International law and governance of the arctic in an era of climate change

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3 Arctic fisheries

3.1 INTRODUCTION

Although there is no fishing activity within the Central Arctic Ocean at present, commercial fishing activity does occur in the surrounding areas. Specifically, large-scale commercial fisheries are taking place in the Barents and Bering Seas, but the fisheries in the Arctic Ocean are essentially limited to small- scale subsistence fisheries in Arctic coastal States' maritime zones.[1] However, climate change will most likely change the picture, through the reduction in sea ice, which will open up new areas of the Arctic Ocean to fisheries, including areas of the Central Arctic Ocean, and through likely changes to the com- position of fisheries.[2] Moreover, it is observed that sea-ice regression in the Arctic leads to the interconnection of the North Pacific and the North Atlantic Oceans with the result that invasive species are settled in the Arctic in recent years, such as snow crab (Chionoecetes opilio) in the Barents Sea.[3]

Currently, there can be no safe prognosis on the exact consequences of such increase in fishing activities on the marine environment of the Arctic Ocean. Yet, it is not likely to be fundamentally different from impacts on the marine environment and biodiversity in other parts of the globe, where capture fisheries are generally at or exceeding the limits of sustainable fisheries. The declining global marine catch over the last few years, combined with the physical harm caused by the often highly destructive methods used for fishing, such as bottom trawling, have had, in many parts of the world, a severe impact on the marine ecosystem. This is also possible to occur in the Arctic.[4] Indeed,

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1 EJ Molenaar, 'International Regulation of Central Arctic Ocean Fisheries', in M Nordquist, N Moore and R Long (eds), Challenges of the Changing Arctic: Continental Shelf Navigation and Fisheries (Brill, Leiden, 2016) 429–464, at pp. 433–4.

2 As the Arctic Climate Impact Assessment noted: 'a moderate warming will improve the conditions for some of the most important commercial fish stocks. This is most likely to be due to enhanced levels of primary and secondary production resulting from reduced sea-ice cover and more extensive habitat areas for subarctic species such as cod and herring'; see Arctic Climate Impact Assessment (Cambridge University Press, Cambridge, 2005) 770.

3 MS Wisz, Ï Broennimann, P Grønkjær, RR Møller, SM Olsen, D Swingedouw, RB Hedeholm, EE Nielsen, A Guisan, and L Pellissier, 'Arctic Warming Will Promote Atlantic- Pacific Fish Interchange', Nature Climate Change, 26 January 2015; *supra* note 1, at p. 430.

4 N Liu and E Kirk, 'The European Union's Potential Contribution to Protect Marine Biodiversity in the Changing Arctic: A Roadmap' (2015) 30(2) International Journal of Marine and Coastal Law (IJMCL) 255–284, at p. 268.

it is already known that overfishing poses a serious threat to fish populations in the Arctic. Additionally, the effects of other human activities that might increase as a result of climate change have to be borne in mind: shipping and extractive activities in particular may spatially compete with fishing or have an impact on them, e.g., by pollution.[5]

The potential for large-scale, commercially viable fisheries in the Arctic Ocean has fuelled discussions, not only on an academic, but also on an inter-State level. Indeed, as from early 2014, the five Arctic Ocean coastal States – Canada, Denmark/Greenland, Norway, the Russian Federation, and the United States (Arctic Five) – have engaged in serious multilateral negotiations on Central Arctic Ocean fisheries. The outcome of these negotiations has been, first, the signing by the Arctic Five of a non-binding Declaration concerning the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean on 16 July 2015 in Oslo ('Oslo Declaration'),[6] effectively creating a moratorium on commercial fishing for the time being. This was followed by the conclusion of negotiation for a binding agreement, this time with the participation of five more States or entities (the Arctic Five plus Five: China, Iceland, Japan, Korea and the European Union (EU)).[7]

Arguably, any conservation and management measure (CMM) concerning Arctic fisheries must have an enforcement component to be effective. In other words, CMMs should be complemented with certain monitoring, control and surveillance (MCS) tools[8] which would permit their enforcement[9] and would

5 EJ Molenaar, 'Arctic Fisheries Conservation and Management: Initial Steps of Reform of the International Legal Framework' (2009) 1 The Yearbook of Polar Law 427–464, at p. 433

6 Available at https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/folkerett/declaration-on-arctic-fisheries-16-JULY-2015.PDF; For comment, see S Ryder, 'Declaration concerning the Prevention of Unregulated High Seas Fishing in the Central Arctic Ocean' in JCLOS Blog, 11 August 2015, available at http://site.uit.no/JCLOS/2015/08/11/THE-declaration-concerning-the-prevention-of-unregulated-high-seas-fishing-in-the-central-arctic-ocean/#more-122;

7 The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, available at: https://www.mofa.go.jp/mofaj/files/000449233.pdf

8 In a Technical Paper, the Food and Agriculture Organization (FAO) defines MCS as having three distinct, but interrelated components: a) Monitoring – the continuous requirement for the measurement of fishing effort characteristics and resource yield; b) Control – the regulatory conditions under which the exploitation of the resources may be conducted; and c) Surveillance – the degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities; see P Flewwelling, An Introduction to Monitoring, Control and Surveillance Systems for Capture Fisheries, FAO Technical Paper No. 338 (FAO, Rome, 2004) 3.

9 MCS should be distinguished from enforcement powers or enforcement jurisdiction, which, by reference to Article 73 of the United Nations Convention on the Law of the Sea (LOSC), denotes 'such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations adopted [by the coastal State] in conformity with this Convention'The difference lies in the coercive nature of the measures that states may take for enforcement purposes

prevent any Illegal, Unreported and Unregulated fishing (IUU fishing) in the region.[10] Admittedly, as far as the high seas areas of the Central Arctic are concerned, a fisheries enforcement analysis seems currently to be a sheer academic exercise; however, it does have relevance for other high seas areas in the region, like the 'Loophole' in the Barents Sea and the 'Banana Hole' in the Norwegian Sea. It will definitely be of relevance when the first fishing vessels are able to access the Central Arctic Ocean.

This chapter focuses exclusively on marine capture fisheries; aquaculture is beyond its scope. Fisheries for target species is distinguished from the impacts of fisheries on non-target species. Target species are exclusively 'fishery resources', which are defined as fish, molluscs, crustaceans and sedentary species.[11] Non-target species can be fishery resources and marine mammals but also birds and (other) benthic species, including corals. Even though fisheries are in this chapter approached from a sectoral perspective, the objective is to pursue an ecosystem approach to fisheries (EAF), defined in the FAO Technical Guidelines on 'The ecosystem approach to fisheries'[12] as follows:

> "An ecosystem approach to fisheries strives to balance various societal objectives by taking into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applying an integrated approach to fisheries within ecologically meaningful boundaries."[13]

There is currently also no universally accepted definition of the spatial scope of the marine Arctic. In this chapter, Arctic fisheries are defined as the fisheries that occur in marine areas within the outer limits of the so-called 'AMAP area', as agreed by the Arctic Monitoring and Assessment Programme (AMAP) of the Arctic Council.[14] These are the marine areas north of the Arctic Circle and north of 62°N in Asia and 60°N in North America, modified to include the marine areas north of the Aleutian chain, Hudson Bay, and parts of the North Atlantic Ocean including the Labrador Sea. For the purpose of this chapter, these marine areas are referred to as the 'Arctic marine area".[15]

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10 For the definition of IUU fishing see the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (adopted by the FAO Committee on Fisheries on 2 March 2001 and endorsed by the FAO Council on 23 June 2001); available at http://www.fao.org/docrep/003/Y1224E/Y1224e00.htm;

11 Based on Art. 1(b) of the 1980 Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries, 1285 UNTS 129, entered into force March 17, 1982; See also 2004 Amendments (Article 18bis), November 12, 2004, and 2006 Amendments, August 11, 2006 (Preamble, Articles 1, 2 and 4), none of them yet in force, but provisionally applied by means of the 'London Declaration' of November 18, 2005, available online at https://www.neafc.org/basictexts.

12 FAO Technical Guidelines for Responsible Fisheries No. 4, Suppl. 2 (2003).

13 *Ibid*. at 6.

14 Map of the AMAP available online at http://www.amap.no.

15 This definition runs through the whole Thesis.

This chapter continues with section 2 on current Arctic fisheries, and it is followed by section 3 on Arctic fisheries and climate change. Section 4 gives a concise overview of the Law of the Sea in the Arctic marine area. Subsequently, section 5 offers an overview of the international legal and policy framework with respect to Arctic fisheries management and section 6 devotes some attention to national regulation. Section 7 focuses on the gaps in the international legal and policy framework and national regulation and options for addressing them. Finally, this chapter ends with some conclusions in section 8.

3.2 Current Arctic fisheries

The Arctic marine area includes a wide range of different ecosystems, fish stocks and fisheries considering its extensive spatial scope. Significant differences exist between the Atlantic and Pacific sides of the Arctic marine area.[16] Knowing the existence of these differences, Chapter 13 on 'Fisheries and Aquaculture' of the ACIA Scientific Report opts to focus on the four major Arctic and Subarctic marine fisheries and their ecosystems, namely (i) the Northeast Atlantic (Barents and Norwegian Seas) (ii) the Central North Atlantic (waters around Iceland and off East Greenland), (iii) Northeast Canada (Newfoundland and Labrador Seas) and (iv) the North Pacific (Bering Sea).[17]

Although no possibility of fisheries within the central Arctic Ocean exists at present, commercial fishing activity does occur in the North Atlantic and North Pacific, and in some high seas areas[18] in both oceans, such as in the 'Loophole' in the Barents Sea[19] and the 'Donut Hole' in the central Bering Sea,[20] and within the EEZ of the Arctic coastal States. However, as the Arctic is particularly intensely affected by climate change, fishing is likely to extend to new areas outside the EEZ of the States bordering the Arctic Ocean, following

16 Molenaar E.J. (2009) Climate Change and Arctic Fisheries. In: Koivurova T., Keskitalo E., Bankes N. (eds) Climate Governance in the Arctic. Environment & Policy, vol 50. Springer, Dordrecht.

17 Also see ACIA, Final Scientific Report, *supra*, Chapter 12, entitled 'Hunting, Herding, Fishing, and Gathering: Indigenous Peoples and Renewable Resource Use in the Arctic', for instance at 652.

18 There are four high seas pockets in the Arctic, namely the so-called 'Banana Hole' in the Norwegian Sea, the so-called 'Loophole' in the Barents Sea, the so-called 'Donut Hole' in the central Bering Sea and the Central Arctic Ocean; see Molenaar, *ibid*., at p. 432

19 OS Stokke, 'The Loophole of the Barents Sea Fisheries Regime', in OS Stokke (ed), Governing High Seas Fisheries: The Interplay of Global and Regional Regimes (Oxford University Press, Oxford, 2001) 273–301.

20 Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (Washington, D.C., 16 June 1994, in force 8 December 1995) (1994) 34 ILM 67 (hereinafter: 'Donut Hole agreement').

the northward migration of many valuable Arctic fish stocks, such as herring and cod, into the high seas.[21]

The species on which this ACIA chapter focuses are "those few circumpolar species (capelin (*Mallotus villosus*), Greenland halibut (*Reinhardtius hippoglossoides*), northern shrimp (*Pandalus borealis*), and polar cod (*Boreogadus saida*)) and those of commercial importance in specific regions. The latter include Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*), Alaska pollock (*Theragra chalcogramma*), Pacific cod (*Gadus macrocephalus*), snow crab (*Chionoecetes opilio*)".[22] It is nevertheless clear that these species are merely a selection, based to a considerable extent on the focus on the four spatial areas mentioned above. Saying anything useful about the relative importance of fisheries for these species is impossible without going into a lot of detail.[23] The ACIA chapter also notes the complexity of the functioning of Arctic marine ecosystems as well as the limitations and shortcomings of science.[24]

The ACIA does not examine subsistence fisheries in the Arctic marine area under a separate heading, but devotes attention to them within the scope of the four spatial areas mentioned above. It seems likely, however, that subsistence fishing in other parts of the Arctic marine area will be relatively more important to indigenous peoples.

