding the interpretation and application of the NEAFC Convention by peaceful means, either through non-compulsory or compulsory procedures. Parties may refer a dispute to an ad hoc panel.²⁶⁷

6. Concluding remarks

This thesis has discussed fish redistribution in the North-East Atlantic to answer how NEAFC as an RFMO has been adapting to climate change, and if the current legal framework is sufficient meeting these changes.

NEAFC has primarily addressed redistribution of stocks through joint management initiatives with NAFO. The resolution on climate change adopted at NEAFCs 2023 annual meeting marks a significant step towards the implementation of future measures. PECMAS has been tasked with evaluating scientific data to determine the most effective strategies for adaptation. It is therefore crucial for RFMOs impacted by climate change to adopt flexible and adaptive management approaches that allow for adjustments as new climate impacts are identified. Enhancing adaptive capacity may involve measures such as fisheries closures or the adoption

²⁶¹ UNFSA, article 27

²⁶² UNFSA, article 7(3)

²⁶³ UNFSA article 7(5)

²⁶⁴ See: *Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan)*, Provisional Measures Order of 27 August 1999, ITLOS Reports 1999

²⁶⁵ NEAFC Performance Review (n116). Annex J. 107.

²⁶⁶ Ibid.

²⁶⁷ Ibid.

of ABMTs as needed. The redistribution of species due to climate change can create gaps in overall protection, making it imperative to further investigate its implications for fish stock management.

The findings indicate that NEAFC cannot adapt to climate change in isolation, especially when fish stocks cross the jurisdictions of multiple RFMOs. The key factors for successful adaptation are coordination, data sharing, transparency, and joint management measures. Furthermore, NEAFC's decision-making processes are vital for ensuring sustainable management in the face of climate change and the uncertainties it brings. Looking into international best practice, for instance the WCPFC, NEAFC could implement using panel reviews of objections if the objection is reasonable or if different measures could be made. Effective dispute resolution mechanisms are also essential if the Contracting Parties reach a "dead end" in negotiations, yet NEAFC currently lacks a comprehensive procedure for resolving disputes.

This thesis has also highlighted broader legal issues that require further attention. One critical area is the need for greater clarity within the existing legal framework, particularly concerning the "duty to cooperate" between RFMOs, revealing a gap in the LOSC and UNFSA. It remains uncertain whether the BBNJ agreement will address this gap, when it comes to coordination among relevant IFBs without undermining them. As shown in the collective agreement in the North-East Atlantic, taking part in such agreements are voluntarily and there is no certainty that efforts made by the COP in the BBNJ will result in new arrangements. The interplay between science, politics, and law is crucial in determining how RFMOs respond to climate change.

Most fish stocks are harvested within 200 nautical miles, highlighting the importance of addressing this issue at all levels of governance. Climate change is a pressing concern that demands comprehensive and coordinated responses to stocks moving different EEZs, and if the transferability of rights would be applied in these circumstances. Moreover, for this thesis, the existing compliance and enforcement arrangements have not been discussed in depth. However, a further review if more cooperation is needed in this area could also be assessed in future studies.

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