3.3 Arctic fisheries and climate change

Climate change couldn't leave unaffected the area of the marine Arctic with its major impacts being the rapid warming of Arctic surface temperatures in comparison with the rest of the world which caused to the rapid warming of Arctic waters; moreover it has been observed substantial reduction of Arctic sea ice both in terms of coverage and in terms of thickness; this has resulted to the appearance of reduced salinity due to influx of fresh water and glacial ice which is salt free ; the oceanographic and meteorological changes (e.g. more

21 L Weidemann, International Governance of the Arctic Marine Environment (Springer, Berlin, 2014) 17.

22 ACIA, Final Scientific Report, *supra*, Chapter 13, at 693.

23 For more detailed information see ACIA, Final Scientific Report, *supra*, Chapter 13; NPFMC, Public Review Draft Fishery Management Plan for Fish Resources of the Arctic Management Area, January (2009), available online at http://www.npfmc.org/wp-content/PDFdocuments/fmp/Arctic/ArcticFMP109.pdf; NPFMC, Public Review Draft Environmental Assessment / Regulatory Impact Review / Initial Regulatory Flexibility Analysis for the Arctic Fishery Management Plan, January (2009), available online at http://www.fakr.noaa.gov/npfmc. Other information can be obtained through the Arctic Fisheries Working Group operating under the International Council for the Exploration of the Sea, online on http://www.ices.dk; this working group, however, has so far been focusing exclusively on the Northeast Atlantic. See last also W.E. Schrank, The ACIA, Climate Change and Fisheries, 31 Marine Policy 5 (2007).

24 ACIA, Final Scientific Report, *supra*, Chapter 13, at 692.

storms and waves) in particular due to changes in air and water temperature and sea ice coverage; an increasing acidification of the world's oceans due to increasing uptake of CO2 (which is not just relevant to the Arctic marine area).

These changes will affect Arctic marine ecosystems unavoidably, however accurate predictions cannot be made.[25] One general conclusion is that:

> "a moderate warming will improve the conditions for some of the most important commercial fish stocks, as well as for aquaculture. This is most likely to be due to enhanced levels of primary and secondary production resulting from reduced sea-ice cover and more extensive habitat areas for subarctic species such as cod and herring. Global warming is also likely to induce an ecosystem regime shift in some areas, resulting in a very different species composition."[26]

The composition of Arctic marine ecosystems will undoubtedly change, both qualitatively and quantitatively. Some species will at some stage disappear and others (e.g. due to northward migration) will be added and the relative importance of species in abundance will change as well. It is very difficult to predict where new fishing opportunities will emerge (on the high seas or within coastal State maritime zones) and with respect to which species or categories of species (e.g. shared, anadromous, straddling or highly migratory[27]). Similarly which States – Arctic Ocean coastal States or other States – will benefit or suffer and how subsistence fishing will be affected, among other things, by competition with commercial fisheries. Finally, as reduced ice overage and thickness will also enable other human activities – most importantly shipping and offshore hydrocarbon activities – these activities may compete with fishing in a spatial sense or affect it through pollution and other impacts.

The impact of current and future Arctic fisheries on the marine environment and marine biodiversity in the Arctic is not likely to be fundamentally different from impacts to the marine environment and biodiversity in other parts of the globe. Arctic fisheries could lead to over-exploitation of target species and a variety of impacts on non-target species, for instance on dependent species due to predator-prey relationships, on associated species due to by-catch and on benthic species due to bottom fishing techniques.[28] In view of the broad spatial scope of the Arctic marine area, such undesirable effects are undoubtedly already occurring, although not on a serious scale.

25 *Ibid*., at 770.
26 *Ibid*. One area in which an ecosystem shift occurred in the past is the Bering Sea.
27 See UNCLOS, Subsection 5.5.
28 *Ibid*.

3.4 Law of the sea in the Arctic marine area

The cornerstones of the current international Law of the Sea are UNCLOS and its two implementation agreements, the Part XI Deep-Sea Mining Agreement and the Fish Stocks Agreement.[29] The current international Law of the Sea applies to the marine environment of the entire globe, including the entire marine environment of the Arctic Ocean, however defined.

The overarching objective of UNCLOS is to establish a universally accepted, just and equitable legal order – or 'Constitution' – for the oceans that lessens the risk of international conflict and enhances stability and peace in the international community. All Arctic States are parties to these three treaties, except for the United States, which is a party to neither UNCLOS nor the Part XI Deep-Sea Mining Agreement.[30] The European Union (EU) is party to all three treaties. This is important in view of the fact that Denmark, Finland and Sweden are Member States of the European Union[31] and Iceland and Norway are parties to the EEA Agreement.[32]

UNCLOS recognizes the sovereignty, sovereign rights, freedoms, rights, jurisdiction and obligations of States within several maritime zones. The most important of these for the Arctic are internal waters, territorial sea, EEZ, continental shelf, high seas and the Area.[33] Internal waters lie landward of the baselines. The maximum breadth of the territorial sea is 12 nm (nm; 1 nm = 1,852 meters) measured from the baselines, 24 nm the maximum breadth for the contiguous zone and 200 nm for the EEZ. However, in many geographical settings these maximum breadths cannot be reached due to the proximity of the baselines of opposite States. In such circumstances, maritime boundaries have to be agreed on by opposite States. Several of such maritime boundaries have already been established in the Arctic Ocean and negotiations on several others are still ongoing.

UNCLOS recognises the sovereignty of a coastal State over its internal waters, archipelagic waters and territorial sea, the airspace above and its bed and subsoil. Sovereignty entails exclusive access and control of living and non-living resources and all-encompassing jurisdiction over all human activities, unless States have in one way or another consented to restrictions thereon. UNCLOS also recognises specified economic and resource-related sovereign rights and the jurisdiction of a coastal State with respect to its EEZ and outer continental shelf. Nevertheless, other States have navigational rights or

29 See *supra* note 6.

30 Information obtained from http://www.un.org/Depts/los, accessed on 26 February 2016.

31 Even though EU membership of Denmark does not encompass Greenland.

32 1993 Agreement on the European Economic Area, OJ L 1, 3.1.1994, entered into force 1 January 1994; see also 1960 EFTA Convention, entered into force on May 3, 1960. Note that the EEA Agreement does not apply to Svalbard.

33 UNCLOS, Art. 1(1)(1) defines 'Area' as "the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction".

freedoms within the maritime zones of coastal States and, with respect to their EEZ and outer continental shelf, also the freedoms of over-flight, laying of submarine cables and pipelines and "other internationally lawful uses of the sea related to these freedoms".[34]

There are four high seas pockets (enclaves) in the AMAP area. These are the so-called 'Banana Hole' in the Norwegian Sea, the so-called 'Loop Hole' in the Barents Sea, the so-called 'Donut Hole' in the central Bering Sea and the central Arctic Ocean.[35] In the high seas, all States have the freedoms already mentioned above as well as the freedom to construct artificial islands and other installations, the freedom of fishing and the freedom of scientific research. These freedoms are all subject to conditions and obligations.[36] The Area and its resources are the common heritage of mankind and the International Sea-bed Authority (ISA) is charged with organising and controlling all activities of exploration for, and exploitation of, the resources of the Area.[37]

The Treaty of Spitsbergen[38] grants sovereignty over Svalbard to Norway and there seems to be increasingly less opposition by other States to Norway's entitlement to establish an EEZ and outer continental shelf off Svalbard. Disagreement still exists, however, on the way in which these sovereign rights and jurisdiction granted to coastal States under UNCLOS should be exercised in light of the equal rights accorded to parties to the Treaty of Spitsbergen.[39]

The fact that the current international Law of the Sea applies to the entire marine Arctic, is also emphasised by the five Arctic Ocean coastal States in the Ilulissat Declaration.[40] Accordingly, as the "law of the sea" is an "extensive international legal framework", they "therefore see no need to develop a new comprehensive international legal regime to govern the Arctic Ocean". Conversely, they recognise the need for "appropriate measures" as a consequence of "developments in the Arctic Ocean". In the less than a single page text that follows, reference is made to the safety of navigation, vessel-source pollution and contingency planning and emergency response to incidents with shipping and offshore exploitation. Notably, no mention is made of international fisheries instruments, fisheries management in general or the need for holistic, integrated or cross-sectoral governance or management.[41]

34 UNCLOS, Art. 58(1).
35 Molenaar E.J., *supra* note 14.
36 UNCLOS, Art. 87(1).
37 UNCLOS, Arts. 1(1)(3), 136 and 157(1).
38 1920 Treaty on the Status of Spitsbergen, 2 League of Nations Treaty Series 8 (1925), entered into force August 14, 1925.
39 See in this regard the Notes Verbales by Spain and Russia in response to the Norwegian submission to the CLCS in 2006 online available at http://www.un.org/Depts/los.
40 The Ilulissat Declaration, Arctic Ocean Conference, Ilulissat, Greenland, May 28 (2008), available online at http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf.
41 Molenaar E.J., *supra* note 14.

The Ilulissat Declaration refers to the "Law of the Sea" but not explicitly to UNCLOS. This is hardly surprising as the United States is not a party to UNCLOS. It is well-known that the United States takes the view that, except for its Part XI, UNCLOS forms part of customary international law and consequently creates rights and obligations for the United States. However, while the United States does not also explicitly except the dispute settlement mechanism in Part XV of UNCLOS, this mechanism is unable to become part of customary international law as a consequence of its procedural nature.[42] The dispute settlement mechanism in Part XV is widely regarded as a critical component of the package deal that paved the way for the adoption of UNCLOS. The fact that it provides compulsory third party dispute settlement with binding decisions across a range of scenarios was a novelty in international law at the time. It thereby helps to safeguard the preservation of the package deal of UNCLOS by preventing undesirable applications and interpretations of its provisions. The non-applicability of the dispute settlement mechanism of Part XV of UNCLOS as between Arctic Ocean coastal States is therefore a significant gap in the "extensive international legal framework" referred to in the Ilulissat Declaration.

3.4.1 The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean

On 3 October 2018, the five Arctic Ocean coastal States (Canada, Denmark (acting on behalf of Greenland and the Faroe Islands), Norway, Russia, and the United States – the 'A5') together with China, the European Union (EU), Iceland, Japan, and South Korea (which together with the A5 form the so-called 'A5+5') signed the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean (CAOF Agreement or CAOFA) in Ilulissat, Greenland.[43]

The CAOFA's raison d'être is summarized in the preamble of the Agreement:

> "Recognizing that until recently ice has generally covered the high seas portion of the central Arctic Ocean on a year-round basis, which has made fishing in those waters impossible, but that ice coverage in that area has diminished in recent years; Acknowledging that, while the central Arctic Ocean ecosystems have been relatively unexposed to human activities, those ecosystems are changing due to climate change and other phenomena, and that the effects of these changes are not well understood; […]

42 Cf. T.L. McDorman, Global Ocean Governance and International Adjudicative Dispute Resolution, 43 Ocean and Coastal Management 255 (2000), at 259.

43 *Supra* note 7.

> Believing that commercial fishing is unlikely to become viable in the high seas portion of the central Arctic Ocean in the near future […]"[44]

In line with what the preamble states, the objective of the CAOFA is:

> "to prevent unregulated fishing in the high seas portion of the central Arctic Ocean through the application of precautionary conservation and management measures as part of a long- term strategy to safeguard healthy marine ecosystems and to ensure the conservation and sustainable use of fish stocks."[45]

Indeed, the high seas portion of the central Arctic Ocean (CAO) has previously not been subject to a comprehensive regional fisheries agreement. As shown on the map below (own copyright), only the southern tip of the CAO falls within the Convention Area of the North-East Atlantic Fisheries Commission (NEAFC). Other relevant regional fisheries management organizations (RFMOs) and arrangements (RFMAs) lack either a geographical or substantive mandate for comprehensive fisheries regulation in the CAO. On the other hand, the global legal regime for high seas fisheries applies to the CAO. The A5 admitted as much in their 2008 Ilulissat Declaration by expressing support for the existing global framework provided by "the law of the sea [as] a solid foundation for responsible management by the five coastal States". The most important global instruments, which are also expressly referred to in the CAOFA's preamble, are the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the 1995 UN Fish Stocks Agreement (UNFSA) and the 1995 Code of Conduct for Responsible Fisheries.

3.4.1.1 The negotiations

The original initiative that led to the negotiation of the CAOFA came from the United States Senate, which directed:

> "the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean."[46]

A series of meetings among the A5 followed. In their non-binding 2015 Declaration Concerning the Prevention of Unregulated High Seas Fishing in the

44 Valentin Schatz, Alexander Proelss and Nengye Liu, The 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean: A Primer, October 26, 2018, Ejil Talk, available at: https://www.ejiltalk.org/the-2018-agreement-to-prevent-unregulated-high-seas-fisheries-in-the-central-arctic-ocean-a-primer/

45 *Supra* note article 2.

46 The relevant Senate discussions and mandates can be found at the website of the US Senate available at: https://www.govinfo.gov/app/details/STATUTE-122/STATUTE-122-Pg1569

Central Arctic Ocean (Oslo Declaration), the A5 committed themselves to the "implementation of interim measures to prevent unregulated fishing in the high seas portion of the central Arctic Ocean".[47] The Oslo Declaration also acknowledged:

> "the interest of other States in preventing unregulated high seas fisheries in the central Arctic Ocean and look[s] forward to working with them in a broader process to develop measures consistent with this Declaration that would include commitments by all interested States."[48]

As a consequence, the A5 invited China, the EU, Iceland, Japan and South Korea to the negotiations. Therefore, the remaining meetings took place among the A5+5 and were accompanied by separate meetings of Scientific Experts on Fish Stocks in the Central Arctic Ocean (FiSCAO). On 30 November 2017, a draft agreement was finally concluded and, after legal and technical review, the final text of the CAOFA was made available in the first half of 2018.

3.4.1.2 Scope of the CAOFA

An important feature of the CAOFA is that it is not supposed to affect the existing legal regime and the parties' positions in that respect – including other fisheries agreements such as NEAFC.[49] This notion is also reflected in the provisions which determine the CAOFA's scope.
The CAOFA's spatial scope extends to:

> "the single high seas portion of the central Arctic Ocean that is surrounded by waters within which Canada, the Kingdom of Denmark in respect of Greenland, the Kingdom of Norway, the Russian Federation and the United States of America exercise fisheries jurisdiction".[50]

Thus, the CAOFA's spatial scope is informed by purely legal aspects rather than an ecosystem approach such as, for example, the Convention Area of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). However, the usual terminology used in fisheries agreements is "areas under national jurisdiction" rather than "exercise […] jurisdiction". This wording appears to have been chosen in order to avoid any implicit statement on the status of the waters around Svalbard (or Spitsbergen) in which Norway exercises fisheries jurisdiction. In particular, Norway, whose sovereignty over Svalbard was recognized by Article 2 of the 1920 Spitsbergen Treaty, has

47 The text of the Oslo Declaration can be found at: https://www.regjeringen.no/globalassets/departementene/ud/vedlegg/folkerett/declaration-on-arctic-fisheries-16-july-2015.pdf
48 *Ibid*.
49 *Supra* note 7 article 14.
50 *Ibid*. article 1a

declared a Fisheries Protection Zone (SFPZ) around Svalbard.[51] All of the A5+5 except the EU are contracting parties to the Spitsbergen Treaty (several EU Member States are also parties). The topic of the SFPZ is sensitive because Article 2 of the Spitsbergen Treaty states that "[s]hips and nationals of all the high contracting parties shall enjoy equally the rights of fishing [in Svalbard's] territorial waters." Norway claims that the term "territorial waters" does not encompass the SFPZ, and neither does the right to equal access extend to the SFPZ. Others argue that the term "territorial waters" must be interpreted dynamically in light of the object and purpose of the Spitsbergen Treaty – with the consequence that Norway must grant equal access to fisheries in the SFPZ. The issue has recently gained new momentum in light of a dispute between the EU (particularly Baltic Member States) and Norway concerning access to the local snow crab fishery.

The CAOFA's substantive scope covers all "species of fish, molluscs and crustaceans" except sedentary species as defined by Article 77(4) UNCLOS.[52] As sedentary species are subject to the regime of the continental shelf, their exception from the CAOFA's scope of application ensures that the A5's (partially overlapping) claims to continental shelves beyond 200 nm are not affected by the CAOFA (these claims overlap with the CAOFA Agreement Area).

3.4.1.3 Moratorium on unregulated commercial fishing

The key operative undertaking of the CAOFA, which is also highlighted in its title, is what has sometimes imprecisely been called a 'moratorium on fishing' in the CAO. This calls to mind the current moratorium on fishing for Alaska pollock under the 1994 Bering Sea Pollock Convention (CCBSP) – with the significant difference, however, that the CCBSP was a reaction to a stock collapse rather than a precautionary measure prior to the initiation of commercial fishing.

However, the moratorium imposed by the CAOFA is in fact on 'unregulated' commercial fishing, not on commercial fishing per se. The parties retain, with some qualifications, their right to authorize commercial fishing by vessels under their flag pursuant to conservation and management measures adopted by existing RFMOs/As such as NEAFC if they are "operated in accordance with international law to manage such fishing in accordance with recognized international standards".[53] In addition, Article 3(1)(b) CAOFA allows for commercial fishing based on "interim conservation and management measures"[54]

51 Article 2, Spitzbergen Treaty, 1920 available at: https://www.loc.gov/law/help/us-treaties/bevans/m-ust000002-0269.pdf.
52 *Supra* note 7 article 1b.
53 *Ibid*. article 3(1) (a).
54 *Ibid*. article 3 (1) (b).

established pursuant to Article 5(1)(c)(ii)[55] CAOFA if (and when) negotiations towards a new RFMO/A are triggered (Article 3(1).

(b) Non-commercial fisheries are not covered by the 'moratorium' under Article 3 CAOFA. However, exploratory fishing will be regulated directly under Article 5(1)(d) CAOFA and may only be authorized pursuant to conservation and management measures established on this basis. The freedom of marine scientific research in the high seas (cf. Articles 87(1)(f) and 238 UNCLOS), which may involve the taking of fish, is expressly guaranteed (Article 3(7) CAOFA). The CAOFA does, however, contain obligations to prevent abuse of exploratory fishing and scientific fishing for commercial purposes (like International Whaling Commission (IWC)), just like it contains an obligation to ensure compliance with the moratorium and any future interim measures on commercial fisheries (Articles 3(4), 3(5) and 5(1) (d)).

This overview shows that the CAOFA indeed prohibits fishing that would be classified as 'unregulated' under para. 3.3 of the FAO's 2001 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Pursuant to the sunset clause in Article 13(1) CAOFA, the CAOFA (and with it the 'moratorium') will remain in force for 16 years. Thereafter, it will be automatically renewed for successive periods of five years unless one (!) of the parties objects (Article 13(2) CAOFA). Equally, the CAOFA will only enter into force once all (!) of the A5+5 have become parties (Article 11(1)). This compromise solution (as opposed to a permanent ban) is reminiscent of the Ross Sea Marine Protected Area established by CCAMLR in Antarctic waters which entered into force in 2017[56] and which is also subject to a sunset clause(35 years subject to renewal or replacement by consensus). However, the interim measures adopted under the CAOFA form part of a "stepwise process" that might lead to the establishment of one or more future RFMOs/As in the CAO. This is not unheard of and has, for example, been used in the context of the South Pacific Regional Fisheries Management Organisation (SPRFMO). Before the next step, however, scientific uncertainties concerning fish stocks in the CAO must be reduced – a purpose for which a robust Joint Program of Scientific Research and Monitoring (JPSRM) will be established (Article 4). If the parties, based on data produced by the JPSRM and other sources, consider that the "distribution, migration and abundance of fish in the Agreement Area would support a sustainable commercial fishery", they can trigger negotiations towards a new RFMO/A (Article 5(1)(c)(i)). This decision, like all substantive decisions under the CAOFA, must be taken by consensus (Article 6(2)).

Thus, a single party can block the trigger mechanism (just as a single party can block the adoption of other conservation measures), which is an expression

55 *Ibid*. article 5 (1)(c)(ii).

56 Please see at: https://www.fisheries.noaa.gov/national/international-affairs/marine-protected-area-antarcticas-ross-sea

of the careful balance of competing interests involved in the CAOFA negotiations. However, it should be noted that potential disputes relating to the interpretation or application of the CAOFA can be referred to binding settlement pursuant to Part VIII of the UNFSA even if a party – such as China – is not a party to the UNFSA (Article 7).

Overall, the CAOFA can be described as an instrument that adopts a precautionary approach to fisheries conservation and management (cf. Article 6 and Annex 11 UNFSA). It remains to be seen whether this approach will be effectively implemented in practice.

3.4.1.4 Questions of participation and concluding remarks

Finally, the CAOFA's provisions on participation deserve attention. They allow only for immediate signature (and thereafter ratification, acceptance or approval) of the A5+5 (Article 9). Other States can only join (1) after the CAOFA has entered into force, (2) if they can show a "real interest" and (3) if the A5+5 have decided to invite them by consensus (Article 10).

It should be recalled that States fishing for straddling or highly migratory stocks in the high seas must, if a competent RFMO/A exists, either become a member of that RFMO/A or at least apply its conservation and management measures (Article 8(3) UNFSA). Otherwise, the relevant State is prohibited from fishing for the stock in question (Article 8(4) UNFSA). As a corollary of those obligations, there is also a right to join an RFMO/A if a "real interest in the fisheries concerned" can be shown – and this right must be reflected in the existence (and application) of non-discriminatory provisions for participation by new entrants in the relevant RFMO/A. While the CAOFA's preamble states that it is "premature under current circumstances to establish any additional regional or subregional fisheries management organization or arrangement", the extent of competences to establish conservation and management measures under Article 5(1)(d) (for exploratory fisheries) and Article 5(1)(c)(ii) (for commercial fisheries) suggests that the CAOFA itself either is an RFMA within the meaning of Article 1(1)(d) UNFSA or, at the very least, will become one as soon as the mechanism of Article 5(1)(c)(i) is triggered. Thus, there must be a possibility for States to join the CAOFA if they can show a real interest. However, the concept of real interest may probably be understood somewhat more broadly than usual because there does not currently exist a fishery in the CAO (but, at the same time, not too broadly, taking into account that the CAOFA operates based on consensus decision-making, which is why the risk of an impasse caused by new conservationist parties (think: IWC is significant).

It may be concluded that the CAOFA's provisions on participation are problematic from the perspective of Article 8(3) UNFSA, but at least in theory, it is possible to apply these. Overall, the CAOFA can accurately be described as an instrument that adopts a precautionary approach to fisheries conservation and management in the CAO. However, it should be borne in mind that, given

the current lack of commercial fishing in the CAO combined with a low likelihood of commercial fisheries taking place there even in the long run, this precautionary action comes at a low cost for the Arctic Five plus Five. At the same time, the CAOFA arguably provides the Arctic Five with an opportunity to reassert their special role as 'stewards of the Arctic'. As such, it may be optimistic to perceive the adoption of the CAOFA as an "important step in gradual transformation of the freedom of the high seas" provisions in conformity with the UNFSA.

3.5 International legal and policy framework for Arctic fisheries management

3.5.1 Introduction

The aim of this section is to provide an overview of the international legal and policy framework with respect to Arctic fisheries. The ensuing subsections address intergovernmental and other relevant international bodies and international instruments.

3.5.2 Interests, rights, obligations and jurisdiction

The international legal and policy framework for fisheries conservation and management seeks to safeguard the different interests of the international community as a whole. These interests include the interests of States that have rights, obligations or jurisdiction in their capacities as flag, coastal, port or market States or with respect to their natural and legal persons. While the term 'flag State' is commonly defined as the State in which a vessel is registered and/or whose flag it flies,[57] there are no generally accepted definitions for the terms 'coastal State' or 'port State'. For the purpose of this chapter the term 'coastal State' refers to the rights, obligations and jurisdiction of a State within its own maritime zones over foreign vessels. Conversely, the term 'port State' refers to the rights, obligations and jurisdiction of a State over foreign vessels that are voluntarily in one of its ports. The rights, obligations and jurisdiction of a port State do not overlap with those of a coastal State (e.g. port States would have jurisdiction over illegal fishing that has occurred beyond the coastal State's maritime zones,[58] as well as over violations of conditions for entry into port).

57 See *e.g.* UNCLOS, Art. 91(1).

58 This reasoning is predominantly based on UNCLOS Art. 218. For a more comprehensive discussion see E.J. Molenaar, Port State Jurisdiction: Towards Comprehensive, Mandatory and Global Coverage, 38 Ocean Development & International Law 225 (2007).

In the context of this chapter, a port State's jurisdiction relates to fishing activities that have taken place beyond its maritime zones. Such fishing activities may nevertheless have related to transboundary stocks that also occur in the maritime zones of the port's coastal State. While there is no universally accepted definition for the term 'market State', this Thesis uses the definition for this term proposed in the constitutive instrument of a RFMO under negotiation, namely "a State […] which imports, exports, re-exports or has a domestic market for fish or fish products derived from fishing in the Convention Area".[59]

Both flag and coastal States would in principle have an interest in long-term exercise of their entitlements over marine living resources in the various maritime zones. However, as a coastal State has exclusive access to marine living resources within areas under its national jurisdiction, its commitment to that objective may often be stronger than that of a flag State. A port State will commonly pursue socio-economic interests related to the port and its 'hinterland'. States generally have interests, rights, obligations and jurisdiction in more than one capacity. This often leads to a more balanced compromise position but occasionally also to contradictory positions of the same State within different fora. There is no reason or indication to assume that Arctic States are different in this regard.

The interests of the international community normally overlap with those of the various capacities in which a State can act but are usually broader and more general. The interests of some States, however, clearly undermine those of other States and the international community. For instance, by not ensuring that their ships comply with international minimum standards or by allowing foreign vessels in their ports to be in non-compliance with international minimum standards. These States, vessels and ports thereby have a competitive advantage over States, vessels and ports that do comply with international minimum standards. Such 'free riders' clearly benefit from the consensual nature of international law – meaning that a State can only be bound to a rule of international law when it has consented to that rule.[60]

3.5.3 Substantive standards

Fisheries conservation and management authorities make use of the following substantive standards; a) Restrictions on catch and effort, for instance by setting the total allowable catch (TAC) and allocating the TAC by means of national quotas; b) Minimum size limits for target species; c) Maximum by-catch limits,

59 Draft Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean UN Doc. SP/06/WP1, Revision 4, October (2008), available online at http://www.southpacificrfmo.org, accessed 26 February 2016, Art. 1(m).

60 Molenaar E.J., *supra* note 14.

for instance in terms of the number of individuals (e.g. in relation to marine turtles and marine mammals) or as a percentage of the target catch; d) Technical measures, for instance minimum mesh sizes, by-catch mitigation techniques (e.g. turtle excluder devices, bird-scaring lines); and e) Spatial measures (e.g. closed areas) aimed at avoiding catch of target species (e.g. nursing and spawning areas) or non-target species (e.g. important feedings areas) or avoiding impact on sensitive habitat (e.g. cold water coral reefs).[61]

3.5.4 Intergovernmental organisations and other relevant international bodies

The main global intergovernmental organisations and bodies of relevance to this paper are the United Nations General Assembly (UNGA) and the FAO. At the regional level, there are a number of RFMOs and bilateral or regional organisations/arrangements whose spatial scope overlaps to some extent with the Arctic marine area. These are:

- the International Commission on the Conservation of Atlantic Tunas (ICCAT) established by the ICCAT Convention;[62]
- the bilateral (Canada and the United States) International Pacific Halibut Commission (IPHC), established by the IPHC Convention;[63]
- the bilateral (Russia and the United States) Intergovernmental Consultative Committee (ICC), established by the Agreement on Mutual Fisheries Relations;[64]

61 E.J. Molenaar, Arctic Fisheries Conservation and Management: Initial Steps of Reform of the International Legal Framework, 1(1) Yearbook of Polar Law 427 (2009), at 428.

62 1966 International Convention for the Conservation of Atlantic Tunas, 673 UNTS 63, entered into force March 21, 1969.

63 1953 Convention for the Preservation of the Halibut Fishery of the North Pacific Ocean and the Bering Sea, 222 UNTS 78, entered into force October 28, 1953. Exchange of Notes Constituting the 1979 Agreement to Amend the IPHC Convention, 1168 UNTS 380, entered into force March 29, 1979.

64 1988 Agreement between the Government of the United States of America and the Government of the Union of Soviet Socialist Republics on Mutual Fisheries Relations, 11 Treaties and other International Acts Series 422 (1988), entered into force October 28, 1988. The Agreement expires on 31 December 2008 but the United States will seek to extend it with another five years. The two States are currently engaged in negotiations to establish a comprehensive fisheries agreement for the Northern Bering Sea. At the 2007 ICC meeting, only three provisions of the draft agreement remained unresolved.

- the Northwest Atlantic Fisheries Organization (NAFO), established by the NAFO Convention.[65] Its main regulatory body is the NAFO Fisheries Commission;
- the North Atlantic Salmon Conservation Organization (NASCO), established by the NASCO Convention;[66]
- the North East Atlantic Fisheries Commission (NEAFC), established by the NEAFC Convention;[67]
- the North Pacific Anadromous Fish Commission (NPAFC), established by the NPAFC Convention;[68]
- the Norway-Russia Fisheries Commission (governed and established by the 1975 Framework Agreement,[69] the 1976 Mutual Access Agreement[70] and the 1978 Grey Zone Agreement[71]) and the trilateral Loophole Agreement and Protocols;[72]

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65 1978 Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, 1135 UNTS 369, entered into force January 1, 1979; See further 2007 Amendment, Lisbon, NAFO/GC Doc. 07/4 (2007), not yet in force, available online at www.nafo.int. The 2007 Amendment consists of eight articles which replace the title with "Convention on Cooperation in the Northwest Atlantic Fisheries" and the existing Preamble, Annexes and almost all provisions by new ones.

66 1982 Convention for the Conservation of Salmon in the North Atlantic Ocean, 1338 UNTS 33, entered into force October 1, 1983.

67 1980 Convention on Future Multilateral Cooperation in the North-East Atlantic Fisheries, *supra*.

68 1992 Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, 22 Law of the Sea Bulletin 21 (1993), entered into force February 16, 1993.

69 1975 Agreement between the Government of Norway and the Government of the Union of Soviet Socialist Republics on Co-operation in the Fishing Industry, 983 UNTS 7, entered into force April 11, 1975. See also O.S. Stokke, The Loophole of the Barents Sea Fisheries Regime, in Governing High Seas Fisheries: The Interplay of Global and Regional Regimes 273 (O.S. Stokke ed., 2001), at 274.

70 1976 Agreement between the Government of the Union of Soviet Socialist Republics and the Government of the Kingdom of Norway Concerning Mutual Relations in the Field of Fisheries, 1157 UNTS 146, entered into force April 21, 1977.

71 1978 Avtale mellom Norge og Sovjetunionen om en midlertidig praktisk ordning for fisket i et tilstøtende område i Barentshavet (1978 Agreement between Norway and the Soviet Union on provisional practical arrangements on fishing in an adjacent area of the Barents Sea), Overenskomster med fremmede stater 436 (1978), entered into force January 11, 1978.

72 1999 Agreement between the Government of Iceland, the Government of Norway and the Government of Russia Concerning Certain Aspects of Co-operation in the Area of Fisheries, 41 Law of the Sea Bulletin 53 (1999), entered into force July 15, 1999; 1999 Protocol between the Government of Iceland and the Government of Russia under the Agreement between the Government of Iceland, the Government of Norway and the Government of Russia concerning Certain Aspects of Co-operation in the Area of Fisheries St. Petersburg, 14 International Journal of Marine and Coastal Law 488 (1999), entered into force July 15, 1999; See also 1999 Protocol between the Government of Norway and the Government of Iceland under the Agreement between the Government of Iceland, the Government of Norway and the Government of Russia concerning Certain Aspects of Co-operation in the Area of Fisheries St. Petersburg, 41 Law of the Sea Bulletin 56 (1999), entered into force July 15, 1999.

- the Western and Central Pacific Ocean Fisheries Commission (WCPFC), established by the WCPFC Convention;[73]
- the Yukon River Panel of the bilateral (Canada and the United States) Pacific Salmon Commission (PSC), established by the Pacific Salmon Treaty;[74] and
- the annual Conference of Parties (CoP) to the CBS Convention.[75]

Reference can also be made to the ongoing negotiation process for the establishment of an RFMO with competence over bottom fisheries in the Northwest Pacific.[76] While interim measures adopted by this process apply south of 45° South, no agreement has yet been reached on the spatial scope of the future Convention.[77]

The main Arctic Council working groups of relevance to this Thesis are the Conservation of Arctic Flora and Fauna (CAFF) and the Sustainable Development Working Group (SDWG). CAFF's work is guided by the CAFF Strategic Plan for the Conservation of Arctic Biological Diversity and has five core objectives: monitoring of Arctic biodiversity; conservation of Arctic species and their habitats; consider the establishment of protected areas; conservation of nature outside protected areas; and integration of conservation objectives and measures for economic sectors of the society.

Finally, reference can be made to relevant international bodies such as: the OSPAR Commission established under the OSPAR Convention,[78] In particular, for its work under Annex IV on the Assessment of the Quality of the Marine Environment and Annex V on Protection and Conservation of the

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73 2000 Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Honolulu, 40 International Legal Materials 277 (2001), entered into force June 19, 2004 See also http://www.wcpfc.int.

74 1985 Treaty between the Government of Canada and the Government of the United States of America Concerning Pacific Salmon, 1469 UNTS 357, entered into force March 18, 1985. See also The Yukon River Panel was established by means of the Yukon River Salmon Agreement of December 2002, which amended the Pacific Salmon Treaty, available online at http://www.psc.org/about-us/structure/panels/yukon-river/.

75 1994 Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, 34 International Legal Materials 67 (1995), entered into force December 8, 1995; see also http://www.afsc.noaa.gov/refm/cbs.

76 For more information see Y. Takei, Filling Regulatory Gaps in High Seas Fisheries: Discrete High Seas Fish Stocks, Deep-Sea Fisheries and Vulnerable Marine Ecosystems, PhD manuscript, Utrecht University (2008), at Chapter 5.3, available online at http://www.nwpbfo.nomaki.jpand.

77 Apparently, the Unites States does not favor the inclusion of the Bering Sea at all but Japan favors the inclusion of the high seas of the Bering Sea that fall within FAO Statistical Area No. 67.

78 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, 2354 UNTS 67, entered into force March 25, 1998. See Ministerial Meeting of the OSPAR Commission Sintra, July 22-23 1998, Main Results: Annex V adopted, entered into force August 30, 2000, see respectively http://www.ospar.org/site/assets/files/1169/pages_from_ospar_convention_a5.pdf.

Ecosystems and Biological Diversity of the Maritime Area; the International Arctic Science Committee (IASC), bodies established under the North Pacific Marine Science Organization (PICES);[79] and various bodies established under the International Council for the Exploration of the Sea (ICES), in particular the Arctic Fisheries Working Group.

3.5.5 International instruments

3.5.5.1 Introduction

As a point of departure, it should be noted that all the global legally binding and non-legally binding instruments related to fisheries conservation and management also apply to the Arctic marine area. The most important are UNCLOS, the Fish Stocks Agreement, the FAO Compliance Agreement,[80] the FAO Code of Conduct for Responsible Fisheries,[81] and its Technical Guidelines, international plans of action (IPOAs) – for instance the IPOA-IUU[82] – and the Model Scheme on PSM[83] and UNGA Resolutions, among other things on drift-nets and destructive fishing practices.[84]

The subsections below will address UNCLOS in further detail, the Fish Stocks Agreement, constitutive instruments of RFMOs, Arrangements and their conservation and management measures, and Arctic Council instruments. Finally, for the sake of completeness, reference should be made here to the OSPAR Convention and the Treaty of Spitsbergen.

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79 See available online at http://www.pices.int,

80 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, 33 International Legal Materials 969 (1994), entered into force April 24, 2003.

81 Adopted by the 28th Session of the FAO Conference, Rome, October 31, 1995, available online at http://www.fao.org/fi.

82 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. Adopted by consensus by FAO's Committee on Fisheries on 2 March 2001 and endorsed by the FAO Council on 23 June 2001 available at http://www.fao.org/fi.

83 COFI, Model Scheme on Port State Measures to Combat Illegal, Unreported and Unregulated Fishing endorsed 26th Session, March 2005. Reference should in this context also be made to the FAO Technical Consultation to Draft a Legally-Binding Instrument on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, which commenced in June 2008 and may conclude its work in 2009. This future Agreement will make the Model Scheme redundant.

84 See *i.a.* 1995 Agreement for the implementation of the provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, UN-GA Res. 50/24, UN Doc. A/RES/50/24, at paras 59, 80-86 (1995).

3.5.5.2 UNCLOS

In addition to acknowledging the sovereignty, sovereign rights and jurisdiction of coastal States over all or certain living resources within their maritime zones and the freedom of fishing of all States in the high seas,[85] UNCLOS lays down several basic obligations which restrict these entitlements. These are:[86]

1. avoiding over-exploitation of target species by means of
   a. determining the TAC, inter alia, by taking account of
      i. dependent species (predator-prey relationships) and by-catch of associated species;
      ii. generally recommended minimum standards;
   b. using the best available scientific research available, where appropriate by cooperating within relevant international organisations;
2. avoiding or limiting by-catch of non-target species;
3. avoiding or limiting other impacts of fisheries on the marine ecosystem, for instance fragile ecosystems as well as the habitat of depleted, threatened or endangered species;
4. striving for the objective of maximum sustainable yield (MSY), except for marine mammals, sedentary species and species whose range of distribution does not extend seaward of the territorial sea;
5. cooperating in relation to transboundary stocks and discrete high seas stocks. The following different categories of transboundary stocks can be distinguished
   a. shared stocks: between the EEZs of two or more coastal States;
   b. straddling stocks: occurring within the EEZs of one or more coastal States and the high seas;
   c. highly migratory stocks: the species listed on Annex I to UNCLOS (in particular tuna and tuna-like species); and
   d. anadromous (e.g. salmon) & catadromous (e.g. eel) stocks.

3.5.5.3 Fish Stocks Agreement

As explained in the Introduction to the background papers, the Fish Stocks Agreement is an implementation agreement of UNCLOS. It does not deal with all of UNCLOS's categories of stocks, but exclusively with straddling fish stocks and highly migratory fish stocks. Its objective is "to ensure the long-term conservation and sustainable use of straddling fish stocks and highly migratory

85 See Report of the International Law Commission to the General Assembly, UN GAOR, 8th Sess., Supp. (No. 9), UN Doc. A/3159 (1956), reprinted in 2 Y.B. INT'L L. COMM'N 189, UN Doc. A/CN.4/SER.A/1956 and United Nations Conference on the Law of the Sea, Official Records, 7 vols., UN Doc. A/CONF.13/37-A/CONF.13/43 (1958).

86 See, *i.a.* UNCLOS Arts. 61-68, 116-120, 194(5).

fish stocks".[87] Its scope of application encompasses not only areas beyond national jurisdiction but also areas within national jurisdiction.[88]

While the Fish Stock Agreement does not alter the basic jurisdictional framework of UNCLOS,[89] the basic provisions of UNCLOS are broadened, strengthened and specified in more detail in relation to straddling and highly migratory fish stocks. This includes the requirements to apply a precautionary approach and an ecosystem approach to fisheries,[90] to protect biodiversity in the marine environment, the concept of compatibility, a variety of specific obligations for flag States, high seas enforcement powers for non-flag States and rights and obligations for port States.

In contrast to UNCLOS, the Fish Stocks Agreement regards RFMOs and Arrangements as the preferred vehicles for fisheries regulation at the regional level. It imposes obligations on States Parties to the Fish Stocks Agreement to cooperate through appropriate existing RFMOs and Arrangements. Of crucial importance in that regard is Article 8(4), which stipulates that access to fisheries is limited to cooperating States. New is also the right in Article 8(3) of States with a 'real interest' in becoming members of RFMOs or participants in Arrangements. Arguably, the duty to cooperate with the relevant RFMO or Arrangement laid down in Article 8(3) is already part of customary international law, thereby entitling the relevant members or participants to take measures against (non-cooperating) non-members and non-participants that would otherwise be in violation of international laws such as trade-related measures.[91] The practice of RFMOs on trade-related measures has not been challenged through the establishment of a dispute settlement procedure under the World Trade Organization.

RFMOs and Arrangements are to be established where these do not exist.[92] As a consequence of bottom-fisheries targeting deep-sea fish species – which are often discrete high seas fish stocks – there is broad support in the international community to ensure that all areas beyond national jurisdiction are covered by RFMOs or Arrangements. Such coverage would ensure that all target fisheries fall within the mandate of an RFMO or Arrangement. These RFMOs or Arrangements need to have modern ecosystem-based fisheries management mandates that allow them to address fisheries impacts on non-target species (including on benthic habitats).[93] These developments have among other things led to the 'filling' of gaps in such coverage in the Southern Indian Ocean and the establishment of negotiation processes to fill gaps in the Southern

87 Fish Stocks Agreement, *supra*, Art. 2.
88 *Ibid.*, Art. 3.
89 *Ibid.*, Art. 4 stipulates that the Agreement "shall be interpreted and applied in the context of and in a manner consistent with the [LOS] Convention".
90 Even though this terminology is not explicitly used.
91 See UN-GA Res. 50/24, *supra*, at para. 46.
92 Fish Stocks Agreement, *supra*, Art. 8(5).
93 See UN-GA Res. 50/24, *supra*, at para. 82.

Pacific and the Northern or Northwest Pacific.[94] Within the United States, these developments have led to the adoption of the Senate joint resolution (SJ Res.) No. 17 of 2007.[95]

The Fish Stocks Agreement does not establish a regulatory body, but provides for the convening of a review conference through Article 36. While this would have been envisaged as a one-off event, the Review Conference on the Fish Stocks Agreement that convened in May 2006[96] was not formally closed and resumed 2010.[97] This has transformed the review conference into a permanent or at least regularly recurring forum in which the implementation of the Fish Stocks Agreement, RFMOs and Arrangements has been discussed, and where recommendations have been made to improve this implementation.

The non-applicability of the Fish Stocks Agreement to stocks other than straddling and highly migratory fish stocks came to the fore as a consequence of bottom-fisheries targeting deep-sea fish species, which are often discrete high seas fish stocks. It has been proposed that a legally binding instrument is needed to address this gap.[98] So far, however, there is little more than the following operative paragraph in a UNGA Resolution, which reads:

> Calls upon all States, directly or through regional fisheries management organizations and arrangements, to apply widely, in accordance with international law and the Code, the precautionary approach and an ecosystem approach to the conservation, management and exploitation of fish stocks, including straddling fish stocks, highly migratory fish stocks and discrete high seas fish stocks, and also calls upon States parties to the Agreement to implement fully the provisions of article 6 of the Agreement as a matter of priority;[99]

While this paragraph applies, in principle, to all fish stocks, its purpose is mainly aimed at discrete high seas fish stocks. In the Arctic context, new fishing opportunities are likely to relate to shared and anadromous fish stocks. The non-applicability of the Fish Stocks Agreement to these fish stocks means that only the relatively general obligations contained in UNCLOS apply.

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94 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, *supra*. About the overview of gaps see K.M. Gjerde *et al.*, Regulatory and Governance Gaps in the International Regime for the Conservation and Sustainable Use of Marine Biodiversity in Areas beyond National Jurisdiction, IUCN Marine Law and Policy Paper No. 1 (2008), available online at https://cmsdata.iucn.org/downloads/iucn_marine_paper_1_2.pdf.

95 For further analysis see next section.

96 See Report of the Review Conference on the Fish Stocks Agreement, UN Doc. A/CONF.210/2006/15 at 39, para 43d (2006).

97 *Ibid*.

98 See *i.a.* E.J. Molenaar, Current Legal and Institutional Issues Relating to the Conservation and Management of High Seas Deep Sea Fisheries, 838 FAO Fisheries Report 113 (2007), at 129-133.

99 UN-GA Res. 50/24, *supra*, at para. 5.

3.5.5.4 *Constitutive instruments of RFMOs and arrangements and their conservation and management measures*

This subsection deals with multilateral fisheries conservation and management. An important first distinction must be drawn between multilateral fisheries conservation and management that applies explicitly to the Arctic marine area, and that which applies implicitly or less explicitly to the Arctic marine area. The latter category consists of two examples, namely the WCPFC and the ICCAT. The WCPFC Convention Area "comprises all waters of the Pacific Ocean" but does not have an agreed northern boundary.[100] That means that the Bering Sea would fall within the scope of the WCPFC, provided tuna or tuna-like species within its mandate occur therein. The ICCAT Convention Area consists of the "waters of the Atlantic Ocean, including the adjacent Seas".[101] It is very likely that its negotiators had the Mediterranean and Caribbean Seas, but not the Arctic Sea, in mind when agreeing to this phrase. Given that the Atlantic Ocean has no agreed definition or northern limit, ICCAT may in principle have competence within the entire FAO Statistical Area No. 18,[102] with regard to the tuna and tuna-like species within its competence. It should be noted, however, that the occurrence of tuna or tuna like species is currently, and in the near future, likely to be confined to the most southern parts of the Arctic marine area. Tuna are likely to begin migrating to the Arctic Ocean in the coming years.

The regulatory areas of all the other RFMOs and Arrangements listed in section 5.5.4 apply explicitly to part of the Arctic marine area. Moreover, NEAFC does not exercise its full competence with regard to the Loophole, which is governed by the Norway-Russia Fisheries Commission and the Loophole Agreement and Protocols. Whereas the main focus of the latter is on demersal species, the main focus of NEAFC is on pelagic and deep-sea fisheries. It may of course be possible that NEAFC will actually also exercise species competence in the Loophole in the future for instance if a fishery for one or more pelagic species in the Loophole would become commercially viable.[103]

As regards the NASCO Convention, pursuant to Article 1(1) it "applies to the salmon stocks which migrate beyond areas of fisheries jurisdiction of coastal States of the Atlantic Ocean north of 36°N latitude throughout their migratory range." In the absence of an agreed definition for, or northern limit

100 Art. 3(1).
101 Art. I.
102 See ACIA, Final Scientific Report, *supra*, Chapter 12 and accompanying text.
103 It should be noted, however, that the provisions in the NEAFC Scheme of Control and Enforcement (in force 1 May 2008) on 'Port State Control of Foreign Fishing Vessels' are made applicable to the NEAFC Convention Area by Article 20 and thereby also the area covered by the Norway-Russia Fisheries Commission and the Loophole Agreement and Protocols.

of, the Atlantic Ocean, it seems possible for NASCO to exercise competence over salmon in the entire FAO Statistical Area No. 18.[104]

As regards the Bering Sea, the overview above indicates that it is explicitly covered by at least four multilateral regimes in addition to the WCPFC Convention. While these regimes all focus on a single species or a single group of species (anadromous), it should be noted that the CBS Convention can also be applied to "living marine resources other than Pollock".[105]

The content of these constitutive instruments varies considerably and in the context of this article it is not possible – and arguably also not necessary – to examine it in depth. Among other things, the older instruments are relatively concise and simple and the newer ones much more extensive and complex, largely as a consequence of the progressive development of international fisheries law. In most cases, the substantive standards of these RFMOs and Arrangements are laid down in conservation and management measures that are adopted or revised during periodic meetings.[106] There is a growing crisis in marine capture fisheries globally, both in the over-exploitation of target species and the impacts on non-target species. As a result, processes have been set in motion to upgrade the constitutive instruments of these RFMOs and Arrangements. The upgrades will enable them to carry out the objectives of the Fish Stocks Agreement, in light of the functions of RFMOs pursuant to Article 10 of the Fish Stocks Agreement. These processes are aimed at making them 'compatible' with the Fish Stocks Agreement and other modern international instruments. The upgrades are among other things aimed at replacing older mandates with EAF mandates. In addition, several RFMOs have agreed to their performance being assessed.[107]

3.5.5.5 Arctic Council instruments

The Arctic Council has so far not focused on the conservation and management of target species and cannot be equated with an RFMO or Arrangement.[108]

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104 This may nevertheless require adjustment of the spatial scope and composition of NASCO Commissions.

105 CBS Convention, Art. II(4).

106 In the case of the Norway-Russia Fisheries Commission these are to a large extent laid down in the so-called 'Grey Zone Agreement' (original title: Avtale mellom Norge og Sovjetunionen om en midlertidig praktisk ordning for fisket i et tilstøtende område i Barentshavet med tilhørende protokoll og erklæring, translated to "Agreement between Norway and the Soviet Union on a temporary and practical arrangement for the fishery in an adjacent area of the Barents Sea"; available in the Norwegian treaty Series, Overenskomster (1978) at 436). This is a temporary agreement first adopted in 1978 and renewed annually since then.

107 The first performance assessment of an RFMO related to NEAFC.

108 Note that most Members of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) – which is part of the Antarctic Treaty system – do not regard

However, the CAFF has been and still is engaged in various important monitoring and assessment activities, such as Circumpolar Biodiversity Monitoring Program and the Arctic Biodiversity Assessment.[109] These are both very useful for international fisheries conservation and management.

3.6 National regulation

Within the context of this chapter, it is not possible to give an overview of national regulation by Arctic States on the conservation and management of target species and the regulation of the impacts of fishing on non-target species within the Arctic marine area. In some parts of the Arctic marine area, for instance the North Atlantic, national regulation is expected to be extensive and relate to all or most of the relevant capacities in which States can exercise jurisdiction, namely as flag, coastal, port and market States and with regard to their natural and legal persons.

For other parts of the Arctic marine area, however, the presence of ice for most of the year has so far rendered national fisheries regulation for those areas unnecessary. But as diminishing ice-coverage will attract fishing vessels looking for possible new fishing opportunities, Arctic States will be required to develop national regulation in order to discharge their obligations under international law, including those under UNCLOS and the Fish Stocks Agreement. The United States is currently engaged in this process with regard to fishing in the maritime zones off Alaska north of the Bering Strait. In the United States, competence over fisheries is shared by the individual States (in this case Alaska) within 3 nm from shore and the federal government in the remainder of the United States maritime zones. The North Pacific Fishery Management Council (NPFMC) plays a key role in federal regulation with regard to the maritime zones of the United States in the North Pacific. The NPFMC has adopted various fishery management plans (FMPs) that apply as far north as the Bering Strait. Its king and tanner crab and scallop FMPs also apply to that part of the Chukchi Sea that lies between the Bering Strait and Point Hope. In June 2007, the NPFMC closed the Northern Bering Sea to bottom trawling and directed a research plan to be developed for that area.[110]

Since October 2006, the NPFMC has specifically focused its attention on Arctic fishery management. This eventually culminated in the adoption of the

CCAMLR as an RFMO. However, most take the view that CCAMLR is 'something more than an RFMO'.

109 For information see http://www.arcticportal.org/en/caff,. See also T. Koivurova, D.L. Vander Zwaag, The Arctic Council at 10 Years: Retrospects and Prospects, 40 University of British Columbia Law Review 121 (2007), at147-149.

110 News & Notes, June 2007, available online at http://www.fakr.noaa.gov/npfmc, at 2

Arctic FMP on 5 February 2009.[111] The Arctic FMP involves *inter alia* closing "the Arctic to commercial fishing so that unregulated fishing does not occur and until information improves so that fishing can be conducted sustainably and with due concern to other ecosystem components".[112]

As some of the fish stocks in the EEZ off Alaska are likely to be transboundary, reference should be made to the United States Senate joint resolution (SJ Res.) No. 17 of 2007, "directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean".[113] The United States also brought SJ Res. No. 17 of 2007 to the attention of SAOs during their meeting in November 2007. During the discussion that followed, there was "strong support for building on and considering this issue within the context of existing mechanisms".[114] This indicates that a considerable majority of the Arctic States do not want the Arctic Council to become directly involved in fisheries management and conservation.

Finally, mention should be made to fisheries conservation and management in the fisheries protection zone established by Norway off Svalbard. This fisheries conservation and management can be categorised as unilateral, even though Norway allocates fishing opportunities for certain species to some State parties to the Treaty of Spitsbergen.

3.7 Gaps in the international legal and policy framework and national regulation and options for addressing them

3.7.1 Gaps

Although all global intergovernmental organisations, bodies and instruments relating to fisheries conservation and management apply to the Arctic marine area, a large part of the Arctic marine area is not covered by an RFMO or Arrangement with competence over target species other than tuna and tuna-like species and anadromous species.[115] The Arctic Council has so far not focused on the conservation and management of target species, lacks an express

111 Council Motion of February 5, 2009, Arctic Fishery Management Plan. The United States Secretary of Commerce still has to act on this motion.

112 NPFMC, Public Review Draft Environmental Assessment (2009), *supra*, at p. iii. By means of its Motion of February 5, 2009, *supra*, the Council opted for Alternative 2, Option 3.

113 Passed by the Senate on 4 October 2007. The House of Representatives voted in favor of SJ Res. No. 17 in May 2008 and President Bush signed it on 4 June 2008.

114 Arctic Council, Final Report of the Meeting of Senior Arctic Officials, 28-29 November 2007, Narvik, Norway, available online at http://www.arctic-council.org.

115 This conclusion assumes that the Bering Sea would come within the scope of the WCPFC, and that ICCAT and NASCO may in principle have competence within the entire FAO Statistical Area No. 18.

mandate for conserving or managing Arctic fisheries, and seems unwilling to become directly involved in fisheries management and conservation. The Arctic Council can at any rate not be equated with a RFMO or Arrangement. There are several bilateral arrangements between the relevant Arctic Ocean coastal States on the conservation and management of shared fish stocks within the Arctic marine area. However, some are missing. This relates to Canada United States (Beaufort Sea), Canada – Greenland and Russia – United States (Chukchi Sea).

In some parts of the Arctic marine area, the presence of ice for most of the year has rendered national fisheries regulation unnecessary. As diminishing ice-coverage will attract fishing vessels looking for possible new fishing opportunities, Arctic States will need to develop their national regulation in order to discharge their obligations under international law. Another gap relates to science and data. The complexity of the functioning of Arctic marine ecosystems as well as the limitations and shortcomings of science were noted in the ACIA.[116] It is most likely that a lot of data required for pursuing an EAF is presently also not available. Fortunately, these aspects played a crucial role in the development of the Arctic FMP within the NPFMC.

3.7.2 Options

3.7.2.1 General

This subsection contains various options for adjusting the current international legal framework relating to fisheries in the Arctic marine area in case such adjustments are regarded as necessary in view of current or future threats of fisheries to the marine environment and marine biodiversity in the Arctic marine area. An assessment of the need for such adjustments should start with conducting basic fisheries research. This should include the development of future scenarios about areas, dates, species, fishing techniques for which new fishing opportunities are likely to arise and the potential impacts on non-target species. It may reveal that new fishing opportunities in the Pacific side of the Arctic Ocean will be mainly located in the maritime zones of coastal States for a considerable time, whereas fishing opportunities in Atlantic side may much sooner also encompass the high seas that were not fished before. Such an assessment could be carried out within the framework of the Arctic Council (e.g. through (CAFF)) or outside, for instance by ICES or IASC.[117]

In addition to ensuring the availability of relevant scientific data by developing the scenarios mentioned above, the following options can be identified:

116 See above section 3.
117 Molenaar E.J., *supra* note 14.

- individual action by Arctic Ocean coastal States and other States in their capacities as flag, coastal, port and market States and with regard to their natural and legal persons;
- bilateral or subregional arrangements between the relevant Arctic Ocean coastal States on the conservation and management of shared fish stocks;
- a declaration or statement by which the main relevant general principles of the Fish Stocks Agreement, the recent UNGA Resolutions in relation to vulnerable marine ecosystems and destructive fishing practices and relevant conservation and management measures drawn from RFMOs[118] are made applicable to new and existing fisheries in the Arctic marine area. In particular, this declaration could stipulate that there will be no new fisheries until adequate assessments of their potential impacts on target and non-target species and livelihoods of indigenous peoples are carried out;
- mechanisms or procedures similar to an environmental impact assessment (EIA) and/or a strategic impact assessment (SEA) for new fisheries in the Arctic marine area; and
- one or more state-of-the-art RFMOs or Arrangements, whether self-standing or as part of a legally binding framework instrument for the Arctic. This could be in conjunction with adjustments to the competence of existing RFMOs or Arrangements, particularly in geographical terms.

3.7.2.2 Declaration on new and existing fisheries in the Arctic Ocean

As one of the options referred to in the previous subsection is a declaration or statement, reference should be made to recent initiatives undertaken by the United States pursuant to United States SJ Res. No. 17 of 2007.[119] These include informal bilateral consultations with a number of relevant actors, including the other Arctic Ocean coastal States, on their willingness to support a process that would culminate in a general statement or declaration on present and future Arctic fisheries. At the next Session of the Committee on Fisheries (COFI) of the United Nations Food and Agriculture Organization (FAO) the United States plans to convene a side-event to discuss this process. The United States may approach another Arctic Ocean coastal State – for instance Norway – to co-sponsor this initiative. At this side event, the United States offered to host a high-level conference on Arctic fisheries in 2015 during which such

118 *E.g.* CCAMLR, Conservation Measures 21-01 (2008), Notification that Members are considering initiating a new fishery, available online at https://www.ccamlr.org/en/measure-21-01-2008, and CCAMLR, Conservation Measures 21-02 (2009), Notification Exploratory fisheries, available online at https://www.ccamlr.org/en/measure-21-02-2009.

119 *Ibid.* and accompanying text.

a general statement or declaration has be adopted.[120] As noted above, the European Commission's Arctic Communication has supported such an initiative.[121]

3.7.2.3 Adjusting the spatial scope of the NEAFC Convention

One of the options listed in the subsection 7.2.1 is the development of one or more state-of-the-art RFMOs or Arrangements for species other than tuna and tuna-like species and anadromous species. That bullet also mentions that this may require "adjustments to the competence of existing RFMOs or Arrangements, particularly in geographical terms". An obvious candidate for a spatial adjustment is NEAFC. The five existing members of NEAFC are the European Community (EC), Denmark on behalf of the Faroe Islands and Greenland, Iceland, Norway and Russia. Unlike the OSPAR Convention, the NEAFC Convention does not explicitly contain an option to amend its spatial scope. On the other hand, there is also nothing in Article 19 or elsewhere in the NEAFC Convention that would preclude spatial adjustments as such.

It should be noted that the NEAFC Convention's eastern boundary and the western boundary north of Greenland[122] do not coincide with the two relevant boundaries of FAO Statistical Area No. 18, entitled 'Arctic Sea'. While the spatial scope of the NEAFC Convention is identical to the spatial scope of its 1959 predecessor,[123] the two relevant boundaries of FAO Statistical Area No. 18 already existed in 1970 and have not changed since then.[124] The spatial scope of the OSPAR Convention and its two predecessors – the Oslo Convention[125] and the Paris Convention[126] – is also identical to that of the NEAFC

120 Information based on conversations between the author and a governmental official of the United States in November and December of 2012. The United States Arctic Region Policy, *supra*, does not refer to the possibility of such a process in the relevant implementation section, *i.e.* Section III (H)(6).

121 See *supra* note 93.

122 Note, however, that the NEAFC Convention Area and the OSPAR Maritime Area do not appear to encompass the waters north of Greenland between 44° west longitude and 42° west longitude extending to the North Pole. While Art. 1(a)(1) of the NEAFC Convention and Art. 1(a)(i) of the OSPAR Convention use the phrase "Atlantic and Arctic Oceans", the term 'Arctic' does not appear in Art. 1(a)(2) of the NEAFC Convention or Art. 1(a)(2) of the OSPAR Convention. While it may sometimes be difficult to point out where the Arctic Ocean begins and the Atlantic Ocean ends, the waters north of Greenland would seem undoubtedly part of the Arctic Ocean. In the fall of 2008, the Secretary of NEAFC approached the Members of NEAFC to obtain their view on this issue.

123 1959 North-East Atlantic Fisheries Convention, 486 UNTS 157, entered into force June 27, 1963.

124 See the historical FAO statistical charts available online at ftp.fao.org/fi/maps/Default.htm.

125 1972 Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, 932 UNTS 4, entered into force April 7, 1974, Art. 2.

126 1974 Convention for the Prevention of Marine Pollution from Land-Based Sources, 1546 UNTS 119, entered into force May 6, 1978, Art. 2.

Convention (and its 1959 predecessor). Interestingly, the ICES Convention stipulates that the spatial mandate is "the Atlantic Ocean and its adjacent seas", but the northern boundaries of the 'ICES Areas' are identical to those of FAO Statistical Area No. 18.

The rationale for the northern boundaries of the predecessor to the NEAFC Convention is not evident. Perhaps they simply demarcated the most northerly range of distribution possible for commercially significant fish stocks in a best-case scenario and then extended this further north to err on the side of caution. It should also be noted that until recently, the exact location of the northern boundaries did not have practical relevance for NEAFC.[127]

While spatial adjustments are possible, only relatively small geographical adjustments – expansions as well as shrinkages – would not be problematic. Such adjustments could follow maritime boundaries or ecosystem boundaries between different hydrographic regimes, submarine topography and distributional ranges of certain target species or other species.[128] A well-known example of an international regulatory regime whose spatial scope was mainly determined by ecosystem boundaries is the CCAMLR Convention by which the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) was established.[129] Even in that case, the approximation of the Antarctic Convergence agreed to during the negotiation of the CCAMLR Convention, took account of political considerations, thereby causing a small diversion from pre-existing FAO Statistical Areas.[130]

For the purpose of adjusting the spatial scope of the NEAFC Convention, account could perhaps be taken of the large marine ecosystems (LMEs) of the Arctic marine area developed by the PAME (Protection of the Marine Environment) working group of the Arctic Council.[131] A quick comparison of these LMEs with the current spatial scope of the NEAFC Convention suggests that the latter's spatial scope could be expanded by including all of LME no. 20, entitled 'Barents Sea' and perhaps even LME no. 58, entitled 'Kara Sea'. Another option would be to restrict the spatial scope of the NEAFC Convention by

127 Molenaar E.J., *supra* note 14.

128 See L.M. Alexander, Large Marine Ecosystems as Global Management Units, in Biomass Yields and Geography of Large Marine Ecosystems 339 (K. Sherman and L.M. Alexander eds., 1989), at 339.

129 It is of course acknowledged that regimes for enclosed or semi-enclosed seas are also mainly or exclusively determined by ecosystem boundaries.

130 J.N. Barnes, The Emerging Convention on the Conservation of Antarctic Marine Living Resources: An Attempt to Meet the New Realities of Resource Exploitation in the Southern Ocean, in The New Nationalism and the Use of Common Spaces 239 (J.I. Charney ed., 1982), at 262, observes that at the insistence of Argentina, the boundary was drawn further away from Argentine territory in order to exclude the Drake Passage (FAO statistical charts were later modified accordingly; see the historical FAO statistical charts, *supra* and also F.M. Auburn, Antarctic Law and Politics, Indiana University Press (1982), 218, 292.

131 Available online at http://www.arcticportal.org/en/pame.

excluding the spatial scope of LME no. 64, entitled 'Arctic Ocean'. The spatial scope of FAO Statistical Area No. 18, could then be adjusted accordingly.[132]

A word of caution is warranted here, however. While the Arctic LMEs defined by PAME have taken 'trophic relationships' into account,[133] this is quite different from a criterion such as 'usefulness for conservation and management of target species'. And even if the latter criterion was used, the negotiations on the CCAMLR Convention illustrate that political considerations can override science-based criteria. Another political consideration would nevertheless attribute great weight to the LMEs defined by PAME. This would be the wish to pursue integrated, cross-sectoral ecosystem based ocean governance (see subsection 7.2.4).

By contrast, large expansions by which the NEAFC Convention Area would comprise the entire Arctic Ocean – as suggested in the European Commission's Arctic Communication[134] – appear much more problematic. This is not so much caused by the interests of the 'new' coastal States, namely Canada and the United States. In fact, Canada is not really a 'new' coastal State as it currently already has the status of Cooperating Non-Contracting Party (NCP) with NEAFC. NEAFC's existing spatial competence in the Atlantic sector of the Arctic as well as potential adjustments of this spatial competence do not appear to have played a role in Canada's decision to apply for NCP status. This does not exclude, however, that such considerations could not play a role in the future.[135] In case Canada would indeed apply for full membership, this would at any rate indicate its willingness to accept the substance of the NEAFC Convention as modified by the 2004 and 2006 amendments.[136] It is less clear whether the United States would have significant problems with the substance of the amended NEAFC Convention.

Perhaps more important, however, is whether or not Canada and the United States have fundamental objections to NEAFC's practices on the establishment and allocation of TAC for straddling fish stocks, for the reason that these clearly give preferential treatment to coastal States. The initiative lies here with the coastal States, who first agree on a coastal State TAC having considered

132 The historical FAO statistical charts, *supra*, indicate that this is a common practice.

133 *Ibid*.

134 EC Communication, COM (2008) 763, *supra*, at 8, it is observed that "In principle, extending the mandate of existing management organisations such as NEAFC is preferable to creating new ones."

135 Of course, once Canada is a member of NEAFC it can participate in decision making on proposals to adjust the spatial scope of the NEAFC Convention. Such decisions require a three-four this majority (cf. Art. 19).

136 It seems that if Canada would insist on acceding to the 'old' version of the NEAFC Convention, this would not attract the necessary majority pursuant to NEAFC Convention, Art. 20(4).

the scientific advice provided by ICES.[137] However, as the ICES advice relates to the entire stock, the coastal States effectively determine the high seas TAC as well. The coastal States also allocate the coastal State TAC between them without specifying which part of each coastal State's allocation should be caught within or beyond areas under national jurisdiction.[138] NEAFC is then charged with determining and allocating the high seas TAC.[139] Although room for manoeuvre seems limited, it should not be forgotten that there are only five Members of NEAFC and three of these are regarded as coastal States with respect to all three main straddling fish stocks regulated by NEAFC.[140]

While Canada and the United States would, as coastal States, benefit from such preferential treatment, they may object to such practices to be consistent with their user or non-user interests in other RFMOs and Arrangements. More problematic are the user interests of States that are not coastal States with respect to the North-East Atlantic Ocean or the Arctic Ocean: States that currently have the status of NCP within NEAFC (Belize, Cook Islands, Japan and New Zealand); and States with large distant water fishing fleets, such as China and South Korea. Even though fishing opportunities in the high seas pocket of the central Arctic Ocean are likely to be minimal in the near future, climate change may alter the Arctic marine area rapidly and fundamentally in the medium term. Consequently, fishing opportunities in the high seas of the Arctic Ocean are likely to be substantial in the medium and long term. Not only is the size of the high seas pocket enormous, but fisheries on the nose and tail of the Grand Banks in the Northwest Atlantic aptly illustrate that just a small area of the high seas may be sufficient.

3.7.2.4 Integrated, cross-sectoral ecosystem-based ocean management

So far, this chapter has approached Arctic fisheries conservation and management exclusively by means of a sectoral perspective. The inherent limitations of sectoral approaches to ocean management are increasingly recognised and this has led to various non-legally binding commitments to pursue ecosystem-

137 *E.g.* the 2007 Trilateral coastal State Arrangement on Northeast Atlantic Mackerel (2007 Agreed Record of conclusions of fisheries consultations between Norway, the European Community and the Faroe Islands on the management of mackerel in the North-East Atlantic for 2008, Oslo, October 30, 2007). See also the NEAFC, Performance Review Panel Report, November (2006), *supra*, at 14, 17.

138 2007 Trilateral coastal State Arrangement on Northeast Atlantic Mackerel, *supra*, Annex I, at para 1.

139 With respect to Mackerel, see *e.g.* the 2008 NEAFC Recommendation on mackerel (Recommendation I: 2008 Recommendation by the North East Atlantic Fisheries Commission in accordance with Article 5 of the Convention on Future Multilateral Cooperation in North-East Atlantic Fisheries at its Annual Meeting in November 2007 to adopt convention and management measures for mackerel in the NEAFC Convention Area in 2008).

140 These are blue whiting, herring and mackerel. Russia is not regarded as a coastal State for blue whiting and mackerel and Iceland is not regarded as a coastal State for mackerel.

based ocean management at the global level.[141] While there is currently no universally accepted definition for the term 'integrated, cross-sectoral ecosystem-based ocean management',[142] it is widely accepted that the different words included in the term indicate a holistic approach which takes due account of spatial dimensions, processes and relationships within ecosystems.[143] Integrated, cross-sectoral ecosystem-based ocean management operates at a higher hierarchical level than sectoral ecosystem-based management. An example of this is EAF. Moreover, sectoral ecosystem-based management can be pursued in the absence of an overarching integrated approach.[144]

While neither UNCLOS nor any other global instrument contains a legally binding obligation to pursue integrated, cross-sectoral ecosystem-based ocean management, reference has been made to relevant commitments above. Support for integrated, cross-sectoral ecosystem-based ocean management also exists within several Arctic States, such as Norway,[145] and various international bodies that are relevant to the Arctic marine area. For instance, integrated management of resources and ecosystem-based management feature prominently in the program of the Norwegian chairmanship of the Arctic Council (2006-2008) and in the Norwegian, Danish and Swedish common objectives for their Arctic Council chairmanships 2006-2012.[146] Reference can also be made to the LMEs of the Arctic marine area developed by PAME (see subsection 7.2.3). Perhaps even more pertinent are the pursuance of the ecosystem approach by the OSPAR Commission[147] and the large overlap between the spatial competence of the OSPAR Commission, NEAFC and ICES. This is conducive to integrated, cross-sectoral ecosystem-based ocean management. The establishment

141 *E.g.* JPOI (Plan of Implementation of the World Summit on Sustainable Development, Johannesburg, September 4, 2002, available online at http://www.unep.org, paras 30(d), 32(c) and UN-GA Res. 61/222 on Oceans and the law of the sea, UN. Doc. A/RES/61/222, at para 119 (2006).

142 Cf. the Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its seventh meeting, UN Doc. A/61/156 (2006), which notes this at para 6 and subsequently lists various elements relating to ecosystem approaches and oceans.

143 See the elements referred earlier.

144 Interestingly, the United States Arctic Region Policy, *supra*, specifically mentions the objective of pursuing ecosystem-based management in the section on Environmental Protection and Conservation of Natural Resources, [section III(H)(6)(d)] but not anywhere else.

145 See the Integrated Management of the Marine Environment of the Barents Sea and the Sea Areas off the Lofoten Islands (Management Plan), (Helhetlig forvaltning av det marine miljø I Barentshavet og havområdene utenfor Lofoten (forvaltningsplan) (St. Meld. Nr. 8 2005-2006); English version available online at http://www.regjeringen.no/en/dep/md/Selectedtopics/Svalbard_og_polaromradene.html?id=1324 The plan – which does not extend beyond the maritime zones of Norway – was approved by the Norwegian Parliament in June 2006. See United States Arctic Region Policy, *supra*.

146 Available online at http://www.arctic-council.org/article/2007/11/common_priorities.

147 See the Statement on the Ecosystem Approach to the Management of Human Activities, Joint Meeting of the Helsinki & OSPAR Commissions 2003, Record of the Meeting, Annex 5, at para. 5.

of cooperative arrangements between NEAFC and OSPAR[148] and the proposal for an OSPAR marine protected area (MPA) situated beyond 200 nm from the coast[149] are aimed at testing this conduciveness.[150]

Most, if not all, States would acknowledge the merits of integrated, cross-sectoral ecosystem-based management of the Arctic marine area. Yet, they are likely to have very diverging views on how it should be pursued. For instance, whether it should be pursued at the global or regional level or through legally binding or non-legally binding instruments. Support for global approaches in this context seems minimal. This can be deduced from the fact that the EU proposal for an Implementing Agreement to UNCLOS[151] has so far received little support by non-EU member States. Linking a legally binding instrument for the marine Arctic to UNCLOS,[152] even if its spatial scope would be limited to areas beyond national jurisdiction (high seas and the Area), would also not be acceptable to Arctic Ocean coastal States. This is because its negotiation would fall under the United Nations General Assembly; a forum where the five Arctic Ocean coastal States could potentially be confronted by many States with opposing views and interests.

148 The Draft Memorandum of Understanding (MOU) adopted by the OSPAR Commission is contained in Annex 13 to Summary Record OSPAR 2008, OSPAR 08/24/1-E, entered into force on September 5, 2008, at Annex 13, see thereto also para. 7.23(f).

149 WWF, the Netherlands and Portugal, Proposal for an OSPAR area of interest for establishing an MPA on the Mid Atlantic Ridge/Charlie Gibbs Fracture Zone, OSPAR doc. BDC 08/04/9-E and the revised version in BDC 08/04/9 Add.3, at paras 7.16-7.24.

150 On this issue, see T. Koivurova, E.J. Molenaar (2009), *supra*, at 15-19.

151 Cf. the Annex to the Statement by Austria, on behalf of the EU, at the 7th Meeting of the ICP (2006) and EC, An Integrated Maritime Policy for the European Union, COM(2007)575 final, at 14, where it is noted that the "Commission will propose an Implementing Agreement of UNCLOS on marine biodiversity in areas beyond national jurisdiction and work towards successful conclusion of international negotiations on Marine Protected Areas on the high seas". It should also be noted that the European Commission's Arctic Communication refers to these items as possible policy actions on p. 11. It is not altogether clear, however, why these items with a global scope should be listed in the Arctic Communication. The precise meaning and intention of these items are not clear, but they seem at any rate related to a process at the global level that is intended to have output that applies throughout the globe and not just the Arctic. Or does it imply that the high seas in the Arctic Ocean should be designated as a marine protected area?.

152 This has for instance been suggested by the Executive Director of the European Environment Agency (EEA), see J. Mc Glade, The Arctic Environment – Why Europe should care, speech delivered at the Arctic Frontiers Conference, Tromsø, January 23, 2007, available online at http://www.eea.europa.eu/pressroom/speeches/23-01-2007. The actual wording used in this speech is "Polar Ocean protocol". This wording is confusing because it can be interpreted as applying to both the Arctic Ocean and the Southern Ocean. Note that the words "based on UNCLOS" of the European Commission's Arctic Communication, *supra*, at 10 indicate that the option of an Implementation Agreement under UNCLOS is no longer pursued.

Regional approaches for pursuing integrated, cross-sectoral ecosystem-based ocean management in the marine Arctic are likely to attract more support.[153] However in view of the Ilulissat Declaration, Arctic Ocean coastal States are not in favour of a legally binding instrument that would amount to "a new comprehensive international legal regime to govern the Arctic Ocean".[154] Proposals on Arctic governance[155] for a treaty inspired by the Antarctic Treaty have the additional hurdle of being too closely associated with the agreement to disagree on the status of sovereignty in Antarctica.[156] Expanding the spatial scope of the OSPAR Convention to include the entire Arctic Ocean would not strictly speaking be a 'new regime', but it is questionable if Canada, Russia and the United States would be prepared to accept this entire 'acquis': the OSPAR Convention, as well as all the legally binding decisions, non-legally binding recommendations and other agreements adopted by the OSPAR Commission without significant amendments. An alternative to these legally binding options is to transform the Arctic Council into a mechanism for cooperation and coordination in pursuing integrated, cross-sectoral ecosystem-based ocean management.[157]

A pertinent question is how the Ilulissat Declaration should be interpreted in this regard: does it draw a line in the sand or is it an opening bid in the initial stages of the ongoing debate on reform? The latter could certainly be the better interpretation if the primary purpose of the phrase is to reject reform along the lines of the Antarctic Treaty, and if existing and newly established sectoral arrangements do not succeed in adequate coordination and

153 For a proposal see T. Koivurova, E.J. Molenaar (2009), *supra*. Note that the idea of a regional oceans management organization (ROMO) was put forward by R.G. Rayfuse, *supra*, at 215.

154 Ilulissat Declaration, *supra*.

155 European Parliament, Resolution on Arctic governance EP doc. P6_TA-PROV(2008)0474, October 9, 2008.

156 The United States Arctic Region Policy, *supra*, observes that the "geopolitical circumstances of the Arctic region differ sufficiently from those of the Antarctic region such that an "Arctic Treaty" of broad scope – along the lines of the Antarctic Treaty – is not appropriate or necessary", at section III(C)(3). The European Commission's Arctic Communication, *supra*, has not enthusiastically embraced the suggestion by the European Parliament but, arguably, does not rule out new instruments either (see the terms 'instruments' or 'frameworks' at 10, 11).

157 See for instance D. McRae, Rethinking the Arctic: A New Agenda for Canada and the United States, within the Canada-US Project, Blueprint for Canada-US Engagement under a New Administration, Centre for Trade Policy and Law, Carleton University, 2008 available online at http://www.carleton.ca/ctpl/conferences, at 8; O.R. Young, Arctic Governance: Emerging Challenges -New Opportunities, presentation at the Alliance for Liberals and Democrats for Europe (ALDE) Seminar Arctic Governance in a global world: is it time for an Arctic Charter?, May 7 (2008), hand-outs available online at http://www.alde.eu. In this presentation, Young does not repeat his earlier idea of establishing a Commission on Arctic Sustainable Development (CASD) modeled on the World Commission on Environment and Development (see O.R. Young, Arctic Governance: Preparing for the Next Phase, paper presented at 5th Conference of Parliamentarians of the Arctic Region (2002), available online at http://www.arcticparl.org.

coordination.[158] The pace of change in the Arctic is likely to be a crucial factor in that regard.

3.8 Preliminary conclusions

The unprecedented pace of change that the Arctic is currently experiencing makes it difficult to argue that the current international legal and policy framework for Arctic fisheries conservation and management is adequate for responding to the huge challenges that lie ahead. This chapter identifies a number of governance and regulatory gaps in this framework as well as in national regulation and offers various options for addressing them. Some initial steps towards one of these options, namely a declaration on new and existing fisheries in the Arctic Ocean, are underway. Such a declaration would function as a minimum level of protection, despite not being legally binding. It would apply if new fishing opportunities were to arise earlier than foreseen, in the absence of the necessary scientific information, or with potentially higher risks to the protection and preservation of the marine environment, marine biodiversity and the rights and interests of Arctic indigenous peoples. The pace of change will also determine when negotiations for an Arctic RFMO or Arrangement should commence.

While assuming that international fisheries conservation and management in the Arctic marine area will pursue an ecosystem approach to fisheries (EAF), sooner or later such sectoral approaches will have to align with the governance and regulation of other human activities. This alignment will eventually lead to integrated, cross-sectoral ecosystem-based oceans management in the Arctic. There are nevertheless diverging pathways towards that ultimate objective. They range from coordination and cooperation between individual States, entities and existing institutions, to the establishment of a new body, or the transformation of the Arctic Council by means of a regional legally-binding instrument for the governance and regulation of the (marine) Arctic. The pathways at the latter end of the spectrum are much more ambitious than those 'business-as-usual' pathways at the former end. Decision-makers must decide whether 'business-as-usual' attitudes are justifiable in these unprecedented circumstances. They should not lose sight of the stature in the international community of Arctic States and other States and entities that have recently expressed a willingness to become closely involved in Arctic governance and regulation. They should certainly also not ignore that unprecedented challenges can offer unprecedented opportunities for reform. Grasping such opportunities

158 See also Young's 2002 paper, *supra*, where he identifies "the prospect that individual elements of the Arctic's institutional complex will collide with one another or work at cross purposes" as one of three main concerns.

could give the Arctic Ocean a pioneering role in regional oceans governance and regulation.